ANNUAL REPORT 2019-20

INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR

Annual Report

2019-2020

Indian Institute of Technology Bhubaneswar

Contents

PROF. RATNAM V. RAJA KUMAR
Director, Indian Institute of Technology Bhubaneswar

From Director's Desk

The last year was the twelfth year of existence of IIT Bhubaneswar. The permanent campus of the institute is spreading over 936 Acres of land which is now developed into a serene, green and wellness campus. Hon'ble Prime Minister, Shri Narendra Modi ji, dedicated the campus of the institute to the nation on the 24th of December 2018.

I would like to take this opportunity to present some of the notable achievements of the institute, made during the last academic year, with the dedicated spirit of achieving excellence, in teaching and research.

1. With the objective of creating a cream of the global class institutions and help the nation in re-establishing its glorious past, recently the vision statement is made very ambitions stating that,

   "IIT Bhubaneswar will be globally well recognized for creating outstanding graduates and new knowledge"

   We have been working tirelessly in raising the standards, and setting new standards, in all operations of teaching-learning, research, infrastructure, other operations, etc., in this endeavour and have achieved significant amount of success in this direction.

   We believe that the clean-green campus has wellness environment and already the best of the 23 IIT's.

2. IIT Bhubaneswar has been working on very fundamental aspects of academics to be amongst the global cream of institution. However, the strategic initiatives taken have not only fostered the development of the institute but also resulted in a very significant rise in the institute's ranking performance in both National and International scenario as follows, during the last five years:

National

Ranking system	NIRF Engineering	Times Engg	India Today	Week Hansa	Times Research
Rank of IITBBS	22	5	11	15	1

International

Ranking system	QS World India	QS World Asia	Times HE World	Times HE Asia	Times HE Impact
Rank of IITBBS	20	227	801-1000	169	401-600

The institute is rated 3rd and 5th best in India for research citations by Times HE, during the last two years.

3. Academic Programmes

1. Last year, the institute grew to have the Highest BTech intake among the 2G and 3G IIT's at 420 seats which has now grown to 475. The intake in MSc and MTech programmes are 125 and 246 in, respectively.

   The current strength of students stand at 2490 Students (B.Tech. – 1174, Dual-Degree – 418, M.Tech. - 388, M.Sc – 178, Ph.D – 332) and is the second highest amongst the 2nd generation IIT's. The Institute has a spectrum of 143 full-time faculty members, a large number of adjunct faculty 25 officers and other supporting staff.

   The Institute offers 6 Nos. of B.Tech., 9 Nos. of Dual Degree Programmes, 5 Nos. of M.Sc., 14 Nos. of M.Tech Programmes and Ph.D Programme in its 7 Schools. The admission for the academic year 2020-21 in to the courses Ph.D., M.Tech., M.Sc., and B.Tech. degrees took place on 24th, 24th and 25th August, and Nov 15, 2020, respectively.

   The institute has Joint PhD Programme with University of Auckland in to which both of the institutes will be taking students to foster academic exchange and cooperation between the two institutions.

4. Some Unique Achievements

1. **Recruitment of Foreign Faculty:** In order to offer education of international flavour to its students and to help the nation in re-establishing its glorious past, IIT Bhubaneswar could recruit faculty of foreign origin successfully to teach at the institute over long terms on Indian salaries. This endeavour has been unique and is ahead of the SPARC and VAJRA schemes. **Also IIT Bhubaneswar has been sanctioned with the highest number SPARC proposals approved amongst all the 2nd generation IIT's.**
2. **Multidisciplinary Education:** Sharing the same vision expressed by NEP 2020, the institute has been promoting holistic and multidisciplinary education, for the last three years, to its engineering students. Courses Mathematics in India (ancient and modern) and "Functional and Communicative Sanskrit", Introduction to Indian Philosophy, Substance in Indian Philosophy, Odissi dance, besides many cutting edge technology courses in AI, Data Sciences, Nano Science and Augmented and Virtual Reality.
3. **Raising Research Centers and Groups of International Repute:** The institute gives a lot of importance to national relevance and impact in research and encourages to quality than quantity. We defined 10 areas of research thrust with the objective of making globally well recognized and very relevant contributions in these areas.
4. **Outstanding Placements:** With more than three time rise in the placements in the last -5 years, the institute has better placements than a few of the senior IIT's. The institute recorded the highest number of core sector placements amongst the IIT's.
5. **Organising Institute for JEE:** The institute attained organizing status for holding JEE and one of the two that got this status amongst all the 2nd generation IIT's. The institute took the responsibility of conducting JEE-2020 for the whole of Odisha and could organize it very successfully without any difficulty.
6. **Spirited participation in National Programmes:** The institute has been participating in all the programmes of the ministry very actively. For instance, perhaps, IIT Bhubaneswar was the only institute that organized all the events of the Ek Bharat – Shrest Bharat, the flagship programme of the ministry involving all the 17 paired states, last year.

5. Initiatives on Protection from COVID19

- The institute, strictly following the norms, made the campus Carona free except of a brief period of over one month.
- The institute gave the option of staying back in the campus, to its students before lockdown and as many as 400 preferred stayed in the campus. Their physical and mental well-being, was taken care of through regular health check-up and counselling.
- Apart from the students and the other campsites, the **Institute protected about 2000 construction workers who could not go back to their home places before the onset of the lockdown** and persuaded them not to venture out in between.
- The institute distributed food to busloads of migrant workers returning to their homes from their work places, on the highway and the migrant workers in the campus.
- Covid-19 awareness lectures were conducted to the students and the campsites.

6. Non-Compromising Education during the Covid-19 Pandemic

The most unprecedented Covid-19 Pandemic has changed our lives and the way we run our education. The institute functioned to fulfil its commitment of providing world-class education without any compromises even at the time of the Pandemic situation, through the following:

The institute could switch to online education with absolutely no gap by pre-planning and taking actions well ahead of the lockdown period.

A unique method of holding comprehensive, pen and paper examinations and invigilation by online has been developed in-house and adopted it very successfully to conduct examinations in full for all the students of the institute right from the Spring 2019-20 semester onwards. The outgoing students were graduated without any compromise on the examination standards. The practice has become a normal and we already completed the mid-semester exams, this semester.

Online interactive sessions have been organized with all the sets of students by Director, Dean Academic and HoS's both centrally as well as at School level to maintain an active constant connect with students.

Continuing the spirit of innovation, the 9th convocation is scheduled to be organized in a unique and innovative live form by hybrid mode wherein a student can receive degrees either by physical or online presence during the pandemic.

7. Research & Development Activities against COVID-19

A lot of research work and product development could be done successfully to fight against Covid-19. These include successful product development, design of broad spectrum antiviral peptides, drug re-purposing, study of effectiveness of masks.

8. Creating a Global Class Campus and Upgradation of Facilities

The campus has 936 acres and is the largest among the new IIT's and 2nd or 3rd largest among all the 23 IIT's. Towards the end of 2016-17, Ministry of Education, Govt. of India sanctioned Rs 850 Crore to the institute to fully develop the institute in all respects for a student strength of 2500, under Phase-2. The master plan was re-done and **the institute has been engaged in creating a Global Class Infrastructure and Campus Ambiance at IIT Bhubaneswar.** Within another 6-12 months, the infrastructure is going to be of 3.50 lack SqM.

IIT Bhubaneswar is highly committed towards promoting the culture of eco-friendliness, creating a green belt, has been engaged in making the campus and nearby places green and adopted several green initiatives. About 40000 trees of fruit and medicinal orchards, avenue plantations, and flowering varieties have been planted in the last 5 seasons. The campus is made to be very pleasant to live in and it is a green campus with wellness environment. IIT Bhubaneswar banned power vehicle use by students and incorporated adopted "Cycling Culture" for promoting the health benefits of students, faculty, staff and the community. The institute is adopting energy and water harvesting mechanisms, green building mechanisms with GRIHA compliance and eco-friendly waste disposal mechanisms.

The 42 acre sports facility is going to be the best amongst the IIT's. The play fields and courts have plantations around and have a living fencing of green shrubs instead of concrete walls or metal fencing, and thus is uniquely designed to be and made green.

Rising to Co-host Inter-IIT Sports Meet: IIT Bhubaneswar made history and the only 2nd generation IIT to co-host an Inter-IIT Sports Meet. We conducted it jointly with

IIT Kharagpur and the event was lauded by all the participants as possibly the best amongst the last four events conducted at various institutes.

Under this phase of the work institute has added the following facilities under phase-2 already:

- a Boys' Hostel (800 Seater),
- a Girls' Hostel (400 Seater),
- Director's Bungalow,
- Students Activity Center,
- Play Courts and
- School of Humanities, Social Sciences and Management building.

NBCC the PMC was supposed to construct and handover the infrastructure by Jan 2019. They now promised to complete it by March -2021.

9. R&D and Patents Filed

A total of 76 sponsored research and consultancy projects worth more than Rs. 16 Crore have been sanctioned to the Institute during the year (2019-20) from different funding agencies. Besides these sanctioned projects, 142 project proposals worth about Rs. 70 Crore have been submitted during the last one year to different funding agencies by the faculty members.

Collaborative Research: The Institute is very actively engaged in collaborative research with many reputed universities and research organizations across the world.

Our climate science group is very unique, collaborates with, University of Messachusetts, *Hurricane Research Department of NOAA, USA, Purdue University, IMD and INCOIS* and already enjoys global reputation. It has predicted the course of recent cyclones, Amphan, Fani, and Hudhud, very accurately about 5/6 days in advance with customization of latest models to Indian conditions. At the moment it is the only alternative to IMD that helps verification.

The Augmented and Virtual Reality Center of excellence is a unique center in the country helping the nation in developing an eco-system in this strategic area. The center has sanctioned and supporting nine R&D projects. The Centre also has organized a grand hackathon on ARVR during 10th -12th Jan 2020. The next edition of the Hackathon and a grand PAN India Startup call are being planned to be scheduled during Feb 2021.

About 43 patent applications have been filed by the Institute faculty and research students so far and the number is rising.

Towards participating in the National/State Missions, and MoU was signed with DRDO during August 2020. An MoU was signed with CSIR-Institute of Minerals & Materials Technology (IMMT), Bhubaneswar on 13th April 2019 to promote collaborative research, and exchange of knowledge.

- The Institute is also actively participating in the national R&D missions like IMPRINT and Uchitar Aviskhar Yojana.
- The institute published 539 papers, last year including 406 in journals, 115 in conferences and 19 book chapters.

10. Faculty Matters and Honours

IIT Bhubaneswar has been adopting standards even higher than some of the senior IIT's for faculty selection, though it may take longer to get good numbers.A team of the Director and Deans visited Singapore Universities and institutes from 7th to 11th November, 2019 with the objective of motivating very bright Postdoctoral and PhD students to apply for the faculty positions at IIT Bhubaneswar and for to foster academic linkages.

In an endeavor to create an environment of teaching-learning of high order, faculty members who got highest student feedback have been honored with teaching excellence awards. The awardees include,

Dr. Pathikrit Bhattacharya – Distinguished Teaching Award (Overall Best Performance)

Dr. Debapratim Ghosh – Award for Commendation for overall good performance

Dr. Vasudeva Rao Allu – Award for Commendable Teaching

Dr. Sankarsan Mohapatro - Award for Commendable Teaching

Dr. Rajakumar Guduru - Award for Teaching Excellence

Dr. Anoop Thomas – Award for Teaching Excellence

Several academic distinctions, honours, distinguished fellowships, associateships, lectureships, coveted medals and awards have been bestowed on our faculty, in recognition of their academic achievements, during the last year and these have been included in the hardcopy of the Director's report.

Two mention a few

Dr. S R Samantaray was selected for the IEEE PES Chapter Outstanding Engineer Award for 2020

Dr. Venugopal Arumuru is honored with Indian National Academy of Engineering (INAE) Young Engineer Award (The award consists of cash prize of One lakh and a citation).

11. Student Achievements

The Students' Gymkhana at IIT Bhubaneswar is a central hub for all-round development of students. The councils organized several activities throughout the year. The annual techno-management fest Wissenaire, socio-cultural fest Alma Fiesta, and Entrepreneurship meet E-Summit have been organized, setting new standards.

Our students have won top prizes in Inter\-IIT Technical and Socio-cultural events and prizes in sports events conducted by other institutions or universities. The details are given in the hard copy of the Director's report and displayed on the electronic screen.

Gold Medals in the Convocation

a) **Mr. ADITYA PAL**, (Computer Science and Engineering) is going to receive the coveted President of India Gold Medal for topping all B. Tech. branches.

b) **Mr. SANKET DEY CHOWDHURY**, Civil Engg, is going to receive the coveted Director's Gold Medal for topping all M. Tech. specializations.

c) **Mr. SOUVICK CHAKRABORTY**, Physics (School of Basic Sciences) is going to receive the coveted Director's Gold Medal for topping all M. Sc. Branches.

d) Eighteen (18) students receive the Institute Silver medals for topping in their respective branches/ specializations.

12. Social Responsibilities and Outreach Programme

Going by the spirit of Government of India in instituting the Unnat Bharat Abhiyan, the **institute took up several outreach activities including adopting 6 villages for helping in development.** Carrying on plantations, workshop sessions, providing science labs to schools, making campaigns like 'no to plastic, conducting programmes for children, have been a few of the activities taken up.

Open House and S&T Exhibition: On the Foundation Day (12th February), the Institute conducts open house, every year, for public and college and school students. Last year, 250+ displays and demonstrations were put up a large numbers ranging from 8000-9000 attended the same.

The institute religiously participates in all the programmes of the Ministry. As an example, the Institute conducted all the 17 paired states exhibiting the cultural aspects as recommended by the Ministry of Education.

13. Mentorship of Institutes

IIT Bhubaneswar has been assisting and collaborating with several local sister universities. Helping Ravenshaw University in creating of a master plan for its new Mahanadi campus, the Design Innovation Centre of IIT Bhubaneswar working with

- College of Engineering and Technology, Bhubaneswar
- BOSE Engineering School, Cuttack
- Ravenshaw University, Cuttack
- Kendriya Vidyalaya - 1, Bhubaneswar

and engaging colleagues from a large number universities **in terms of collaborative research and providing mentor support** to them are some of the initiatives taken.

14. Alumni Affairs related information

Although it is a new IIT, the institute has taken initiatives to build its alumni network early and keep it vibrant and has already organized three alumni meets so far,

- The Bangalore Chapter of IIT BBS Alumni Association was formed and inaugurated on 28 September 2019. The first ever off-campus meet of the Association, was conducted at Bengaluru.
- Alumni Chapters will be started at Hyderabad and bay area, in the near future.
- The institute took active part in the IIT Industry Conclave organized by the IIT Alumni Centre Bengaluru during 7-9 February 2020.
- During the visit to Singapore by the Director and Deans the team and the IIT Bhubaneswar Singapore alumni met and interacted with the PAN IIT Alumni Association in Singapore on 9th November 2019 in their annual meeting. Our Singapore Alumni could be connected with all IIT Alumni Association in Singapore

15. Entrepreneurship & Start up Activity

IIT Bhubaneswar is committed to its goal of nurturing entrepreneurship culture among its students. This year the E-cell organised several workshops, webinars and its flagship event E summit 2020. A two day workshop "From young innovators to Entrepreneurs" conducted with CEP and Govt. of Odisha for School children in Nov. 20-21, 2019. The sixth edition of E-Summit was organised during January 10-12, 2020 with the theme "Shifting Paradigms: Pursuing Purpose Beyond Profit".

Currently four projects are running under technology incubation center, three of them being based on internet of things ranging from home security solutions, health monitoring devices to electrical power grid stability solution.

The AR-VR Center of Excellence of the Research Park organized a grand hackathon on ARVR during 10th -12th Jan 2020. The next edition of the Hackathon and a grand PAN India Startup call is planned to be scheduled during Feb 2021.

16. Continuing Education Activities

Twenty (20) National and International symposiums, conferences and workshops have been organized by the institute.

IIT Bhubaneswar is now accorded QIP Centre status from 2019-20 by All India Council for Technical Education (AICTE) and started admitting faculty members of engineering institutes into doctoral and masters programmes.

IIT Bhubaneswar has conducted 32 Nos. of short-term courses with the support of eminent professors from across the globe under the Global Initiative of Academic Networks (GIAN), the Flagship program of the Ministry of Education.

Under SPARC, another important program of the Ministry, 11 major research projects have been sanctioned for the institute to facilitating academic and research collaborations. ***This is the largest number of approvals amongst the 2nd and 3rd generation IIT's.***

Functioning of the Institute in its high standards and its entire activities could not have been achieved without the full participation and support of all stakeholders – our faculty, students, staff; agencies and industries sponsoring R&D organizations and departments; professionals from other organizations and our alumni. The Institute is grateful to the Ministry of Education, Govt. of India for its continued and sustained encouragement and support.

Before I conclude, I congratulate all the graduating students, awardees and medal winners and wish all happiness, professional success and fulfillment in their lives.

Jai Hind!

Prof R V Raja Kumar

December 4 2020

Board of Governors

Chairman

Prof. Ratnam V. Raja Kumar
Director
Indian Institute of Technology Bhubaneswar

Members

Prof. Ratnam V. Raja Kumar
Director
Indian Institute of
Technology Bhubaneswar

Dr. S. S. Sandhu, IAS
Additional Secretary (TE),
Ministry of Education
Shastri Bhawan, New Delhi - 110 001
[Till 23.10.2019]

Dr. Rakesh Sarwal
Additional Secretary (TE),
Ministry of Education
Shastri Bhawan,
New Delhi - 110 001
[From 24.10.2019]

Shri Sanjay Kumar Singh, IAS
Commissioner-Cum-Secretary,
Skill Development & Technical
Education Department,
Govt. of Odisha, Bhubaneswar

Prof. V. K. Tewari
Director, IIT Kharagpur
Kharagpur - 721302 (WB)

Cdr. V.K. Jaitly
INS (Retd.) Chairman,
C-cube Consultants, C_cube
conducts Programs in
Business Excellence
New Delhi -110077

Prof. R. K. Panda
Professor, School of
Infrastructure
Indian Institute of
Technology Bhubaneswar
[Till 31.12.2019]

Prof. V. R. Pedireddi
Professor, School of Basic Sciences
Indian Institute of Technology
Bhubaneswar
[Till 31.12.2019]

Prof. Saroj Kumar Nayak
Professor, School of Basic Sciences
Indian Institute of Technology
Bhubaneswar
[From 01.01.2020]

Prof. N. C. Sahoo
Professor, School of
Electrical Sciences
Indian Institute of
Technology Bhubaneswar
[From 01.01.2020]

Secretary

Shri Debaraj Rath
Registrar In-Charge
Indian Institute of Technology
Bhubaneswar
[Till 23.05.2019]

Col (Dr) Subodh Kumar
Registrar
Indian Institute of
Technology Bhubaneswar
[From 24.05.2019]

Finance Committee

Chairman

Prof. Ratnam V. Raja Kumar
Director, Indian Institute of Technology Bhubaneswar

Members

Prof. Ratnam V. Raja Kumar
Director, Indian Institute of Technology Bhubaneswar

Dr. S. S. Sandhu, IAS
Additional Secretary (TE),
Ministry of Education
Shastri Bhawan, New Delhi - 110 001
[Till 23.10.2019]

Dr. Rakesh Sarwal
Additional Secretary (TE),
Ministry of Education
Shastri Bhawan, New Delhi - 110 001
[From 24.10.2019]

Ms. Darshana M Dabral
JS & FA, Dept. of Higher Education
Ministry of Education
Shastri Bhawan, New Delhi - 110 001

Prof. V. K. Tewari
Director, IIT Kharagpur
Kharagpur - 721302 (WB)
[From 12.04.2019]

Prof. R. K. Panda
Professor, School of Infrastructure
Indian Institute of Technology Bhubaneswar
[Till 31.12.2019]

Prof. Saroj Kumar Nayak
Professor, School of Basic Sciences
Indian Institute of Technology Bhubaneswar
[From 01.01.2020]

Secretary

Shri Debaraj Rath
Registrar In-Charge
Indian Institute of Technology Bhubaneswar
[Till 23.05.2019]

Col (Dr) Subodh Kumar
Registrar,
Indian Institute of Technology Bhubaneswar
[From 24.05.2019]

Building and Works Committee

Chairman

Prof. Ratnam V. Raja Kumar
Director, Indian Institute of Technology Bhubaneswar

Members

Shri S. R. Sethy
Chief Engineer, Buildings
PWD, Government of Odisha
Bhubaneswar
[Till 20.09.2019]

Shri Aditya Ray
Chief Engineer (DPI & Roads)
Works Department, Bhubaneswar
[From 21.09.2019]

Shri R. K. Shami
Chief Engineer, CPWD
Pokhariput, Bhubaneswar
[Till 20.09.2019]

Shri Sansar Pattanayak
Former ADG, CPWD
Bhubaneswar
[From 21.09.2019]

Mr. S. Sahu
Sr. General Manager (T), CESU, Odisha
Bhubaneswar
[Till 20.09.2019]

Shri Bhakta Kabi Das
Chief General Manager (P&C)
IDCO, Bhubaneswar
[From 21.09.2019]

Prof. R. K. Panda
Head, School of Infrastructure
Indian Institute of Technology Bhubaneswar

Dr. Prasant Kumar Sahu
Head, School of Electrical Sciences
Indian Institute of Technology Bhubaneswar
[Till 30.06.2019]

Prof. N. C. Sahoo
Professor
School of Electrical Sciences
Indian Institute of Technology Bhubaneswar
[From 01.07.2019]

Secretary

Shri Debaraj Rath
Registrar In-Charge
Indian Institute of Technology Bhubaneswar
[Till 23.05.2019]

Col (Dr) Subodh Kumar
Registrar,
Indian Institute of Technology Bhubaneswar
[From 24.05.2019]

Senate Members

1.	Prof. R.V. Raja Kumar	Chairman (Ex-Officio)	Director, Indian Institute of Technology Bhubaneswar
2.	Prof. Sujit Roy	Member	Professor, School of Basic Sciences (Chemistry) / Head, School of Minerals, Metallurgical and Materials Engineering
3.	Prof. Pravas Ranjan Sahu	Member	Dean (Academic Affairs) (Extended for one year w.e.f. 26.03.2020)
4.	Prof. V. R. Pedireddi	Member	Dean, (Students' Affairs)
5.	Prof. S.K. Mahapatra	Member	Dean, CE /Head, School of Humanities, Social Sciences and Management
6.	Prof. R.K. Panda	Member	Dean (AA&IR)
7.	Prof. S.K. Nayak	Member	Dean (F&P)
8.	Prof. R.K. Panda	Member	Head, School of Infrastructure (upto 29.02.2020)
9.	Dr. Dinakar Pasla	Member	Head, School of Infrastructure (w.e.f. 01.03.2020 for a period of 3 years upto 28.02.2023 or till further order)
10.	Dr. T. V. S. Sekhar	Member	Head, School of Basic Sciences
11.	Dr. P. K. Sahu	Member	Head, School of Electrical Sciences (w.e.f.30.06.2019)

12.	Prof. N. C. Sahoo	Member	Head, School of Electrical Sciences (w.e.f.01.07.2019)
13.	Dr. Satyanarayan Panigrahi	Member	Head, School of Mechanical Sciences (w.e.f.30.06.2019)
14.	Dr. Mihir Kumar Pandit	Member	Head, School of Mechanical Sciences (w.e.f.01.07.2019)
15.	Dr. Sandeep Patnaik	Member	Head, School of Earth, Ocean and Climate Sciences (upto 29.02.2020)
16.	Prof. R.K. Panda	Member	Head, School of Earth, Ocean and Climate Sciences (upto 01.03.2020 for a period of 2 years upto 28.02.2022)
17.	Prof. P. V. Satyam	Member	Head, School of Minerals, Metallurgical and Materials Sciences (w.e.f. 01.03.2020 for a period of 2 years upto 28.02.2022 or till further order)
18.	Prof. U.C. Mohanty	Member	Visiting Professor, School of Earth, Ocean and Climate Sciences
19.	Prof. V. R. Yerikalapudy	Member	Visiting Professor, School of Basic Sciences (Mathematics)
20.	Prof. Pratap Kumar Jagdev Mohaptra	Member	Visiting Professor, School of Mechanical Sciences and Academic Coordinator, school of humanities and social sciences and management (upto 19.04.2019)
21.	Prof. Brij Kumar Dhindaw	Member	Visiting Professor, School of Minerals, Metallurgical and Materials Sciences
22.	Prof. H.K. Mishra	Member	Visiting Professor, School of Earth, Ocean and Climate Sciences
23.	Prof. Rambhatla G Sastry	Member	Visiting Professor, School of Earth, Ocean and Climate Sciences
24.	Prof. Krishnamachar Prasad	Member	Visiting Professor, School of Electrical Sciences
25.	Prof. Godabarisha Mishra	Member	Visiting Professor, School of Humanities, Social Sciences and Management
26.	Prof. Rabi N. Mahapatra	Member	Visiting Professor, School of Electrical Sciences
27.	Prof. Johannes Eugene Marie Houben	Member	Visiting Professor, School of Humanities, Social Sciences and Management (Left the Institute)
28.	Prof. Brahma Deo	Member	MGM Chair Professor, School of Minerals, Metallurgical and Materials Engineering
29.	Prof. Sudhakar Panda	External Member	Director, NISER Bhubaneswar (w.e.f. 24.03.2019)
30.	Prof. Gopal Krishna Nayak	External Member	Director, IIIT Bhubaneswar (w.e.f. 24.03.2019)
31.	Prof. Radhamadhab Dash	External Member	Vice Chancellor, Shri Jagannath Sanskrit Vishvavidyalaya, Puri (w.e.f. 24.03.2019)
32.	Dr. Manoranjan Satapathy	Member	Associate Professor, School of Electrical Sciences (Two years w. e. f. 24.03.2019)
33.	Dr. Sabyasachi Pani	Member	Associate Professor, School of Basic Sciences (Two years w. e. f. 24.03.2019)
34.	Dr. Puspendu Bhunia	Member	Associate Professor, School of Infrastructure (Two years w. e. f. 24.03.2019)
35.	Dr. Animesh Mandal	Member	Associate Professor, School of Minerals, Metallurgical and Materials Engineering (Two years w. e. f. 24.03.2019)

36.	Dr. Seema Bahinipati	Member	Assistant Professor, School of Basic Sciences (Two years w. e. f. 24.03.2019)
37.	Dr. Rajkumar Guduru	Member	Assistant Professor, School of Humanities, Social Sciences and Management (Two years w. e. f. 24.03.2019)
38.	Dr. Shantanu Pal	Member	Assistant Professor, School of Basic Sciences / Warden
39.	Dr. S. Mohapatro	Member	President, Gymkhana/Associate Professor, School of Electrical Sciences
40.	Dr. Rajesh Roshan Dash	Member	Chairman Library/Associate Professor, School of Infrastructure
41.	Dr. Chandrasekhar Bhamidipati	Member (Ex-Officio)	Chairman, JEE
42.	Dr. Subhransu Ranjan Samantaray	Member (Ex-Officio)	Chairman, GATE
43.	Dr. Rajan Jha	Member (Ex-Officio)	Chairman, JAM
44.	Dr. Bibhuti Bhusan Sahoo	Member	Deputy Librarian, Central Library
45.	Mr. Siddharth Kumar	Student Invitee	Research Scholar, School of Humanities, Social Sciences and Management (w.e.f. 01.03.2019)
46.	Mr. Punit R	Student Invitee	Vice President, Gymkhana (upto 03.04.2019)
47.	Mr. Soumyajit Ghosh	Student Invitee	Vice President, Gymkhana (w.e.f. 04.04.2019)
48.	Shri Debraj Rath	Secretary	Registrar I/c (upto 23.05.2019)
49.	Col (Dr.) Subodh Kumar	Secretary	Registrar (w.e.f. 24.05.2019)

Administration

Director

Prof. Ratnam V. Raja Kumar

Deans

Dean (Academic Affairs)
Dr. Pravas Ranjan Sahu
Email: deanac@iitbbs.ac.in

Dean (Faculty and Planning)
Prof. Saroj Kumar Nayak
Email: deanf@iitbbs.ac.in

Dean (Research & Development)
Prof. R. K. Panda (up to 03.07.2019)
Prof. Sujit Roy (w.e.f. 04.07.2019)
Email: deanrd@iitbbs.ac.in

Dean (Student Affairs)
Prof. V. R. Pedireddi
Email: deansa@iitbbs.ac.in

Dean (Continuing Education)
Prof. Swarup Kumar Mahapatra
Email: deance@iitbbs.ac.in

Dean (Alumni Affairs and International Relations)
Prof. Swarup Kumar Mahapatra
(Up to 04.09.2019)
Prof. R. K. Panda (w.e.f. 05.09.2019)
Email: deanaa@iitbbs.ac.in

Head of the Schools

School of Basic Sciences
Dr. T. V. S. Sekhar
Email: hos.sbs@iitbbs.ac.in

School of Earth, Ocean and Climate Sciences
Dr. Sandeep Pattnaik (Up to 28.02.2020)
Prof. R. K. Panda (w.e.f. 01.03.2020)
Email: hos.seoc@iitbbs.ac.in

School of Electrical Sciences
Dr. Prasant Kumar Sahu (Up to 30.06.2019)
Prof. N. C. Sahoo (w.e.f. 01.07.2019)
Email: hos.ses@iitbbs.ac.in

School of Humanities, Social Sciences and Management
Prof. Swarup Kumar Mahapatra
Email: hos.hss@iitbbs.ac.in

School of Infrastructure
Prof. R. K. Panda (Up to 28.02.2020)
Dr. Dinakar Pasla (w.e.f. 01.03.2020)
Email: hos.sif@iitbbs.ac.in

School of Mechanical Sciences
Dr. Satyanarayan Panigrahi
(Up to 30.06.2019)
Dr. Mihir Kumar Pandit (w.e.f. 01.07.2019)
Email: hos.sms@iitbbs.ac.in

School of Minerals, Metallurgical and Materials Engineering
Prof. Sujit Roy (Up to 28.02.2020)
Prof. P. V. Satyam (w.e.f. 01.03.2020)
Email: hos.smmme@iitbbs.ac.in

Officers

Shri Debaraj Rath
Registrar I/c
(Up to 23.05.2019)
Email: jtregistrar@iitbbs.ac.in

Col (Dr) Subodh Kumar
Registrar
(w.e.f. 24.05.2019)
Email: registrar@@iitbbs.ac.in

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Joint Registrar
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Shri Anuj Pradhan
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Shri Bimalendu Mohanty
Superintending Engineer (Civil)-II
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Shri Sanku Das
System Engineer
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ar.ce@iitbbs.ac.in

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Assistant Registrar
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Shri Pradeep Kumar Sahoo
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Shri K. Saikiran
Assistant Registrar
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CDPO
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Programmer
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Shri K Rabin Kumar Dora
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Shri Biswaranjan Pradhan
Assistant Executive Engineer
(Electrical)
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Lt Cdr Raj Kumar
Chief Security Officer
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Dr. Mansoor Ahmed Khan
Medical Officer
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Dr. Subhasis Nag
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Shri Sushanta Kumar Poddar
OSD (Academics)
Email: osd.academics@iitbbs,.ac.in

Ms. Manisha Mishra
Student Counsellor
Email: manisha@iitbbs.ac.in

Shri Shalin Sasidharan Nair
Public Relation Officer
Email: pro@iitbbs.ac.in

PIC, Chairperson, Co-Coordinators, Warden and Gymkhana

Name, School	Position	Period
Professor-In-Charge		
Dr. Gaurav Bartarya School of Mechanical Sciences	PIC - E-Cell	w.e.f. 17.09.2018
Dr. Arun Ku. Pradhan School of Mechanical Sciences	PIC - Training & Placement [Career Development Cell]	w.e.f. 01.07.2016
Dr. Mihir Kumar Pandit School of Mechanical Sciences	PIC - Guest House	w.e.f. 01.07.2016
Prof. V. R. Pedireddi School of Basic Sciences	PIC - Permanent Campus	w.e.f. 18.07.2015
Prof. V. R. Pedireddi School of Basic Sciences	PIC - Security	w.e.f. 01.07.2016
Dr. P. K. Sahu School of Electrical Sciences	PIC - [Network & Security]	w.e.f. 01.07.2016
Dr. R. R. Dash School of Infrastructure	PIC - Transport Services	w.e.f. 01.07.2016
Dr. M. Sabarimalai Manikandan School of Electrical Sciences	PIC - Horticulture (Residence)	w.e.f. 16.06.2015
Dr. Srinivas Bhaskar Karanki School of Electrical Sciences	PIC - Horticulture (Academic)	w.e.f. 19.07.2016
Dr. Srinivas Bhaskar Karanki School of Electrical Sciences	PIC - Counselling Service	w.e.f. 29.06.2016
Dr. Satyanarayan Panigrahi School of Mechanical Sciences	PIC - IPR	w.e.f. 06.11.2012

Name, School	Position	Period
Dr. C. N. Bhende School of Electrical Sciences	PIC - Institute Seminar	w.e.f. 03.04.2018
Dr. Adway Mitra School of Electrical Sciences	PIC - Web Services	w.e.f. 11.04.2018
Dr. Chandrasekhar Perumalla School of Electrical Sciences	PIC - Web Services	w.e.f. 07.06.2019
Dr. Niladri Bihari Puhan School of Electrical Sciences	PIC - Web Services	w.e.f. 26.07.2019
Dr. Balakrishna Pamulaparthy School of Electrical Sciences	PIC - Electrical works	w.e.f. 26.03.2018
Dr. Chandrasekhar Perumalla School of Electrical Sciences	PIC - Electrical works	w.e.f. 26.07.2019
Dr. Dinakar Pasla School of Infrastructure	PIC - Civil works	w.e.f. 07.08.2015
Dr. Sumanta Haldar School of Infrastructure	PIC - Civil works	w.e.f 01.03.2020
Dr. Srinivas Pinisetty School of Electrical Sciences	PIC - ERP & E-mail admin	w.e.f. 11.04.2018
Dr. Manoranjan Satpathy School of Electrical Sciences	PIC - Centre of Excellence of Augmented Reality and Virtual Reality	w.e.f. 11.04.2018
Dr. Prasant Sahu School of Electrical Sciences	PIC - Centre of Excellence of Augmented Reality and Virtual Reality	w.e.f. 01.07.2019
Dr. Raj Kumar Singh School of Earth, Ocean and Climate Sciences	PIC - Raj Bhasha Ekak	w.e.f. 28.03.2015
Dr. Yogesh Bhumkar School of Mechanical Sciences	PIC - Start up Center	w.e.f. 03.04.2018
Dr. Rajan Jha School of Basic Sciences	PIC - Examination	w.e.f. 20.04.2018
Dr. Manas M. Mahapatra School of Mechanical Sciences	PIC - Time Table	w.e.f. 07.07.2017
Dr. Raj Kumar Guduru School of Humanities, Social Sciences and Management	PIC - Newsletter Committee	w.e.f. 11.04.2018

Chairman / Chairperson

Prof. Sujit Roy School of Basic Sciences	Chairman - Institute Purchase Committee	w.e.f. 01.07.2016
Dr. P. K. Sahu School of Electrical Sciences	Chairman - CITSC	w.e.f. 20.09.2017
Dr. Barathram Ramkumar School of Electrical Sciences	Chairman - CITSC	w.e.f. 05.09.2019
Dr. Barathram Ramkumar School of Electrical Sciences	Associate Chairman - CITSC	w.e.f. 20.09.2017
Dr. P.R. Sahu School of Electrical Sciences	Chairman - CPMC	w.e.f. 01.07.2016

Name, School	Position	Period
Dr. R.R. Dash School of Infrastructure	Chairman - Central Library	w.e.f. 01.07.2016
Dr. Manas M. Mahapatra School of Mechanical Sciences	Chairman - CIF [Central Instrumentation Facility]	w.e.f. 01.07.2016
Dr. Animesh Mondal School of Minerals Metallurgical and Materials Engineering	Co- Chairman - CIF [Central Instrumentation Facility]	w.e.f. 01.07.2016
Dr. C. Bhamidipati School of Basic Sciences	Chairman - JEE	w.e.f. 01.08.2016
Dr. Rajan Jha School of Basic Sciences	Chairman - JAM	w.e.f. 01.08.2016
Dr. S. R. Samantaray School of Electrical Sciences	Chairman - GATE	w.e.f. 01.08.2016
Dr. Remya Neelancherry School of Infrastructure	Chairman - Women Welfare Committee	w.e.f. 01.07.2016
Prof. R.K. Panda School of Infrastructure	Chairman - House Allotment Committee	w.e.f. 27.02.2015
Prof. R.K. Panda School of Infrastructure	Chief Vigilance Officer	w.e.f. 01.02.2016

Coordinator

Dr. Soobhankar Pati School of Minerals Metallurgical and Materials Engineering	Coordinator - Alumni Affairs & International Relations	w.e.f. 07.10.2015
Dr. Snehasis Chowdhuri School of Basic Sciences	Coordinator -NSS Program Officer	w.e.f. 01.07.2016
Dr. Snehasis Chowdhuri School of Basic Sciences	Coordinator - EAA	w.e.f. 01.07.2016
Dr. Srikant Gollapudi School of Minerals Metallurgical and Materials Engineering	Coordinator - EAA	w.e.f. 08.04.2019
Dr. B. Hanumanth Rao School of Infrastructure	Co- Coordinator - EAA	w.e.f. 01.07.2016
Dr. B.C. Mondal School of Basic Sciences	Co- Coordinator - EAA	w.e.f. 08.04.2019
Dr. Seema Bahinipati School of Basic Sciences	Co- Coordinator - UBA Programs	w.e.f. 11.04.2018
Dr. Tarakanta Nayak School of Basic Sciences	Co- Coordinator, UBA Programs	w.e.f. 11.04.2018
Prof. Godabarish Mishra School of Humanities, Social Sciences and Management	Academic Coordinator, HSS&M	w.e.f. 12.09.2018
Prof. S. K. Mohapatra School of Mechanical Sciences	Coordinator - QIP	w.e.f. 29.08.2018

Name, School	Position	Period
Warden		
Dr. Santanu Pal School of Basic Sciences	Warden	w.e.f. 01.07.2016
Dr. Srinivas B. Karanki School of Electrical Sciences	Assistant Warden [Boys]	w.e.f. 01.10.2015
Dr. Yogesh Ganpat Bhumkar School of Mechanical Sciences	Assistant Warden [Boys]	w.e.f. 08.07.2016
Dr. Sourav Sil School of Earth, Ocean and Climate Sciences	Assistant Warden [Boys]	w.e.f. 08.07.2016
Dr. Barathram Ramkumar School of Electrical Sciences	Assistant Warden [Boys]	w.e.f. 08.07.2016
Dr. Meenu Ramadas School of Infrastructure	Assistant Warden [Girls]	w.e.f. 01.07.2016
Dr. Manaswini Behera School of Infrastructure	Assistant Warden [Girls]	w.e.f. 01.01.2020
Gymkhana		
Dr. Sankarsan Mohapatro School of Electrical Sciences	President, Gymkhana	w.e.f. 13.02.2017
Dr. N.B. Puhan School of Electrical Sciences	Advisor, Science & Technology Activities of Student Gymkhana	w.e.f. 14.07.2018
Dr. Tabrez Khan School of Basic Sciences	Advisor, Science & Technology Activities of Student Gymkhana	w.e.f. 10.07.2019
Dr. Venugopal Arumuru School of Mechanical Sciences	Advisor, Sports & Game Activities of Student Gymkhana	w.e.f. 14.07.2016
Dr. Olive Ray School of Electrical Sciences	Advisor, Sports & Game Activities of Student Gymkhana	w.e.f. 26.07.2019-
Prof. P. K. J. Mohapatra School of Mechanical Sciences	Advisor, Entrepreneurship Cell [E-Cell] of Student Gymkhana	w.e.f. 14.10.2015 Up to 19.04.2019
Dr. Kaushik Das School of Minerals Metallurgical and Materials Engineering	Treasurer - Gymkhana	w.e.f. 26.07.2016
Dr. Yengkhom Kesorjit Singh School of Earth, Ocean and Climate Sciences	Treasurer - Gymkhana	w.e.f. 08.04.2019
Dr. Ankur Gupta School of Mechanical Sciences	Advisor - Faculty [Socio-Cultural]	w.e.f. 13.02.2017
Dr. Manaswini Behera School of Infrastructure	Advisor - Faculty [Socio-Cultural]	w.e.f. 08.04.2019
Dr. Mihir Kumar Pandit School of Mechanical Sciences	Advisor, Purchase Committee of Student Gymkhana	w.e.f. 14.07.2016
Dr. V. Pandu Ranga School of Mechanical Sciences	Advisor, Finance Committee of Student Gymkhana	w.e.f. 14.07.2016

Staff

Director's Office

Shri Surendranath Patra
[Secretary]
(Up to 30.06.2019)

Smt. Suhana Parween
[Jr. Accounts Officer]

Shri Una Sujit
[Junior Superintendent]

Shri Ramseh Kumar Panda
[Junior Assistant]

Shri Ramesh Chandra Biswal
[Driver]

Registrar's Office

Shri Pradeep Kumar Pattanaik
[Private Secretary]

Dean - Faculty & Planning Office

Shri Satyabrota Ghosh
[Jr. Superintendent]

Dean - Continuing Education Office

Shri Himansu Bhusan Sahoo
[Junior Assistant]

Establishment

Ms. Jignyasha Behera
[Jr. Superintendent]

Ms. Smruti Smaranika Kumar
[Junior Assistant]

Shri Arup Kumar Pandab
[Junior Assistant]

Shri Vikram Alagandula
[Junior Assistant]

Finance and Account Section

Shri Ajit kumar Sahoo
[Jr. Superintendent]

Shri Sambit Ranjan Mohanty
[Jr. Superintendent]

Shri Raghunath Behera
[Jr. Accounts Officer]

Shri Guru Parsad Sahoo
[Jr. Accounts Officer]

Shri Vivek Kedia
[Jr. Accounts Officer]

Shri Vijay Kumar Biswal
[Internal Audit Assistant Sr.]
(14.10.2019 to 31.3.2020)

R&D Section

Shri Giresh Kumar Pitta
[Jr. Superintendent]

Shri Anirudha Bai
[Jr. Superintendent]

Store & Purchase Section

Shri Rajsekhar Bendi
[Jr. Superintendent]

Shri Abhishek Kachchap
[Jr. Superintendent]

Shri Jogarao Chintala
[Junior Assistant]

Academic Section

Shri Satyajit Sarangi
[Jr. Superintendent]

Shri Abhimanyu Mahal
[Jr. Superintendent]

Smt. Nibedita Patnaik
[Jr. Superintendent]

Shri Susanta Kumar Prusty
[Junior Assistant]

Shri Gouri Shankar Mishra
[Junior Assistant]

Central Library

Ms. Sangita Sahu
[Sr. Library Information Assistant]

Shri Dillip Kumar Parida
[Sr. Library Information Assistant]

Horticulture

Shri Kamireddy Visweswara Reddy
[Horticulturist]

Central Dak

Ms. Souravi Behera
[Junior Assistant]

Medical Unit

Ms. Prabhavathy M.
[Staff Nurse]

Ms. Swarnalata Swain
[Staff Nurse]

Ms. Soniya John
[Staff Nurse]
(Up to 17.08.2019)

Shri Srinibash Panigrahy
[Pharmacist]

Shri D. Kannan
[Pharmacist]

Health and Sanitary Unit

Shri Pradip Kumar Poddar
[Sanitary Inspector]

Security Unit

Shri Tapan Kumar Mohapatra
[Assistant Security Officer]

CITSC

Shri Rabinson Behera
[Associate Network Administrator]

Shri Tileswar Mahto
[Technician (System Administration)]

Shri Ranjith Rao
[Technician (Network Administration)]

Shri Shwetank
[Assistant Network Administrator] (Up to 24.08.2019)

Engineering Cell

Shri Dipti Ranjan Pattanaik
[Junior Engineer (Civil)]

Shri Abhisek Das
[Junior Engineer (Electrical)]

Shri Gajendra Behera
[Junior Engineer (Electrical)]

Shri Rupesh Kumar Pradhan
[Junior Engineer (Civil)

Student Gymkhana

Ms. Sunita Verma
[Physical Training Instructor]

Shri Biswajit Pegu
[Physical Training Instructor]

Shri Ravinder Kumar Sagar
[Physical Training Instructor] (Up to 27.12.2019)

School of Basic Sciences

Dr. Nihar Ranjan Panda
[Jr. Technical Superintendent]

Shri Sushanta Sahoo
[Jr. Technical Superintendent]

Shri Tarapada De
[Junior Technician]

Shri Samir Kumar Jena
[Jr. Laboratory Assistant]

Shri Sukesh Kumar Mishra
[Jr. Laboratory Assistant]

Shri Naresh Koppula
[Jr. Laboratory Assistant]

Shri Marshal Tudu
[Junior Assistant]

School of Electrical Sciences

Ms. Madhusmita Divyadarsini Mohapatra
[Jr. Technical Superintendent]

Shri Santosh Kumar Sahoo
[Jr. Technical Superintendent]

Shri Bikram Ranjan Behera
[Junior Technician]

Shri Dillip Kumar Biswal
[Junior Technician]

Shri Birata Keshari Nanda
[Junior Technician]

Shri Brajamohan Mohapatra
[Junior Technician]

Shri Raimohan Behera
[Junior Technician]

Sk Tajuddin Ahmed
[Junior Technician]

Shri Krushana Chandra Nayak
[Junior Technician]

Shri Mrinal Datta
[Junior Technician]

School of Infrastructure

Ms. Supriyarani Mohanty
[Jr. Technical Superintendent]

Shri Samir Kumar Sethi
[Jr. Technical Superintendent]

Ms. Akasmika Sarangi
[Junior Technician]

Shri Soubhagya Kumar Behera
[Junior Technician]

Shri Amiya Chandra Singh
[Junior Technician]

School of Mechanical Sciences

Shri Aloka Kumar Nayak [Jr. Technical Superintendent]

Shri Malaya Kumar Routray
[Jr. Technical Superintendent]

Shri Sidhartha Biswal
[Jr. Assistant]

Shri Dillip Kumar Sahoo
[Junior Technician]

Shri Sunil Kumar Pradhan
[Junior Technician]

Shri Bibhudata Mohanty
[Junior Technician]

Shri Purnendu Kumar Bisoi
[Junior Technician]

School of Mineral, Metallurgical & Materials Engineering

Shri Ramakrishna Pantangi
[Jr. Technical Superintendent]

Shri Sonu Kumar Goyal
[Jr. Laboratory Assistant]

Central Instrumentation Facility

Shri Vidya Sagar Vajja
[Jr. Technical Superintendent]

About IIT Bhubaneswar

Indian Institute of Technology Bhubaneswar is established by the government of India in 2008 under The Institutes of Technology Act 1961 with Amendments up to 2012. The Act was passed in the Lok Sabha on 24th March 2011 and by the Rajya Sabha on 30 April 2012. IIT Bhubaneswar became an Institute of National Importance from 29 June 2012 with notification of Amendment in the Institutes of Technology Act, 1961 by the Ministry of Education, (Department of Higher Education) Government of India published in the Gazette of India dated 2 July 2012.

The Institute started functioning from the campus of IIT Kharagpur on 22nd July 2008 and shifted its operation to the city of Bhubaneswar on 22nd July 2009. The Institute has adopted the concept of Schools rather than Departments for promoting inter-disciplinary research. At present, 7 schools are offering an academic programme.

Presently the academic programmes of the Institute include B. Tech. (Hons.) in Computer Science, Civil, Electrical, ECE, Mechanical Engineering, Metallurgical and Materials Engineering. The institute is also starting Dual degree courses in Mechanical and civil with intake of 10 from the academic year 2016-17. The institute offers 2 years of M.Sc. and M. Tech courses. The Institute started the Doctoral programme from the academic session 2009-2010 and offer admission to the joint M. Tech-Ph.D. Programme from July 2012. The Indian Institute of Technology, Bhubaneswar (IITBBS) is also planning to start a new school of planning, architecture and design. This school will offer undergraduate, postgraduate and Ph.D. courses in all three disciplines. This will be the eighth school to function in the Institute. At present, such schools function at two other IIT's-in IIT Kharagpur and Roorkee.

The Institute has broadly adopted the course curricula, syllabi and other academic regulations of IIT Kharagpur, the mentor institute. The pedagogy emphasizes participatory, student-centric and participatory learning. The academic programmes are equipped with very relevant courses for a budding entrepreneur, the entire institute may be used as a technology incubator and the institute has a 40,000 sq. ft. Start-up space for students to avail.

The institute is committed to providing holistic education aimed at producing tomorrow's leaders, nurturing personality, creativity, innovative mind-set and capability be it in Science or Technology or Management or other domains of human excellence. It provides ample opportunity for a young mind to take any path and excel apart from providing the opportunity to research in a chosen area. Institute is also committed to creating a wellness environment, including in green, clean and healthy environment, quality education, efficient and effective governance, effective health services, security, equality and enlightenment.

The Institute has started all academic operations from the permanent campus at Argul from academic session 2015-16. The final shifting of the Institution was done on 14th July, 2018 where the entire administrative became an operational post that. The Institute provides well-qualified faculty, state-of-the-art infrastructure facilities creating a conducive environment for the rapid growth of the students' skill sets in all aspects of the personality – academic, research, cultural, sports, ethical and social responsibility. Our Institute's numerous collaborations with foreign universities, industries and institutions across the world provide scope to the students to be exposed to the global trends in education, research and industry. Ample opportunities in both national and international stints for internships, research projects and exchange programs have been a prominent trend among our students. In the past 10 years the Institute Co-offered degrees to 1810 students (B.Tech., M.Tech., Ph.D., MSc., etc.)

During the last 10 years, the Institute's faculty members and students have contributed to creating knowledge by publishing more than 1850 original research papers in reputed national and international Journals and Conferences. Students also won several awards in conferences and competitions.

The Institute has been constantly increasing its rankings in various international and national agency rankings. As per Times Higher Education (THE) World University rankings 2020, the institute has been ranked 601-800 among 1396 institutes across the world and 10th in India among 56 institutes, where it has been ranked 7th in citation scores in India. The Three University Mission Rankings (Russia) has ranked the Institute in 701-800. Also as per The Times Higher Education (THE) Young University Rankings 2019, the institution has been ranked 151-200 in the world and 10th in India. In addition, IIT Bhubaneswar has been ranked by various credible national agencies. The Institute has been ranked 17th in Engineering and 46th in an overall category by National Institutional Ranking Framework (NIRF)-MOE, 9th rank by Times Engineering Institute Rankings 2019, 9th rank by India Today Best Engineering College, 20th rank in QS India University Rankings 2020 and 227 in QS World University Rankings Asia.

Vision and Mission

Indian Institute of Technology Bhubaneswar inherits the brand name IIT. This fact itself charges the Institute not only to be worthy of its inheritance but also to be distinctive and distinguished on its own by scripting a path towards novelties.

Presented below are the statements for Vision, Mission, Goals & Strategies (to achieve the Goals) and the Core Values of IIT Bhubaneswar.

Vision

"IIT Bhubaneswar will be globally well recognized for creating outstanding graduates and new knowledge"

Mission

- To shape ourselves into a learning community, where we work, listen and respect each other.
- To encourage and facilitate faculty, researchers and students to work synergistically across discipline boundaries.
- To infuse a sense of excitement in students in innovation & invention, design & creation and entrepreneurship.
- To develop and pursue curricula those are dynamic, flexible and holistically designed to facilitate creativity and cognitive thinking.
- To strive for productive partnerships between the industry and the Institute.

Goals and Strategies

Promoting globally competitive academic programs and ambiance that support intellectual growth and skill acquisition

- Promote skills to critically analyze and the competency to effectively synthesize and apply new knowledge in curriculum development and delivery
- Address the changing needs of the region, state, nation and world in the learning process.
- Create a diverse, fully-engaged, learner-centric campus environment
- Strengthen the national and international competitiveness of the students by facilitating international internships, industrial project opportunities, student exchange and study abroad participation
- Put equal emphasis on discovery science and solution science
- Bring research into classrooms

Expanding world-class interdisciplinary research and scholarly endeavours

- Promote distinctive research programs that address the real-life as well as futuristic issues.
- Strengthen integrated and synergistic interdisciplinary research within and across the various Schools.
- Broaden and strengthen the Institute's research base and support infrastructure by engaging with partners from all sectors of the economy.
- Create a talent pool of world-class faculty members, postdoctoral fellows, doctoral and post-graduate students.
- Create an excellent support staff structure and regularly upgrade their competencies.
- Evolve itself into a repository of intellectual properties and prototypes on a globally competitive basis.

Strengthening and providing support in sustaining a healthy society by improving the quality of life through the application of technology

- Establish an institutional structure to facilitate and promote community engagement and societal enterprise
- Include community engagements into the Institute's promotional guidelines
- Encourage and reward faculty and students' efforts in community development. Acknowledge efforts and gains in official statements and transcripts

Establishing a strong and sustainable economic base for the Institute

- Encourage and facilitate sponsored projects, consultancy and technology transfer for creating a sound corpus
- Utilize brand value for attracting endowment for sponsored chairs and scholarships
- Support entrepreneurial endeavours especially in commercializing emerging technologies evolved out of the Institute labs through a public-private partnership

Building up a healthy and robust IIT Bhubaneswar family

- Promote and sustain a positive working environment and maintain a significantly improved service quality
- Improve staff support through expanding professional development opportunities
- Perform Institute's corporate social responsibilities with utmost sincerity
- Nourish and sustain vibrant co- and extra-curricular activities
- Create an ambiance for bonding through equity, trust and mutual respect

Core Values

Core Values

- Respecting students as budding engineers and scientists embarking on a journey towards innovation and invention
- Nurturing freedom of thought and expression and encouraging a sense of inquiry
- Empowering each person to rise to his/her full potential
- Respecting the opinions and rights of others

About Campus

The permanent campus of IIT Bhubaneswar spreads over 941.59 Acres of land. It is situated at the foot of Barunei Hill, which is famous for its rich history. The campus provides a unique serene and pollution free academic environment. The campus includes an Academic area, a Residential area and an area for Training centers and Research Park.

Mahanadi Hall of Residence

Boys Hostel with the capacity of 800 students Mess Facilities; Modern and well-equipped kitchens; Gym and Physical Fitness; Basketball and Volleyball Courts; Badminton and Table Tennis Court; Media Entertainment Room; Solar Lighting Systems; 24 Hours high alert security system; Gigabit Ethernet to individual Hostel rooms; ATM facilities.

Subarnarekha Hall of Residence

Girls Hostel with the capacity of 200 students Independent mess facilities; Modern and well-equipped kitchens; Basketball and Volleyball Courts; Solar lighting systems; 24 hours high alert security system; Gigabit Ethernet to individual hostel rooms.

Health Center

- Dispensary-Male
- Dispensary-Female
- Round the clock availability of experienced doctors
- Well-equipped ambulances
- Paramedical staff nurses
- Life-saving drugs

Sports Facility

- Cricket field
- Volleyball courts
- Basketball courts
- Table tennis rooms
- Tennis court

Residential facility for Faculty and Staff

- Faculty quarters block having 80 quarters
- 40 room guest house
- Staff quarter block having 40 quarters
- Mini-Market
- 200 seated community centre

Guest House

The guest house is comprised of a total of 42 single and double bedded air-conditioned rooms with attached bathrooms and all modern amenities. Online booking and e-payment facilities are available.

Phase-II constructions of IIT Bhubaneswar

MOE has sanctioned ₹1260 Crores for Phase –I & II constructions of IITBBS. Out of ₹1260 crores, IIT Bhubaneswar had approved the Preliminary Estimated cost of ₹410 Crores for Phase-I and CPWD was given A/A and E/S and planned for the expenditure of ₹850 Crores for Phase – II constructions by appointing NBCC (India) Ltd. as the Project Management Consultant for phase – II constructions of IIT Bhubaneswar.

Completed Buildings of Phase-II constructions

Sl. No.	Name of the Work	Area (Sq.m.)	Date of Start	Likely date of Completion
1.	Boys' Hostel (800 Seater)- 1 No.	24504	20.04.2017	15.07.2019
2.	Girls' Hostel (400 Seater)- 1 No.	15043		
3.	Director's Bungalow	506	27.11.2017	14.02.2020

Brahmaputra Hall of Residence

Boys Hostel with capacity of 800 students with single room facility, Independent mess facilities; Modern and well equipped kitchens; Multipurpose hall; 24 hours high alert security system; Gigabit Ethernet to individual hostel rooms

Ganga Hall of Residence (GHR)

GHR is having a capacity of 400 girls students are equipped with single room facility, Independent mess facilities; Modern and well-equipped kitchens; a Multipurpose hall; 24 hours high alert security system; Gigabit Ethernet to individual hostel rooms

Director's Bungalow

The bungalow is having 506 sq. Meter plinth area; 24 hours security system including boundary wall and kitchen garden facilities.

Buildings under Progress in Phase-II constructions

The following buildings/facilities are under construction by NBCC as PMC.

Sl. No.	Name of the Work	Area (Sq. m.)	Date of Start	Likely date of Completion
M/s. Simplex Infrastructures and M/s. Girdhari Lal Constructions Pvt. Ltd.				
1.	Boys' Hostel (800 Seater)- 1 No.	24504	27.11.2017	31.12.2020
2.	Type – A Faculty Qtrs. (44 Nos)-2 unit	11386		
3.	Type –B Faculty Qtrs. (88 Nos) -4 unit	21275		
4.	Type –C Staff Qtrs. (66 Nos)-3 unit	13682		
5.	Type –D Staff Qtrs. (44 Nos) - 2 unit	6633		
6.	Students activity centre (including swimming Pool 50 x 25M)	4350		
7.	Dispensary	1224		
8.	Auditorium (1500 Capacity)	5278		

Sl. No.	Name of the Work	Area (Sq. m.)	Date of Start	Likely date of Completion
9.	School of Minerals, Metallurgical and Materials Engineering	6085	27.11.2017	31.12.2020
10.	School of Earth Ocean & Climate Sciences	6001		
11.	School of Humanities, Social Sciences & Management	1715		
12.	Central Workshop	2545		
13.	Central Research and Instrumentation facilities	2725		
14.	Lecture Theatre (60 Seater Class room-48 Nos., 120 Seater Class room-22 Nos., 240 Seater Classroom - 4 Nos.	24632		
M/s. SNS Infracon Pvt. Ltd.				
1.	Commercial Complex (Academic)	1282	01.06.2018	30.09.2020
2.	Commercial Complex (Residential)	1601		
3.	Extension of SES Building	4898		
M/s. Lalitendu Satpathy and M/s. Gurumaharaja Engicon Pvt.Ltd.				
1.	Construction of Sewerage Network at Argul Campus		14.11.2018	30.09.2020
M/s. Shreejikrupa Projects Ltd.				
1.	Efficiency Hostel	7555	14.12.2018	30.09.2020
2.	Extension of SBS Building	2564		
3.	Extension of SIF Building	3105		
4.	Extension of SMS Building	3128		
M/s. Shreejikrupa Projects Ltd.				
1	External development (like Road, Drain, Play Fields, Play courts, Equipment room, Cycle car parking, land scapping in LHC and School and open air theatre		03.03.2019	31.12.2020
M/s. J.M. Enviro Technologies Pvt. Ltd.				
1.	STP with SCADA system		29.06.2019	31.07.2020

Academic Area / Construction Block

Photographs of under constructed Buildings as on Dt. 31.03.2020

Academic Area

Auditorium: Structural Work of 1st floor is in progress

LTC-1: Structural work completed.

LTC-2: 2nd floor roof slab work Is in progress

LTC 3: The structural work completed.

SMMME: The structural work completed & finishing work is in progress

SEOCS: The structural work completed & finishing work is in progress.

SIF Extension: The structural work completed & finishing work is in progress.

SMS Extension: The structural work completed & finishing work is in progress.

SBS Extension: The structural work completed & finishing work is in progress

SES Extension (A- Wing): The structural work completed & finishing work is in progress

SES Extension (B- Wing): The structural work completed & finishing work is in progress

CRIF: Work completed & finishing work is in progress

Central Workshop: The structural work completed & finishing work is in progress

Residential Block

Type-A1 & A 2 Quarters: A1 finishing work is in progress and A2- 3rd floor roof slab completed.

Type-B1 & B 2 Quarters: B1 finishing work is in Progress and B2- 2nd floor roof slab completed.

Type-B3 & B 4 Quarters:B3 - 2nd floor roof slab completed and B4- finishing work is in progress

Type-C1 & C2 Quarters: C1- 5th floor roof slab Completed and C2 - 2nd floor roof slab completedc

Type- C3 Quarters: Finishing work is in progress.

Type-D1 & D2 Quarters: Finishing work is in Progress

Boys' Hostel-3: Front side dining and multipurpose hall Finishing work is in progress.

Boys' Hostel-3: B wing finishing work is in Progress

Boys' Hostel-3: A wing 3rd floor roof slab completed.

Dispensary: Finishing work is in progress.

Student Activity Centre: Finishing work is in progress

Swimming Pool: Finishing work is in progress

Commercial complex (Res): Finishing work is in progress.

Efficiency Hostel: Finishing work is in progress

Cricket Ground: Finishing work is in progress.

Football Ground with the athletic track: Work is in Progress.

Hockey Ground: Finishing work is in progress.

Basketball, Volleyball and Tennis Court : Finishing work is in progress.

Eco-Friendly Campus Initiatives

The horticulture activity was started in 2015 to create the IIT Bhubaneswar campus with full of greenery and more vibrant, including exotic and indigenous deciduous and coniferous trees and plants (long-life tall trees, flower and medicinal trees, fruit trees, palm and pine trees). For the next five year plan, the main focus of the centre for horticulture is to create native landscaping in newly constructed areas and near buildings with lush green gardens adorned with ornamental and medicinal plants that maintain the clean and healthy environment for the students and residents of the campus. An autonomous water irrigation system will be set up in the campus to saving both water and expenditures. The horticulture section is strict about using only organic fertilizers.

Plantation Initiative

IIT Bhubaneswar believes that nurturing nature is the best way to promote creativity and increasing the amount of landscaping and greenery on the campus can provide a positive effect on the mental and physical health of the community. More than 33000 trees have been planted in the last two years. The exotic and indigenous deciduous and coniferous trees and plants were chosen to create a healthy eco-system for attracting the exotic and migratory birds. The avenue trees can soothe and relax us by providing pleasant smells. The massive teak plantation was completed along the boundary wall of our campus to help in maintaining the balance between the oxygen and Carbon dioxide in the atmosphere

Cycle Friendly Campus Initiative

IIT Bhubaneswar banned power vehicle use by students and incorporated the "Cycling Culture" by considering the health benefits of students, faculty, staff and the community and for controlling environmental risk factors. The institute has initiated the Bicycle Infrastructure Development Plan for creating a "Cycle Friendly Campus" by providing a sustainable and convenient tree-lined cycle path to a ride a bicycle between the schools and hostels, and to create cycle parking in each of the buildings.

Energy-Harvesting Initiative

IIT Bhubaneswar has installed solar panels on the building rooftops to reduce carbon footprint and dependency on conventional sources of energy.

Water-Harvesting Initiative

IIT Bhubaneswar has initiated building up rooftop rainwater harvesting and surface rainwater harvesting infrastructure and setting up a waste management system and wastewater recycling plant.

Green Buildings

The buildings are GRIHA (Green Rating for Integrated Habitat Assessment) 4 and 5 compliant. The building construction is done by using the fly ash bricks recognized as an environmentally friendly product because it helps in keeping the building cool and clean environment, and also saves agricultural land which is used for manufacturing clay bricks

Eco-friendly Waste Disposal

IIT Bhubaneswar deployed dustbins with biodegradable and non-biodegradable categories.

IIT BHUBANESWAR is Ragging Free

The Institute strongly adheres to the anti-ragging policy and implements it through the true spirit of actions. The institute takes several timely actions including close monitoring to ensure the system is in place. Also the administration, concerned faculty and staff conduct several meetings with the newly joined fresher's as well as senior students appraising them about the policy of the institute and counseling them about the good practices of interaction with new students and development of brotherhood towards personality building.

The Dean (SA) closely monitors the activities on the campus being supported by Warden and faculty members to make it ragging free. In order to build up the confidence in the minds of freshers, faculty do regularly visit the hostels to ensure the truest interaction between freshers and senior students and spend nights in the hostel during the initial few months

Academics

Indian Institute of Technology Bhubaneswar is one of the elite technology institutes of India spurred by sustained creation of knowledge and innovation, through high-quality R&D activities and commitment to holistic education. The Institute aims to develop and pursue dynamic and flexible curricula designed to facilitate creativity and cognitive thinking among students through productive partnerships with industry. The Institute offers 6 Nos. of B.Tech., 9 Nos. of Dual Degree Programmes, 5 Nos. of M.Sc., 14 Nos. of M.Tech Programmes and Ph.D. Programme in its 7 Schools. The admission for the academic year 2019-20 to the courses Ph.D., M.Tech., M.Sc. and B.Tech. & Dual Degree took place on 17th, 19th and 23rd July, 2019 respectively. Intake of the B. Tech. and Dual Degree students increased from 369 to 420 with the implementation of @5% reservation for the EWS category and increase in supernumerary seats for female students significantly. Out of 420 seats offered through JEE, 407 students (Including 4 preparatory course completed students of last year, joined this year) joined B.Tech, and Dual Degree programmes and 4 students joined the preparatory course at other institutes, Out of 100 seats offered, 82 students joined M.Sc and out of 246 offered, 192 (including 3 sponsored students from DRDO) students have joined various M.Tech programmes. 63 students took admission in the Ph.D. programme. M.Tech. admission through COAP was very successful. The general trend to opt for Computer Science, Electronics & Communication, Electrical Engineering disciplines were exercised by the students for undergraduate programmes. From the academic year 2019-20, three new M.Tech Programmes viz, Geotechnical Engineering, Manufacturing Engineering and Power Electronics and Drives were introduced. The Institute had 2102 Students (B.Tech. - 1347, M. Tech. - 314, M.Sc. – 153, and Ph. D. - 288) during the period 2019-20.

The 8th Annual Convocation was held on 21st September 2019 in the Community Centre, Argul Campus, IIT Bhubaneswar. Dr. K. Sivan, Chairman ISRO graced the occasion as Chief Guest. The Members, Board of Governors, the Director IIT Bhubaneswar Prof. Ratnam V. Raja Kumar and other dignitaries were present on the occasion. Out of total of 356 graduates, 198 (85 B.Tech., 55 M.Tech., 38 M.Sc., and 20 Ph.D.) students were awarded degrees during the occasion.

Shri Shrohan Mohapatra from B.Tech. (Computer Science and Engineering) was awarded the President of India Gold Medal in absentia for topping among all B. Tech. branches, Shri Rahul Das of M.Tech. (Structural Engineering) was awarded the Director's Gold Medal for topping among all M.Tech. Programmes and Shri. Anubhav Nath of M.Sc. (Chemistry) was awarded the Director's Gold Medal for topping among all M.Sc. disciplines. Several other medals and endowment awards were also distributed.

Academic Information for 2019 – 20

Programmes Offered

4-year B.Tech. Programme	Civil Engineering, Electrical Engineering, Mechanical Engineering, Computer Science and Engineering, Metallurgical and Materials Engineering, Electronics and Communication Engineering
5-year Dual Degree (B.Tech. + M.Tech)	B. Tech in Mechanical Engineering + M. Tech. in Mechanical System Design, B. Tech in Mechanical Engineering + M. Tech. in Thermal Science and Engineering, B. Tech. in Mechanical Engineering + M. Tech. in Manufacturing Engineering, B. Tech in Civil Engineering + M. Tech. in Structural Engineering, B. Tech in Civil Engineering + M. Tech. in Transportation Engineering, B.Tech. in Civil Engineering + M. Tech. in Transportation Engineering, B. Tech in Civil Engineering + Environmental Engineering, B.Tech. in Computer Science and Engineering + M.Tech. in Computer Science and Engineering, B.Tech. in Electrical Engineering + M.Tech. in Power Electronics and Drives, B.Tech. in Metallurgical and Materials Engineering + M.Tech. in Materials Science and Engineering
M. Tech. Programme	Climate Science and Technology, Electronics and Communication Engineering, Transportation Engineering, Structural Engineering, Metallurgical & Materials Engineering, Mechanical Systems Design, Thermal Science and Engineering, Power System Engineering, Environmental Engineering, Water Resources Engineering, Computer Science and Engineering, Geotechnical Engineering, Manufacturing Engineering, Power Electronics and Drives
Joint M.Sc.-Ph.D. Programme	Physics, Chemistry, Mathematics, Geology, Atmosphere and Ocean Sciences
Ph.D. Programme	School of Basic Sciences, School of Earth, Ocean & Climate Sciences, School of Electrical Sciences, School of Humanities, Social Sciences and Management, School of Infrastructure, School of Mechanical Sciences, School of Minerals, Metallurgical & Materials Engineering

Year-Wise Sanctioned (Approved) Intake

Academic Programme	2019-20	2018-19	2017-18	2016-17
B.Tech & Dual Degree	389	350	350	260
M.Tech	246	173	154	130
Joint M.Sc. - Ph.D.	100	100	100	100
Ph.D.	449			

Year-Wise admitted strength of Students in various Academic Programmes

Year	B.Tech. & Dual Degree	M.Tech.	M.Sc.	Ph.D.	Total
2010-11	126			25	151
2011-12	112			21	133
2012-13	113	42		50	205
2013-14	148	50	57	44	299
2014-15	164	71	71	48	354
2015-16	162	74	76	58	370
2016-17	249	106	73	61	489
2017-18	338	125	70	51	584
2018-19	354 *	156	75	90	675
2019-20	407 *	192	82	63	744

*including Supernumerary Female student and preparatory course completed students

Total actual Student Strength (2019-20)

Programme	No. of Male Students	No. of Female Students	Total Students	Within State	Outside State	Socially Backward (SC, ST, OBC-NCL)
B.Tech & Dual Degree	1173	174	1347	55	1292	685
M.Tech	254	60	314	---	---	141
M.Sc.	113	40	153	---	---	79
Ph.D	229	59	288	122	166	106

Course Wise Student Strength B.Tech & Dual Degree

Sl. No.	Name of Programme	Approved Intake	No. of students admitted in 2019-20*		Total number of students in 2019-20*		No. of Students passed in 2018-19	
			Male	Female	Male	Female	Male	Female
1	B.Tech. (Civil Engineering)	56	46	9	156	18	31	1
2	B.Tech (Electrical Engineering)	56	50	10	177	29	32	3
3	B.Tech. (Computer Science and Engineering)	56	49	11	188	27	41	3
4	B.Tech (Electronics and Communication Engineering)	44	36	7	149	25		
5	B.Tech. (Mechanical Engineering)	56	49	11	167	22	30	1
6	B.Tech. (Metallurgical and Materials Engineering)	22	21	4	71	8	10	0
7	Dual Degree (B. Tech in Mechanical Engineering + M. Tech. in Mechanical System Design)	11	11	3	44	6		
8	Dual Degree (B. Tech in Mechanical Engineering + M. Tech. in Thermal Science & Engineering)	11	11	3	41	4		
9	B. Tech. in Mechanical Engineering + M. Tech. in Manufacturing Engineering	11	11	3	28	5		
10	Dual Degree (B. Tech in Civil Engineering + M. Tech. in Structural Engineering)	11	9	2	33	7		
11	Dual Degree (B. Tech in Civil Engineering + M. Tech. in Transportation Engineering)	11	8	1	35	5		
12	B. Tech in Civil Engineering + M. Tech. in Environmental Engineering	11	8	2	14	4		

Sl. No.	Name of Programme	Approved Intake	No. of students admitted in 2019-20*		Total number of students in 2019-20*		No. of Students passed in 2018-19	
			Male	Female	Male	Female	Male	Female
13	B.Tech. in Computer Science and Engineering + M.Tech. in Computer Science and Engineering,	11	9	2	28	6		
14	B.Tech. in Electrical Engineering + M.Tech. in Power Electronics and Drives	11	8	2	24	5		
15	B.Tech. in Metallurgical & Materials Engineering + M.Tech. in Materials Science and Engineering	11	9	2	18	3		
	Total	**389**	**335**	**72**	**1173**	**174**	**144**	**8**

*including Supernumerary Female student and preparatory course completed students

M.Tech.

Sl. No	Name of programme	Approved Intake	No. of students admitted in 2019-20		Total number of students in 2019-20		No. of Students passed in 2018-19	
			Male	Female	Male	Female	Male	Female
1	Electronics and Communication Engineering	21	11	9	22	9	9	5
2	Power System Engineering	20	14	4	24	7	8	3
3	Power Electronics Drives	20	15	2	15	2		
4	Computer Science and Engineering	20	11	5	18	11		
5	Mechanical Systems Design	20	18	1	34	2	13	0
6	Thermal Science and Engineering	20	17	1	31	2	16	0
7	Manufacturing Engineering	20	19	0	16	0		
8	Structural Engineering	14	10	1	14	4	6	2
9	Transportation Engineering	12	8	0	11	1	8	1
10	Environmental Engineering	13	8	1	11	4	4	1
11	Water Resources Engineering	13	6	2	7	8	5	2
12	Geotechnical Engineering	13	5	3	5	2		
13	Climate Science and Technology	20	13	1	26	3	10	5
14	Metallurgical & Materials Engineering	20	6	1	20	5	5	2
	Total	**246**	**161**	**31**	**254**	**60**	**84**	**21**

M.Sc.

Sl. No.	Name of programme	Sanctioned (Approved) Intake	No. of students admitted in 2019-20		Total number of students in 2019-20		No. of Students passed in 2018-19	
			Male	Female	Male	Female	Male	Female
1	Chemistry	20	13	7	20	14	15	2
2	Physics	20	12	6	24	9	13	4
3	Mathematics	20	17	4	29	8	19	2
4	Geology	20	14	2	27	7	10	2
5	Atmosphere and Ocean Sciences	20	5	2	13	2		
	Total	**100**	**61**	**21**	**113**	**40**	**57**	**10**

Ph.D.

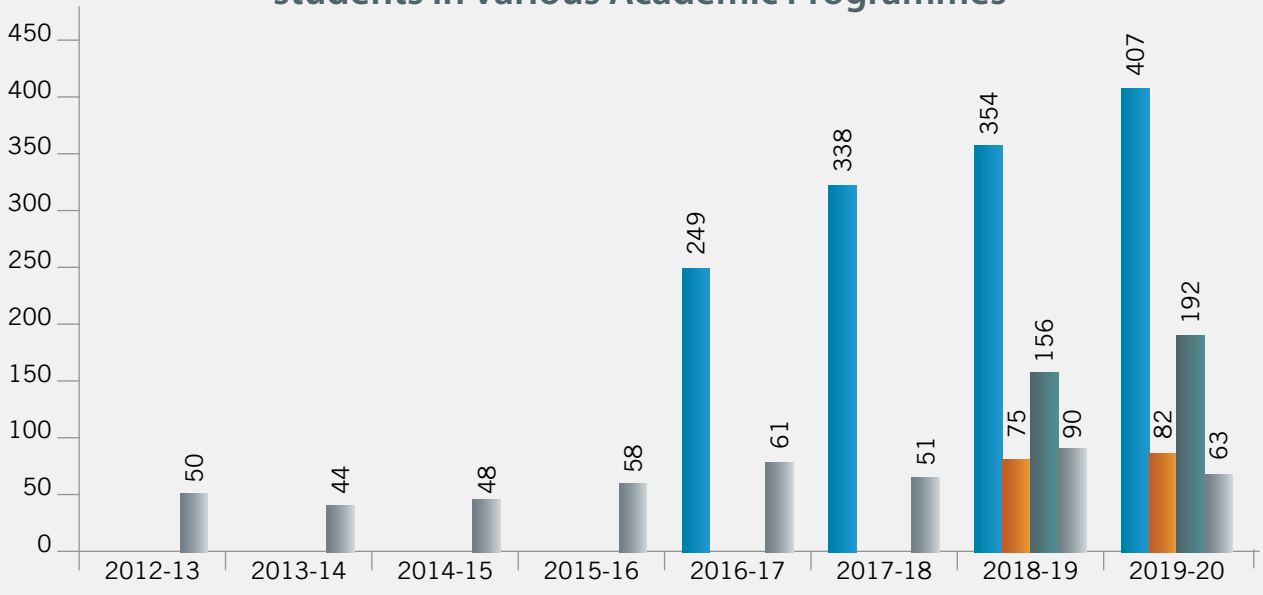
Sl. No.	Name of course / School	Approved Intake	No. of students admitted in 2019-20		Total number of students 2019-20		No. of Students passed in 2018-19		No. of Students passed in 2019-20 (provisional) (up to Spring End Sem Exam. 2019-20)	
			Male	Female	Male	Female	Male	Female	Male	Female
1	School of Basic Sciences	449	20	7	64	19	6	7	3	02
2	School of Earth, Ocean & Climate Sciences		8	0	25	6	1	1	1	0
3	School of Electrical Sciences		6	4	45	14	6	2	4	0
4	School of Humanities & Social Sciences		3	4	7	10	1	1	0	0
5	School of Infrastructure		1	2	29	6	3	1	4	1
6	School of Mechanical Sciences		5	0	35	1	3	0	0	0
7	School of Minerals, Metallurgical & Materials Engineering		3	0	24	3	0	0	1	0
	Total		**46**	**17**	**229**	**59**	**20**	**12**	**13**	**3**

Total fee per Student for the Academic Year 2019-20 (per Semester)

Courses	General	OBC-NCL	SC/ST/PwD	Sponsored
B.Tech	₹1,48,068.00	₹1,48,068.00	₹48,068.00	Not applicable
M.Tech	₹53,068.00	₹53,068.00	₹48,068.00	₹72,568.00
M.Sc	₹48,068.00	₹48,068.00	₹48,068.00	Not applicable
Ph.D	₹50,568.00	₹50,568.00	₹48,068.00	₹50,068.00

Graphical Representation of different Academic Programmes up to 2019-20 (based on Admission Records)

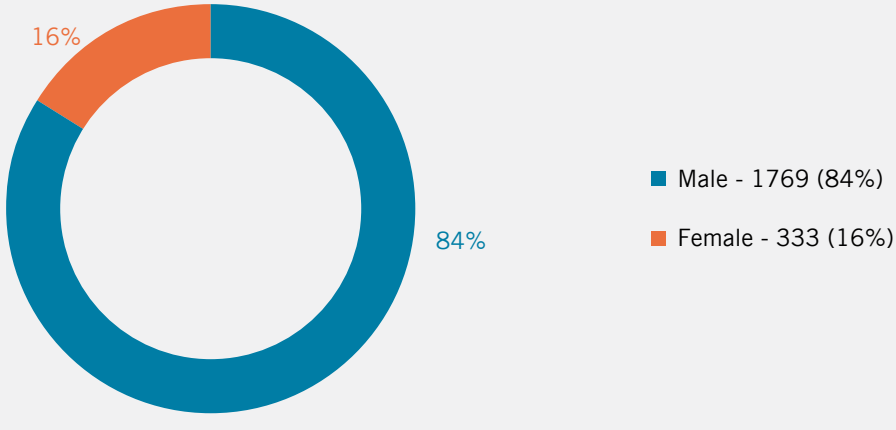
Year wise Admitted strength of the existing batch of students in various Academic Programmes



	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
B.Tech.					249	338	354	407
M.Sc.							75	82
M.Tech.							156	192
Ph.D.	50	44	48	58	61	51	90	63

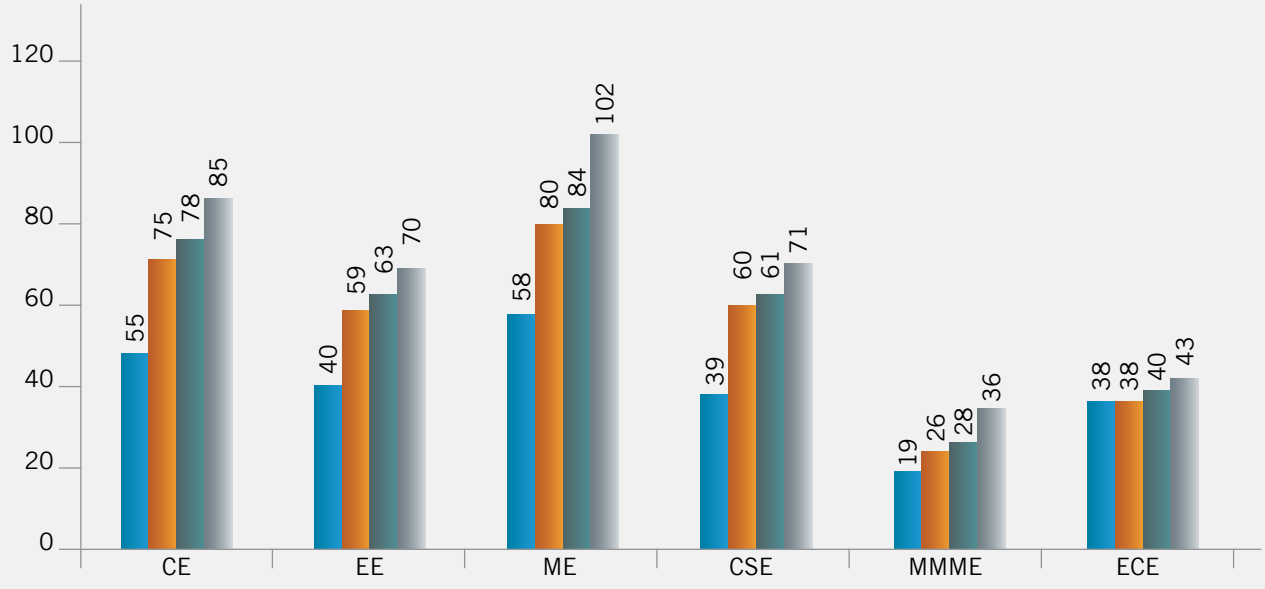
B.Tech. M.Sc. M.Tech. Ph.D.

Genderwise Student strength



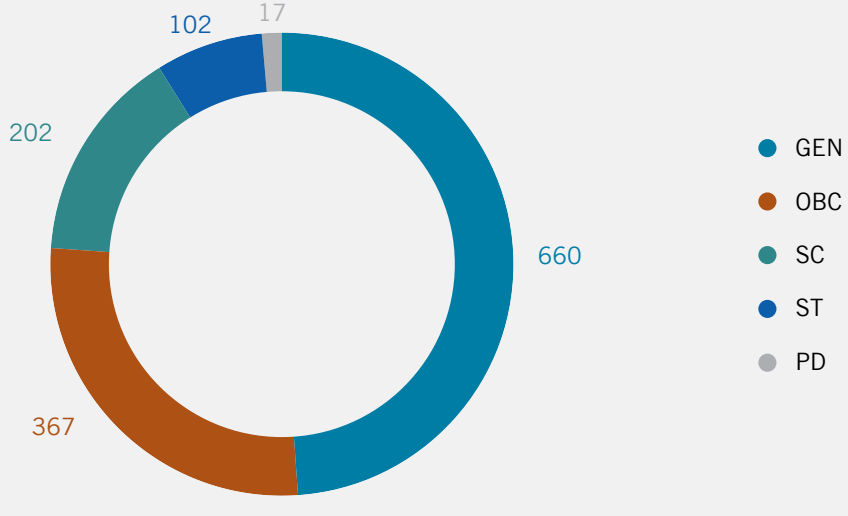
B.Tech & Dual Degree Programme

Student Admitted in B.Tech. & Dual Degree Programme (Year wise)

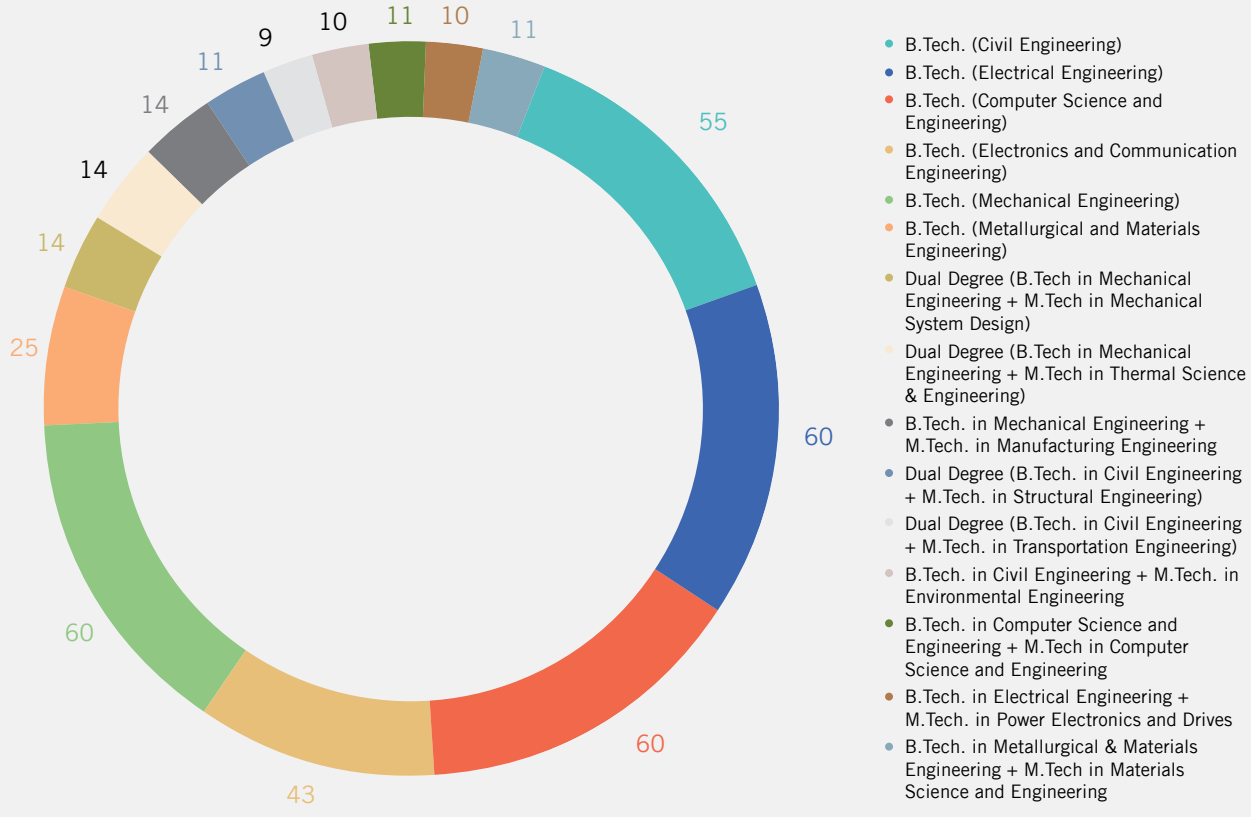


	CE	EE	ME	CSE	MMME	ECE
2016-17	55	40	58	39	19	38
2017-18	75	59	80	60	26	38
2018-19	78	63	84	61	28	40
2019-20	85	70	102	71	36	43

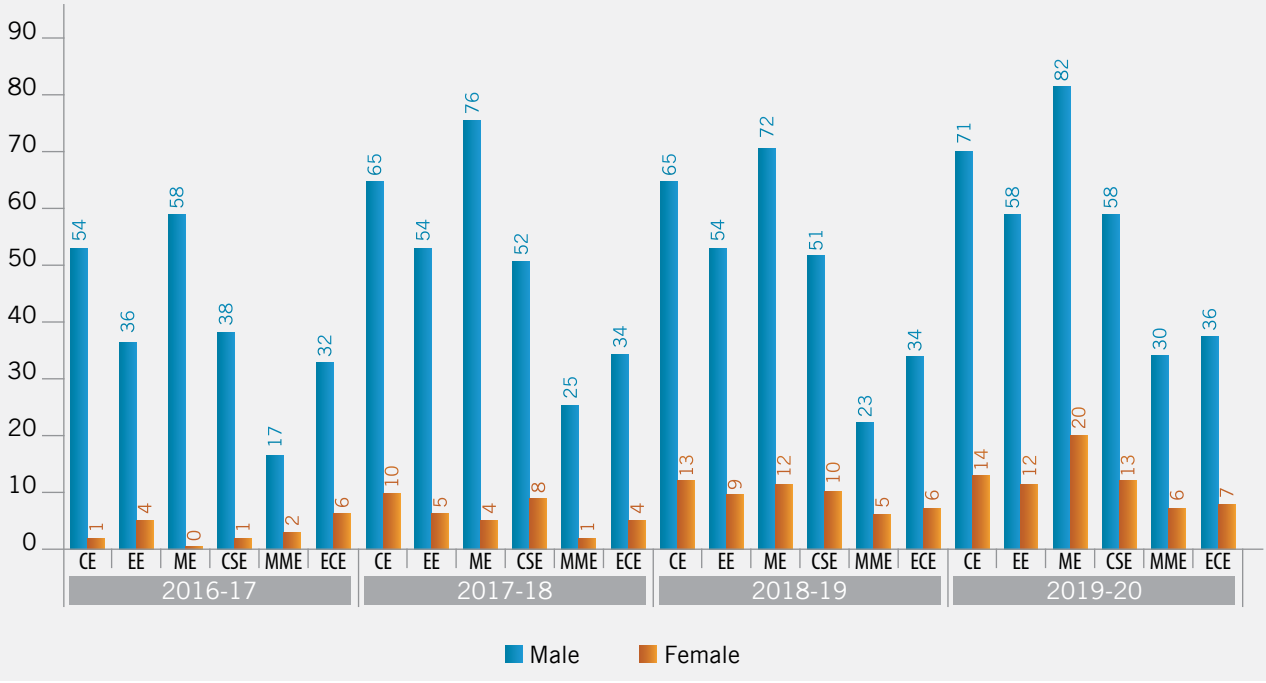
Student Admitted category wise



UG Student Admitted in different Programmes : 2019-20

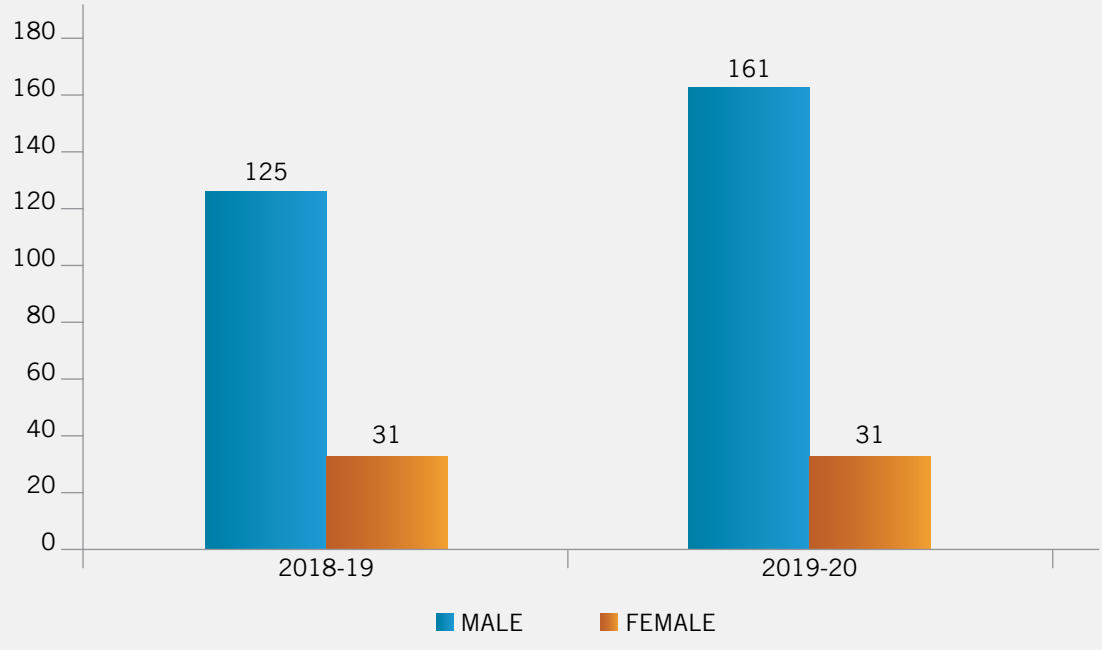


Gender Statistics of Students in B.Tech & Dual Degree Programe

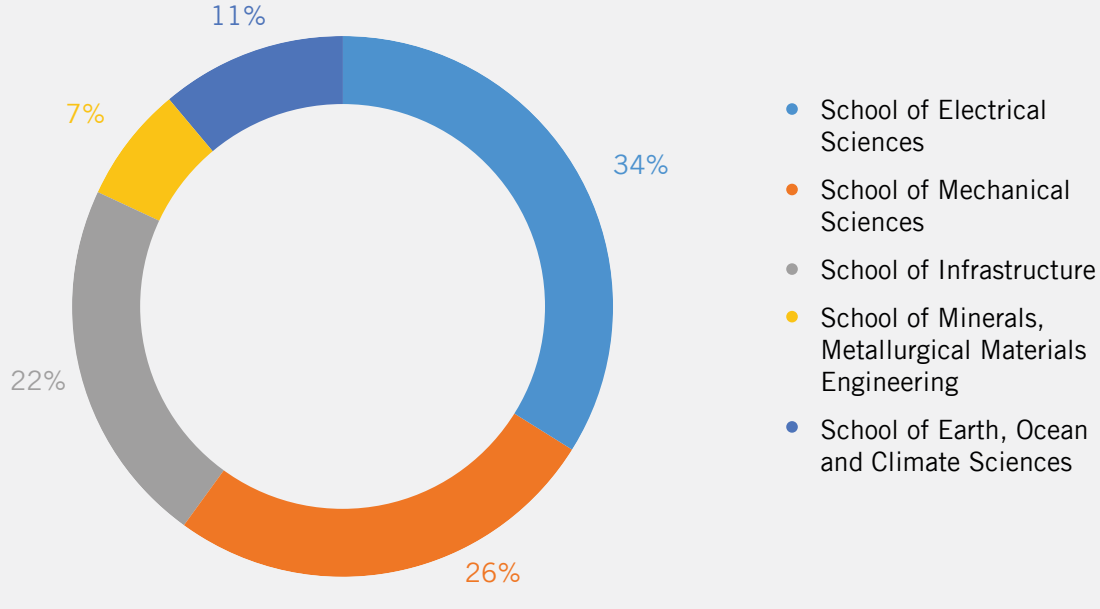


M.Tech. Programme

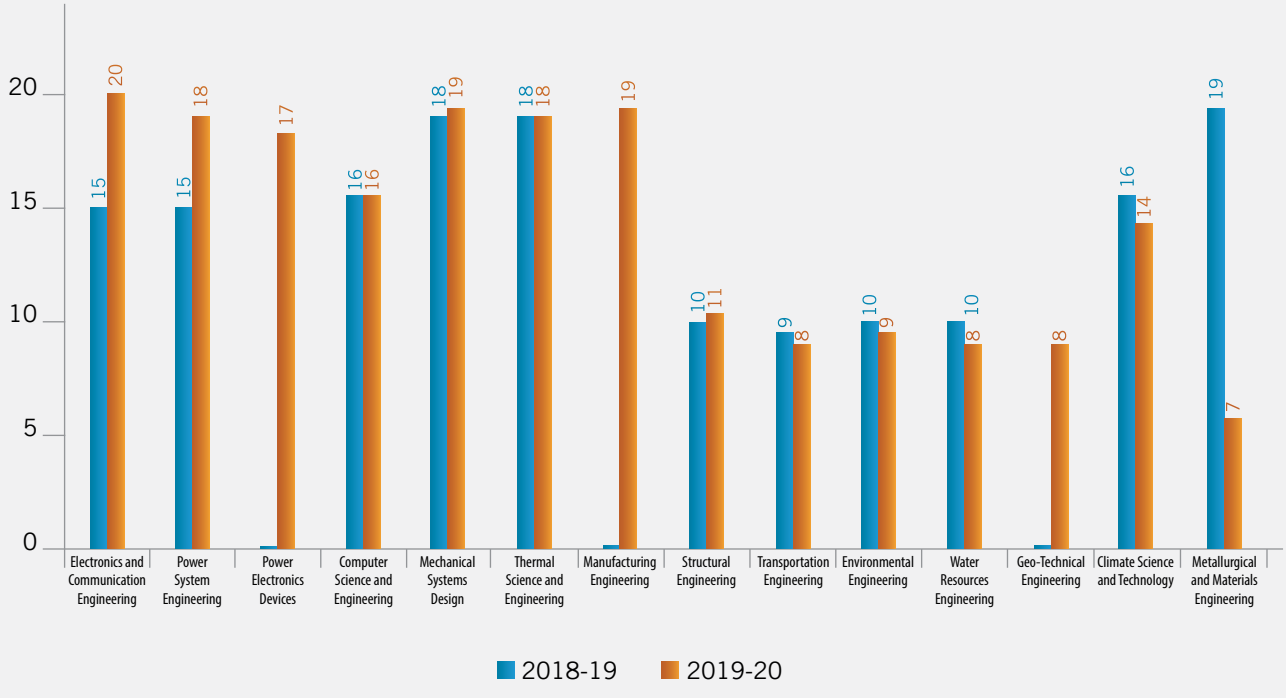
Gender Statistics



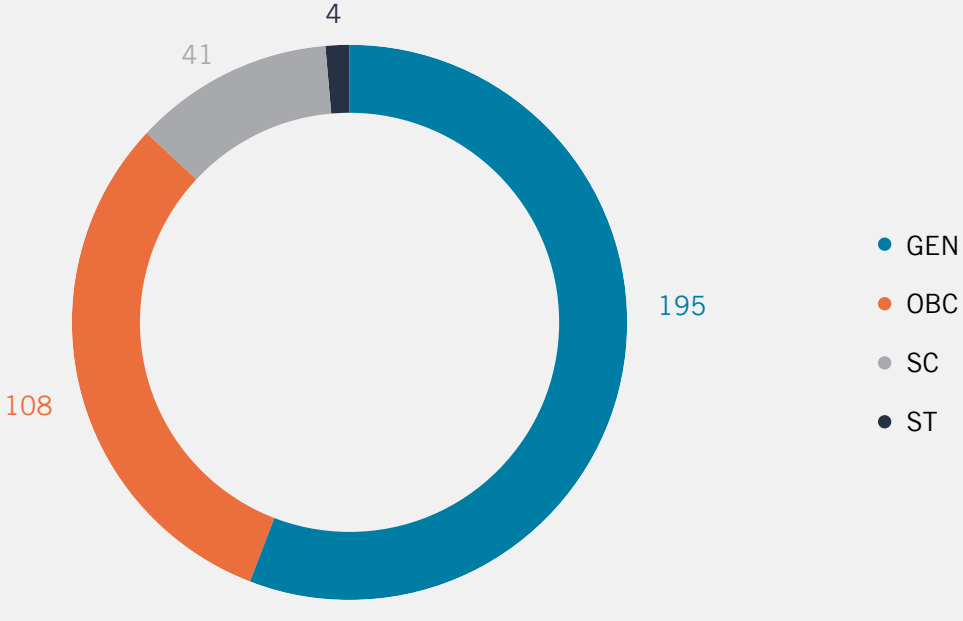
School wise representation of Students



Admission Status (in different disciplines)

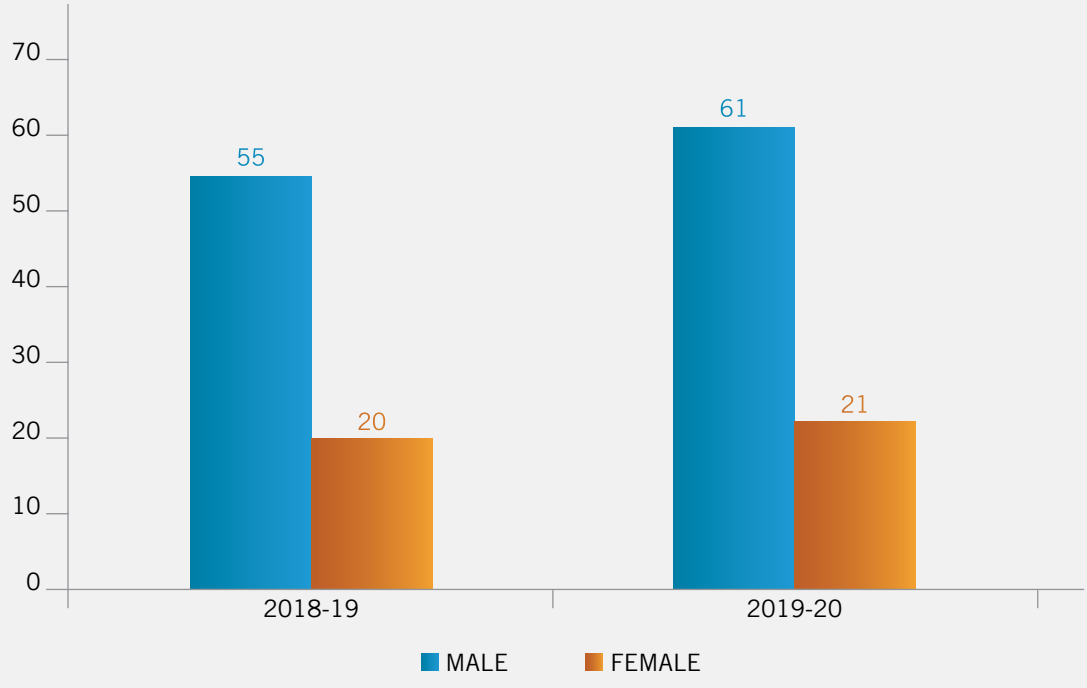


Distribution of Students in different categories

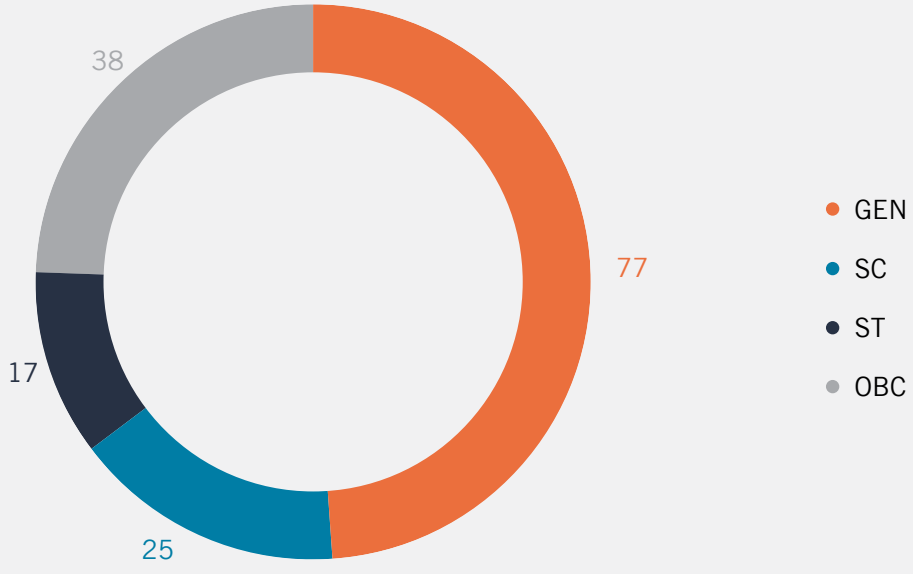


Joint M. Sc. – Ph.D. Programme

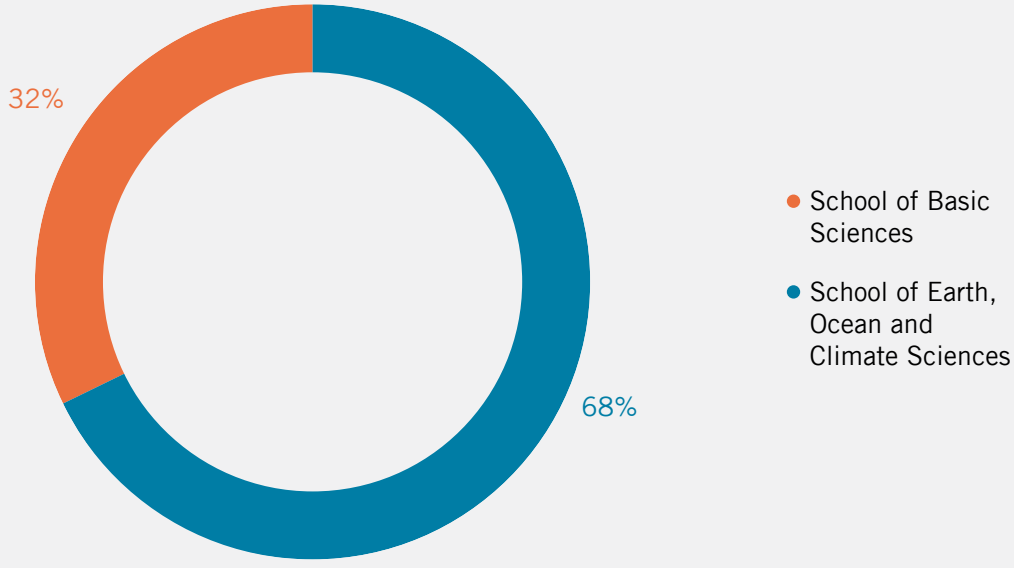
Gender Statistics



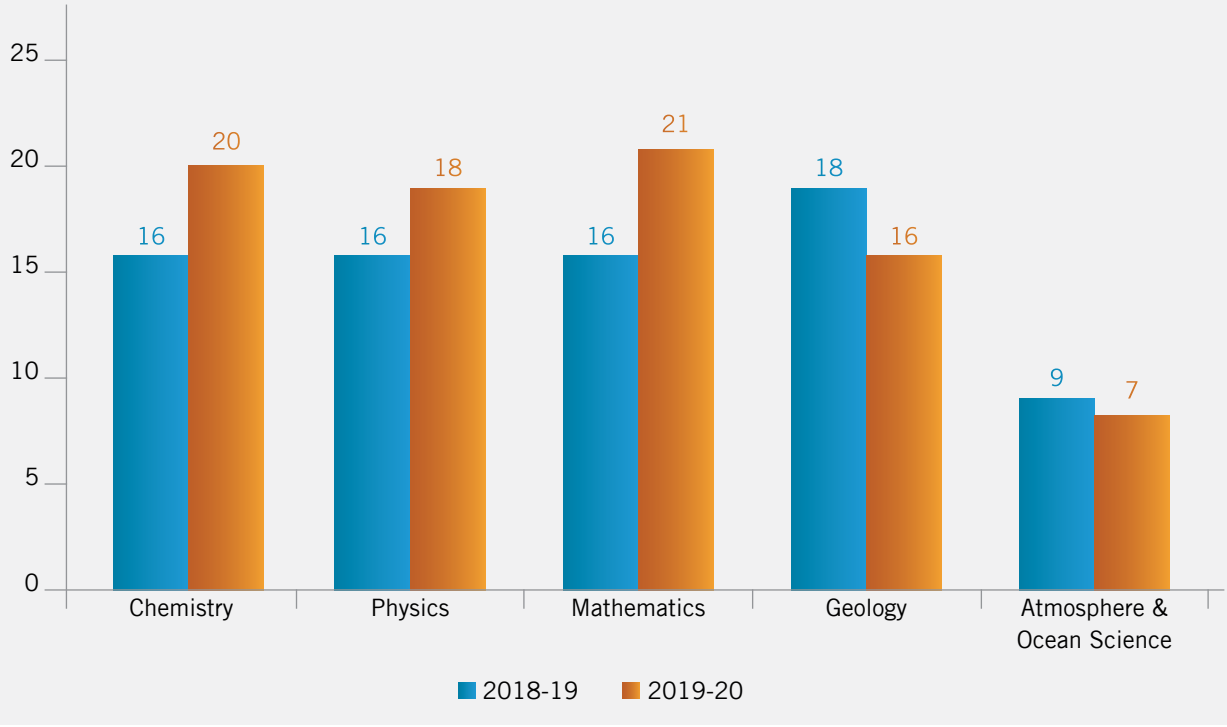
Distribution of Students in different categories



School wise representation of Students

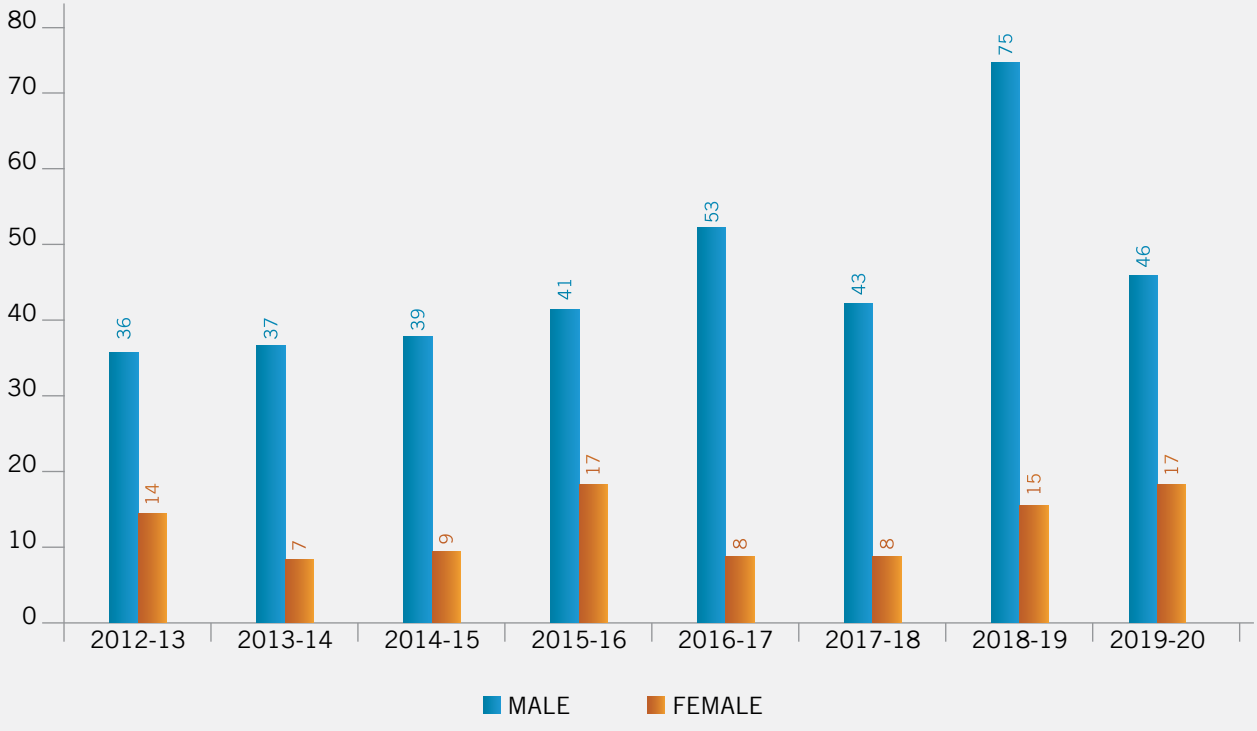


Admission Status (in different discipline)

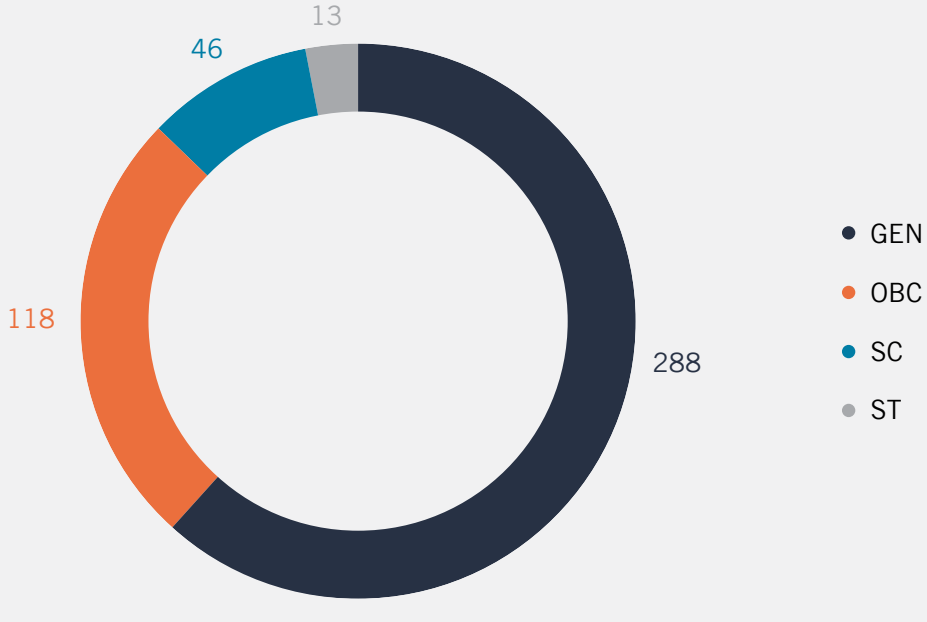


Ph.D. Programme

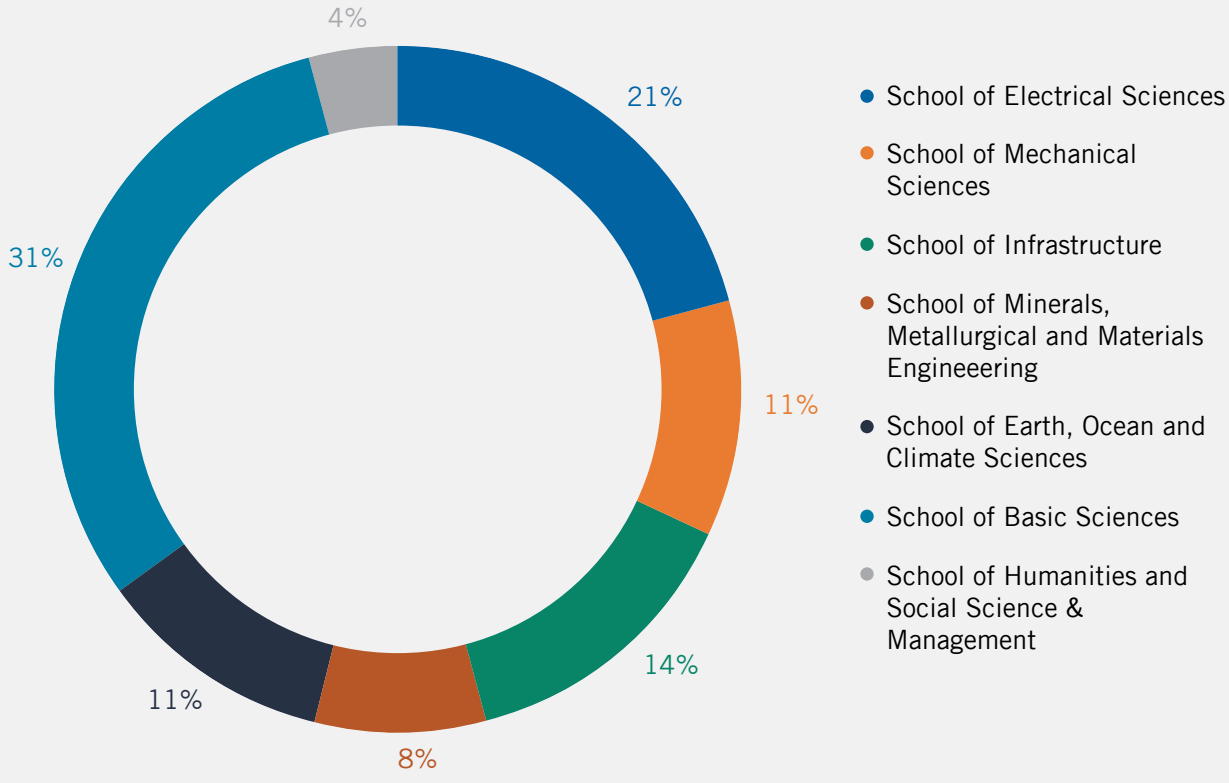
Gender Statistics



Distribution of Student in different categories



School wise representation of Ph.D. Scholar



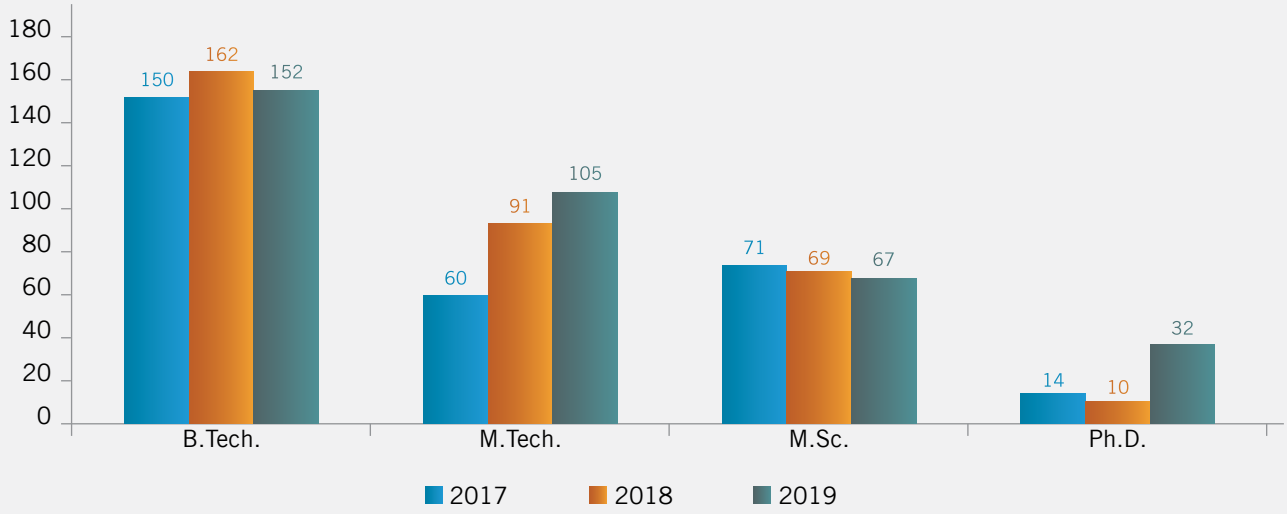
Graduation Data (last Three Years)

Disciplines	Ph.D.	M. Tech.	M.Sc.	B. Tech.
Graduation Data 2017				
Civil Engineering		2		33
Computer Science and Engineering				41
Electrical Engineering				38
Mechanical Engineering				38
Electronics & Communication Engineering		7		
Materials Science & Engineering		13		
Climate Science & Technology		8		
Mechanical System Design		10		
Thermal Science and Engineering		11		
Power Systems Engineering		4		
Structural Engineering		3		

Disciplines	Ph.D.	M. Tech.	M.Sc.	B. Tech.
Transportation Engineering		2		
School of Basic Sciences	9			
School of Electrical Sciences	3			
School of Infrastructure	1			
School of Mechanical Sciences	1			
Atmosphere and Ocean Sciences			4	
Chemistry			17	
Geology			16	
Mathematics			17	
Physics			17	
Total	**14**	**60**	**71**	**150**
Graduation Data 2018				
Civil Engineering		1		34
Computer Science and Engineering				43
Electrical Engineering				38
Mechanical Engineering				38
Electronics & Communication Engineering		14		
Materials Science & Engineering		11		9
Climate Science & Technology		6		
Mechanical Systems Design		14		
Thermal Science and Engineering		16		
Power System Engineering		14		
Structural Engineering		8		
Transportation Engineering		7		
School of Basic Sciences	3			
School of Electrical Sciences	2			
School of Infrastructure	1			
School of Mechanical Sciences	2			
School of Humanities, Social Sciences & Management	2			
Atmosphere and Ocean Sciences			4	
Chemistry			16	
Geology			15	
Mathematics			18	
Physics			16	
Total	**10**	**91**	**69**	**162**

Disciplines	Ph.D.	M. Tech.	M.Sc.	B. Tech.
Graduation Data 2019				
Civil Engineering				32
Computer Science and Engineering				44
Electrical Engineering				35
Mechanical Engineering				31
Electronics & Communication Engineering		14		
Metallurgical and Materials Engineering				10
Material Science and Engineering		07		
Climate Science & Technology		15		
Mechanical Systems Design		13		
Thermal Science and Engineering		16		
Power System Engineering		11		
Structural Engineering		08		
Transportation Engineering		09		
Environmental Engineering		05		
Water Resources Engineering		07		
School of Basic Sciences	13			
School of Electrical Sciences	08			
School of Infrastructure	04			
School of Mechanical Sciences	03			
School of Humanities, Social Sciences & Management	02			
School of Earth, Ocean and Climate Sciences	02			
Atmosphere and Ocean Sciences				
Chemistry			17	
Geology			12	
Mathematics			21	
Physics			17	
Total	**32**	**105**	**67**	**152**

Graphical representation of Students Graduated in last three years



Scholarship

Programme	Name of Scholarship	2019 (Batch)	2018 (Batch)	2017 (Batch)	2016 (Batch)
B. Tech.	MCM Scholarship 2019-20	48	43	65	56
	Free Studentship 2019-20	0	0	2	1
	Financial Assistance 2019-20	4	2	4	7

Awards & Medals and Participation in Conference

Programme	Awards & Medals	National Conference	International Conference
B. Tech.	6	--	--
M. Tech.	7	--	--
Joint M. Sc. – Ph.D.	5	--	--
Ph.D.	32	37	20

Special Events in 2019-20

Programme	Date
Senate Meetings	22.05.2019
	13.09.2019
	12.12.2019
	20.03.2020
8th Annual Convocation	21.09.2019
National Science Day	28.02.2020

School of Basic Sciences (SBS)

About the School

The School of Basic Sciences is a unique school with an emphasis on interdisciplinary research in areas of Physics, Chemistry, Mathematics and Biosciences.

Presently SBS offers programs as follows:

- Joint M.Sc.- Ph.D. in Physics, Chemistry and Mathematics
- Ph.D. in Physics, Chemistry, Mathematics and Biosciences
- Post-doctoral program

The School is proud to have two Centres of Excellence, namely MOE Centre of Excellence for Novel Energy Materials (CENEMA) and S. K. Dash Centre of Excellence of Biosciences and Engineering & Technology (SKBET)

Statistics

- No. of faculty: 39
- No. of publications: 175
- No. of Class Rooms with multimedia projectors: 6
- No of Ongoing Sponsored Research Projects for 2019-20- 33

Major Teaching Areas

The school lends is support to basic science courses (Biochemistry, Chemistry, Physics and Mathematics) to the undergraduate (B.Tech.) prgrammes running at IIT Bhubaneswar in. In addition, the school offers full-fledged Master of Science (Joint M.Sc.-Ph.D.) programmes in Chemistry, Physics and Mathematics disciplines. The intake capacity in each of these M.Sc. Programmes is 20.

Major Research Areas

The school enjoys a multitude of interdisciplinary research. However, the major research areas can be broadly categorized into the disciplines of Biochemistry, Chemistry and Biosciences, Mathematics and Physics.

Biochemistry

Protein Chemistry and Spectroscopy, Structure-Function Elucidation of Various Small Heat Shock Proteins Related to Different Diseases (Cataract, Leprosy and Tuberculosis); AAA+ATPase, Cancer biomarkers.

Chemistry

There are three broad research areas in Chemistry research – inorganic, organic, and physical and theoretical chemistry.

Inorganic Chemistry: Biomedicinal Chemistry: T1, T2 and paraCEST based contrast agent for Magnetic Resonance Imaging; Fluorogenic and Chromogenic Chemosensor: sensing cations, anions and some hazardous and explosive molecules/ions.

Coordination Chemistry: Synthesis of [nxn] grid complexes and 3d-4f metal complexes and their magnetochemistry and Emission properties; Bioinorganic perspective of coordination complexes: Stabilization of unusually high oxidation states of metal ions; Ionic Liquids and their application; Synthesis and Coordination Aspects of Homo and Heterometallic Complexes; Metal-Based Anticancer/Imaging Agents; Functional Materials and Luminescent Materials; Nanoparticle-Based Sensors; Metal-Organic and Covalent Open Frame (MOF and COF) Compounds; Design of Functional Organometallics, Multimetallic Catalysis for Fine Chemicals, Novel Activation of C1-Platform Chemicals, Mechanistic studies of C-H, C-O, C-N, C-X activation on Organometallic Template, Green Chemistry: On-Water Catalysis, Nanoparticle catalysis.

Organic Chemistry: Heterocyclic Chemistry, Asymmetric synthesis using chiral pool approach; Enantioselective catalysis and new reaction methods; New molecular entities with biological properties; Dipolar Cycloadditions; C-H functionalization, Pericyclic reactions, Metathesis, Umpolung chemistry, Radical chemistry, traditional & newer functional group transformations for application in marine alkaloids synthesis, terpenoids and polyketide based natural products; Carbohydrate Chemistry, novel synthetic methods development, Bioactive Natural and Unnatural Products synthesis; Supramolecular Chemistry, Molecular Recognition, Polymer chemistry: Synthesis of Chiral Polymers and their applications in chiral induction; Synthesis of Achiral and Chiral Resins and their applications in synthesis; PIL stabilized metal nanoparticles and their applications; Polyelectrolyte-DNA interaction studies; PILs for gas separation membranes; Synthesis of MIPs and resins for nuclear waste treatment; Synthesis of (RAFT derived) ionic, pH, temperature and solvent responsive homo- and block copolymers towards their self-assembling for drug delivery; Design, Synthesis and Characterization of Peptides; Anticancer and antimicrobial activities of plant-derived natural products.

Physical, Theoretical, and Computational Chemistry: Molecular modeling; molecular dynamics (MD) simulations; Development and application of multi-configurational quantum mechanical methods to study energetics and dynamics of bound and transient states; Investigation of photochemical reactions in the non-adiabatic ("beyond-Born-Oppenheimer") realm; Computational modeling of chemical reactions using quantum mechanical (QM) and mixed quantum mechanical – molecular mechanical (QM/MM) methods; Investigation of bacterial resistance toward beta-lactam based antibiotic drugs using QM/MM methods.

Mathematics

The main areas of research in Mathematics are Analysis, Applied Functional Analysis, Complex dynamics and Fractals, Matrix Theory, Graph theory, Optimization Theory, Queueing Theory, Applied Probability Models, Computational Fluid Dynamics, Numerical Methods, and Soft Computing.

Physics

Experimental

- Expertise on PVD, PLD, CVD, MBE, and MOCVD growth processes and methods.
- Expertise on Transport measurements and other Physical property measurements including magnetic and electronic properties, scanning tunneling microscopy and spectroscopy, electron microscopy, X-ray and Ion Scattering, cryogenic temperature measurements.
- Expertise on sensors and device fabrication and their applications.
- Growth, characterization and prototype applications of low-dimensional systems (1D and 2D materials) in the realm of nanoscience and nanotechnology and quantum technology, surface and interface physics.
- Novel materials for energy applications, sensor applications, industrial applications, and strategic research.
- Strongly correlated electron system, the study of real-time kinetics including ultrafast dynamics
- Optical fibre sensors, nano- and bio-photonics, terahertz sensing and spectroscopy, waveguide & interferometer, materials for quantum optics.
- Accelerator ion beam based research such as engineering nanostructured materials, ion-matter interaction processes, ion beam induced synthesis and characterization with ion beams, atomic and molecular surface physics.

Theory/Computational

- Expertise on computational physics and quantum information
- First principles molecular dynamics simulations, quantum transport, quantum biology

- Computational condensed matter physics; electronic and magnetic properties of 2D materials; functional materials; energy storage; chromatin folding and DNA transcription.
- Non-equilibrium statistical mechanics, nanomagnetism, quantum dissipation and decoherence.
- Theoretical and experimental high energy physics: quantum field theory, quantum information, string theory, black holes (theory) and beyond standard model physics (experiment – international collaborations)

Theme areas

(a) Emergent phenomena and energy materials: 2D layers, nanostructures for solar cells, supercapacitors, and fuel cells

(b) Device physics: sensors, photonic devices, electronics, and health care

(c) Computational condensed matter physics

(d) Quantum technology: quantum information (theory), Qbits (future), devices based on quantum technology.

The discipline of Physics, School of Basic Sciences will focus on synthesis and detailed characterization (structural, electronic, optoelectronic, topological, and correlated quantum states) of materials based on family of two-dimensional (2D) transition metal dichalcogenides (TMDs) (MX2 where M is metal centres such as Mo, W, and X is chalcogen such as S, Se, Te). Effectively, the plan for the next five years is to build background knowledge which will be essential for working on technologies for the realization of quantum computers. Briefly, the proposal focuses on emergent electronic properties of 2D TMDs structures, quantum nanophotonics, and theoretical aspects of quantum transport and dynamics.

Two-dimensional materials have been at the forefront of condensed matter physics since more than a decade. Joining graphene and hBN are a family of 2D TMDs which exhibit diverse electrical properties ranging from metallic, semiconducting, ferromagnetic, and superconducting to topological phases. TMDs have also opened an avenue to create material structures through "materials by design" by realizing van der Waals (vertical) and lateral heterostructures. Multiple degrees of freedom (e.g. properties of individual TMD layers, their stacking, and the relative azimuthal rotation between the layers in vdW HS; properties of individual TMD layers and type of interface in lateral HS) enable us to synthesize "materials by design" which is not present in conventional materials system. Consequently, the complex lateral and vertical heterostructures formed by 2D TMDs will provide even richer and versatile platform to explore new emergent and complex phenomena which are rather weak or absent in their pristine counterparts.

These materials will have potential applications in the realization of quantum bits as well as next-generation solar cells, transistors, diodes, p-n photodiodes, and CMOS devices. While new exotic physical phenomena and their technological importance are envisaged in various TMD structures, extensive experimental studies need to be carried out for exploring these phenomena. The discipline of physics, School of Basic Sciences, IIT Bhubaneswar has the following plan:

1. **Synthesis:** We propose to develop new mathematical and computational models to advance the fundamental understanding of the growth of heterostructures in order to predict layer morphologies and to provide a rationale framework to optimise the growth process. Using this understanding, we plan to synthesize various 2D TMD materials by harnessing the concepts of kinetics and thermodynamics of growth reactions. We will mainly use Chemical Vapour Deposition (CVD) technique to realize TMD structures. We aim to synthesize ternary alloys of 2D TMDs materials, vdW (vertical) and lateral TMDs. While ternary alloys of will allows more precise tuning of their electronic properties, lateral and Vertical heterostructures will possess fascinating and exotic 1D electronic states at their interface.
2. **Structural characterization:** Structural characterization of the synthesized TMD structures will be carried out using Raman spectroscopy, Atomic Force Microscopy (AFM), Scanning Tunneling Microscopy (STM). AFM and STM measurements will be used to image the TMD structures for the determination of the lateral size and layer thickness for the optimization of the growth process. AFM also allows to record wealth of information such as maps of elastic modulus, adhesion, deformation, local surface conductivity, and contact potential. Additionally, STM measurements will be used to record images of the TMD structures with atomic resolution capturing information about surface reconstructions, superlattices like moire pattern in vdWheterostructures as well as electronic properties like the electronic density of states, work function. Further, we will use Raman spectroscopy to investigate the electronic, optical, and lattice-vibration properties of the synthesized structures.
3. **Electrical transport measurements and devices:** We will realize devices based on TMD structures and investigate their electronic properties through electronic transport in a cleanroom environment. Towards this end, we will fabricate devices in Field Effect Transistor (FET) and Hall bar geometries using large area TMD structures. FET geometry will allow us to measure carrier type, carrier mobility (often used as a figure of merit), and carrier density in the TMD structures.
4. **Quantum optical measurements:** We will study electrical, optical and magnetic characterization of different 2D

quantum dot emitters (QDE) and their heterostructures for generation of single photon. Further, the synthesized QDEs will be integrated with nanowires and we will study its anti-bunching behaviour, saturation measurement and coupling efficiency towards single photon emitter: experimentally and computationally. Further, to have more insight into the coupling of the QDEs to the nanowire, polarization dependence excitation and emission will be done. These systems will be used for the development of interferometer, resonators and single molecule detection.

5. **Computational modeling:** We will conduct a large scale computational search to identify novel compositions of TMDs and their heterostructures. Furthermore, interlayer stacking sequence and different orientation of the adjoining monolayers further expands the composition phase space of TMD materials.

   This class of materials is so broad and varied in the composition that to identify the "best performers" in the enormous parameter space through experiments is impractical and expensive. As a result, a high-throughput computational screening approach is needed where predictions of chemical and mechanical stability, changes in interlayer spacing, strain in the layers during heterostructure formation and basic electronic properties can be made efficiently. We will also devise the high-throughput approaches for novel composition discovery and property predictions based on existing approaches such as genetic algorithm and machine learning.

6. **Quantum dynamics and quantum thermodynamics:** To enhance the deeper understanding of 'designer material' devices and to prepare for the quantum-bit based technologies, we will investigate the fundamentals of quantum dynamics, quantum transport at the nanoscale, and quantum thermodynamics. Starting from the first principles, we aim to develop new methodologies and will try to implement new computational treatments to address the novel phenomenon in quantum dynamics, thermal energy management, and Optoelectronics is essential for the realization of quantum computers.

Details of Strength of Physics Discipline

We strongly believe that the faculty members at the Discipline of Physics, School of Basic Sciences, IIT Bhubaneswar are among the best groups in the scientific community in the world working in the areas of theoretical and experimental condensed matter physics, Nano and micro-photonics, open quantum systems, black holes and string theory, experimental high energy physics, and cosmology.

Further, the faculty members have national and international collaboration with groups from many renowned and prestigious universities and institutes such as TIFR Mumbai, TIFR Hyderabad, IISER Pune, ICTS Bangalore, IISc Bangalore, University of Toronto, Canada, NTU Singapore, National University of Sydney, Aalto University, Finland; Columbia University, New Jersey Institute of Technology, Stanford University, Kings College London, TU Vienna, and KU Leuven.

State-of-the-Art Facilities

The School has procured state-of-art equipment to pursue advanced research. The following advanced instrumentation facilities have been established through central instrumentation facility:

- X-ray Diffractometers(XRDs)
- Scanning Electron Microscope (SEM)
- Raman Spectrophotometer
- Rheometer Nuclear Magnetic
- Resonance (NMR)
- Physical Properties Measurement System (PPMS)
- Gas Chromatography-Mass Spectrometry(GC-MS)

IIT Bhubaneswar is a member of both Belle and Belle II collaborations at KEK, Japan and a member of CMS collaboration, at Large Hadron Collider (LHC), CERN, Geneva.

The School is fully equipped with a central computing server system and is integrated and functional for all sorts of high computing research and analysis.

SBS Laboratories

The School of Basic Sciences presently has the following laboratories equipped with relevant modern equipment and instruments:

- Atomic Molecular and Surface Physics Lab
- Biochemistry Lab
- Bioinstrumentation Lab
- Chemical Biology Lab

- Coordination Chemistry and Materials Chemistry Lab
- Coordination Chemistry Lab
- Theoretical Chemistry Lab
- Quantum Chemistry Lab
- Experimental High Energy Physics Lab
- M.Sc. Chemistry Lab
- M.Sc. Mathematics Lab
- M.Sc. Physics Lab
- Magnetic Materials Lab
- Nano Photonics & Plasmonics Lab
- Nanostructure & Soft Matter Physics Lab
- Organic Chemistry Lab
- Organic Synthesis Lab
- Protein Chemistry Lab
- Quantum Chemistry Lab
- Renewable Energy Lab
- Supramolecular Chemistry Lab
- Undergraduate Chemistry Lab
- Undergraduate Physics Lab

The main areas of research in Mathematics are Analysis, Applied Functional Analysis, Complex dynamics and Fractals, Matrix Theory, Graph theory, Optimization Theory, Queueing Theory, Applied Probability Models, Computational Fluid Dynamics, Numerical Methods, and Soft Computing. The research work in biosciences is focused on G-protein coupled receptor biology, peptide/protein design and engineering, molecular modelling, computational biology, the structure-function studies of various proteins of eye lenses, leprosy, tuberculosis and mechanism and regulation of a class of enzyme ATPases involved in various biological pathways and human diseases.

Infrastructural Strengths

The following experimental and theoretical research facilities are currently available

Facility	Research
Physical Property Measurement System (PPMS)	For electronic transport measurements at low-temperature (2K) and high magnetic field (9T)
Pulsed Laser Deposition (PLD) setup	For creating dissimilar heterostructures
Field Emission Scanning electron Microscope (Carl Zeiss)	For morphological and elemental characterization of the synthesized TMD structures
Raman Spectrometer - (triple Raman Spectrometer, T64000, Horiba)	For optimization of high quality growth of TMDs structures
Solar Simulator	For solar-cell measurements
Scanning Tunneling Microscope (ambient condition) - in the process of procurement	For structural and electronic characterization of the TMD structures
Wire bonder	For bonding devices on sample holders
Single crystal and powder X-ray Diffractometer	For structural characterization and phase analysis
Source meter + Impedance analyzer + Nano-voltmeter	For electrical characterization
Time-resolved photoluminescence	For study of fast electronic deactivation processes
Electron- and Ion-implantation setup (Indigenously developed)	For ion/electron modification of TMDs and other nanomaterials
Optical microscope	For optical access to the structures
MATLAB + LabView + Comsol + VASP	For computational simulation and modelling of materials and material properties

School of Earth, Ocean and Climate Sciences (SEOCS)

About the School

The School of Earth, Ocean and Climate Sciences (SEOCS) has established to provide an intellectual, congenial and vibrant atmosphere for developing state of the art education and research in Earth System Sciences through an integrated inter-disciplinary systemic view of Earth-Ocean-Atmospheric interactions processes for sustainable development. Earth is a complex and dynamic system. While understanding and appreciating its working is essential; knowledge of its dynamics is not only important but also necessary for sustainable living. Earth scientists, atmospheric scientists, and oceanographers have challenging responsibilities to help guide the planet through the current climate crisis.

Presently SEOCS offers programs as follows:

- Joint M.Sc. – Ph.D. in Geology, Joint M.Sc. – Ph.D. in Atmosphere and Ocean Sciences,
- M. Tech. in Climate Science & Technology
- Ph.D. Programmes

Experienced and motivated faculty members with varied specializations have been one of the strengths of the School. Currently, the specializations of these faculty members include geochemistry, hydrogeology and watershed management, geophysics, coal geology, paleoceanography& paleoclimatology, remote sensing & GIS applications, atmospheric aerosols & climate, data assimilation & analysis, ocean circulations & modeling, mesoscale modeling and prediction of extreme weather events, tropical cyclones, storm surges & air-sea interactions, tropical waves, modeling inter-tropical convergence zone, intrapersonal variability, monsoon dynamics and climate change etc.

Statistics

- No. of faculty: 14
- No. of publications 2019: 48
- No of Ongoing Sponsored Research Projects for 2019-20- 16

State-of-the-Art Facilities

Laboratories are equipped with state-of-the-art computational and scientific instruments viz. ICP-OES, Ion Chromatograph, Automatic high resolution stereo zoom microscope with 3D imaging capability, Number of broadband Seismometers, Engineering Seismograph, Digital Gravimeter, Resistivity meter (Terrameter), Continuously Operating GPS Reference Stations, High precision Multi-parameter ocean profiler, Binocular and Trinocular polarizing microscopes, High-resolution stereo zoom microscopes, range of hydrological and hydro-meteorological instruments, High Performance Liquid Chromatography, Total Organic Carbon Analyzer, Deionized Water Purification System, Microbalances, Microwave Digestion System, LD-Particle Size Analyzer. In addition, the Lightning Detection Sensor System, Flux tower for atmospheric observations, a number of high-end workstations, computers and software are available for data

analysis, simulation, modeling and visualization purposes. To study the coastal processes, the school have current profiler, number of CTDs, Grab samplers, Niskin Water bottles, gravity corer (1.5m) etc.

Laboratories

Within the last four years, the following laboratories have been established with state-of-the-art facilities for Geophysical and Geochemical analyses, Petrological and Paleontological studies, Paleoceanography and Paleoclimatology, Remote Sensing & GIS, Modelling and Visualization Weather Analysis and Forecasting, and Simulations of Atmospheric and Oceanic Processes. The list of laboratories are as follows

- Advance Geochemistry Laboratory
- Advanced Mineralogy & Crystallography Laboratory
- Applied Paleontology Laboratory
- Climate Observatory
- Cloud physics
- Computational Geosciences & Geophysical Laboratory
- Geophysical Lab
- Hydrogeological and Hydro-metrological Laboratory
- Instrumentation and Observation Laboratory
- Modeling and Visualization Laboratory
- Ocean Analysis and Modeling Laboratory
- Ore Geology Laboratory
- Petrology & Geochemistry Laboratory
- Remote Sensing and GIS Laboratory
- Structure Geology Laboratory
- Sedimentology Laboratory
- Paleoclimatology and Paleoceanography Laboratory
- Weather Analysis and Forecasting Laboratory

In addition, Bay of Bengal Coastal Observatory is being established on the coastline near Loudigaon adjacent to IISER Berhampur. It is a flagship project of the institute sponsored by the Ministry of Earth Sciences, Govt. of Odisha and IIT Bhubaneswar. The prime objectives of the observatory are to collect real-time observations and monitoring of the coastal Bay of Bengal in collaboration of different renowned national and international institutions.

The School aims to create well trained, educated and competent human resource to address various issues like protection of water and air, development of renewable energy, hydrocarbons, disaster warming, prediction and preparedness, watershed and flood management, coastal erosion, environment pollution assessment, resource conservation and recycling, development of clean technologies, climate change prediction and impact on socio-economic well-being.

School of Electrical Sciences (SES)

About the School

The School of Electrical Sciences was established in the year 2008. Presently SES offers the following academic programs:

- 4-year B. Tech. in Electrical Engineering, Computer Science & Engineering, Electronics and Communication Engineering
- 5-year dual degree (B. Tech. and M.Tech.) in Electrical Engineering, Computer Science & Engineering
- M. Tech. in Electronics & Communication Engineering, Power System Engineering, Computer Science and Engineering and Power Electronics and Drive (July 2019)
- Ph.D. Programmes: In all major areas of Electrical Sciences

The school has a distinguished record in both teaching and research. Faculty members are active in research and development and are publishing their research findings in highly reputed national and international leading journals and in national and international conferences.

In addition, the faculty members are engaged in a number of consultancies and in project activities sponsored by government and leading industries.

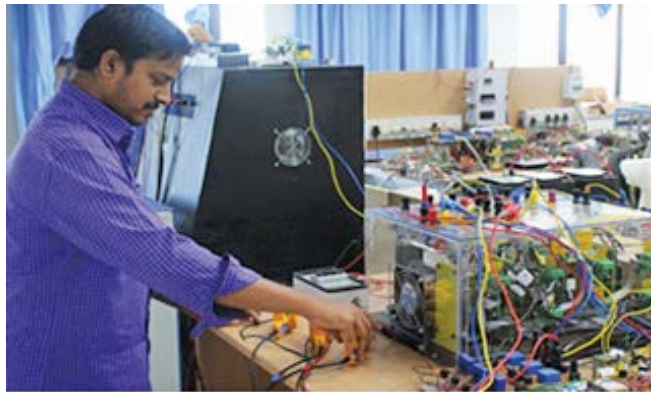
Statistics

- No. of Faculty: 29
- Number of Conferences
- Published between April 2019 to March 2020: 34
- The number of patents filed till date: 10

- The number of patents granted till date: 04
- No. of Ph.D. Students enrolled: 10
- Number of Ph.D. Students Graduated:09
- Number of M. Tech. Students Enroll: 70
- No. of on-going sponsored research projects – 20
- Number of Seminars/Gain Courses/Events Conducted in 2019-2020: 07
- No. of publications 2019: 149
- No of Ongoing Sponsored Research Projects for 2019-20- 28

State-of-the-Art Facilities

The School has numerous state of the art laboratories and facilities including VLSI system design and fabrication lab, RTDS lab, Renewable Energy system lab, Radiating system design lab and computational facilities for application development and research. Full-fledged FPGA implementation and development facilities linked with embedded system tools and MATLAB provide a smooth platform for ambitious developers.



Laboratories

The School has full-fledged laboratories to train the undergraduate, postgraduate students, and research scholars from the very basics to modern trends in the field of Electrical Engineering, Electronics and Communication and Computer Science Engineering. Students utilize the modern lab facilities and equipment to carry out design and testing of various circuits, projects, programs, and proof of concepts of various research aspects in electrical, electronics, communications, and computer engineering. At present, there are 34 laboratories that include:

- Advanced Communication Lab
- Algorithm Lab
- Analog & Digital Electronics Lab
- Basic Electronics Lab
- Biomedical Signal Processing Lab
- Cloud Lab
- Communication Engineering Lab
- Computer Architecture and Embedded Systems Lab
- Computer Networking Lab
- Control & Instrumentation Lab
- Database Systems Laboratory
- Digital Signal Processing Lab
- Electric Machines Lab
- Electrical Technology Lab
- FACTS and Power Quality Laboratory
- High Performance Computing laboratory
- Image & Video Processing Lab
- Measurement and Instrumentation Lab
- Micro-fabrication and Characterization Lab
- Multimedia Lab
- Operating System & DBMS Lab
- Optical Communication Lab
- Power Electronics & Electric Drives Lab
- Power Quality & FACT Lab
- Power System Analysis & Protection Lab
- Real Time Digital Simulation (RTDS) Lab
- Real time Embedded Systems Lab
- Real-time Signal Processing Lab
- Renewable Energy Systems
- RF, Microwave & Characterization Lab
- Security Lab
- Signal Processing Lab
- Smart Grid & Hybrid Energy System Lab
- Telemedicine Lab
- Wireless Communication & Sensor Networks Lab
- VLSI Simulation Lab

School of Humanities, Social Sciences and Management (SHSS&M)

About the School

The School aims at imparting inter-disciplinary education in Humanities and other Social Sciences to its students. It has developed into a full-fledged department having expertise in three different disciplines – Economics, English and Psychology. Having a team of six young and dynamic faculties, well-versed in inter-disciplinary areas like environment, finance, management, personality development, communication skills and neural science, this school seeks to generate erudite citizens who would be a perfect amalgamation of technical knowledge, creativity, empathy and social responsibility.

Statistics

- Number of Faculty: 08
- Number of foreign/ visiting Faculty: 02
- Number of Ph.D. students graduated: 10
- Number of Ph.D. students enrolled at present: 17
- Number of Ph.D. students submitted the thesis: 02
- Completed Research Projects: 02
- No. of Computer Labs: 01
- No. of Computers: 39
- No. of Faculty Rooms: 08
- No. of Equipment's (No. of Major Equipment): 03

Research Areas

- English language training programme
- Forest Resource Management
- Impact of climate change on the Agricultural sector
- Mining Sector and Productivity; Valuation of natural resource
- Solid Waste Management
- Insurance
- Indian Writing in English;
- Migrant/Diaspora Literature;
- Travel Literature; Autobiographies; Creative Writing;
- Film Studies and Popular Culture
- Postcolonial World Literature; American Literature; Canadian Literature
- Cross-cultural Communication; Business Communication
- Clinical Psychology: Cognitive Neuroscience, Cognitive Psychology, Hemispheric Lateralisation, Personality, Neurolinguistics
- Developing Critical Vocabulary of ESL Learners; Cognitive Reading Skills; Second Language Acquisition; Teacher Education and Development; Communication Skills; Technology and Language Learning
- Non-Western Philosophical Schools: Advaita Vedanta, Buddhism and other schools of Indian Philosophy.

School of Infrastructure (SIF)

About the School

School of Infrastructure at IIT Bhubaneswar has come up to dedicate its excellence in engineering education, creation of knowledge, innovation in research and leadership in professional services. The mission of the School is to offer an unbounded academic and research environment in undergraduate, postgraduate and doctoral program. The academic activities of the School emphasize on comprehensive understanding of fundamental principles, development of creative ability to handle the challenges of real-world Civil Engineering problems, and the analytical ability to solve problems having interdisciplinary in nature. Our goal is to do research in challenging engineering problems and provide efficient engineering solutions in the various sub-disciplines of Civil Engineering. The school has a strong focus in the research areas of Environmental Engineering, Geotechnical Engineering, Structural Engineering, Transportation Engineering and Water Resources Engineering.

Presently the School offers programs as follows:

- B. Tech. in Civil Engineering, Dual-degree B. Tech in Civil Engineering + M. Tech. in Environmental Engineering, Dual-degree B. Tech in Civil Engineering + M. Tech. in Structural Engineering, Dual-degree B. Tech in Civil Engineering + M. Tech. in Transportation Engineering
- M.Tech in Environmental Engineering, M.Tech. In Structural Engineering, M. Tech. in Transportation Engineering, M.Tech. In Water Resources Engineering and M.Tech. in Geotechnical Engineering
- Ph.D. Programmes

The Department is actively involved in basic and applied research and consultancy and provides high quality technical advisory support through various R & D projects and consultancy to various organizations. The School also encourages its students to engage in extracurricular activities, promotion of team spirit, and refining their budding managerial skills.

Statistics

- Number of Faculty: 21
- Number of Ph.D. students enrolled at present: 06
- Number of M.Tech student: 44
- No. of publications 2019: 48
- No of Ongoing Sponsored Research Projects for 2019-20- 14

State-of-the-Art Facilities

The School is having Advanced Computational Laboratory facility with modelling and simulation packages like PLAXIS 3D, ABAQUS, HYDRUS 3D, VMODFLOW and Gid for practical training in handling real-world civil engineering problems. The Environmental Engineering Laboratory of the School is equipped with state-of-the-art equipment like Ion chromatograph, HPLC, TOC analyzer, high speed centrifuge, respiratory BOD analyzer, AAS, GC, Freeze Dryer, Radiometer, UV-Vis. Spectrophotometer, Zeta Potential cum Particle Size Analyzer, etc. for carrying out various sophisticated analysis of water and wastewater. The Geotechnical Engineering Laboratory houses advanced instruments such as Testing frame with O-ring, large sieve shakers,GPR, Cyclic Triaxial Setup, Laser Profilometer, Flexible Wall Permeameter, etc. The Structural Engineering and Concrete Technology Laboratories house state-of-the-art facilities such as Dynamic Actuators, Shake Table, Servo Controlled Compression Testing Machines, NDT Equipment, Corrosion Analyser, etc. for analysis and evaluation of various types of civil engineering structures. The Transportation Engineering Laboratory is equipped with state-of-the-art instruments to carry out advanced experiments and simulations works such as bituminous mix design, pavement evaluation, rutting measurement, evaluation of multi-modal urban transportation network, traffic flow etc. The Laboratory facility houses sophisticated instruments such as Dynamic Shear Rheometer, Repeated Load Triaxial Test, Wheel Tracking Machine with Roller Compactor, Superpave Gyratory Compactor etc. Besides the lab has a computational facility for those working in the Transportation System Planning and Traffic Engineering field. The Water Resources Engineering Laboratory is capable of carrying out various experiments and simulations relating to fluvial hydraulics, flow through submerged and emergent vegetation. The laboratory is equipped with state-of-the-art equipment like Down looking and Side looking Acoustic Doppler Velocimeters, Acoustic Doppler Profilers, Recirculating Tilting Flumes with Wave Generator and sensors like Flow Visualization Apparatus, MIKE_SHE software, Water Depth Recorder, Digital Flowmeter, etc.

Laboratories

The School of Infrastructure currently runs with eight well-equipped undergraduate and postgraduate laboratories as follows:

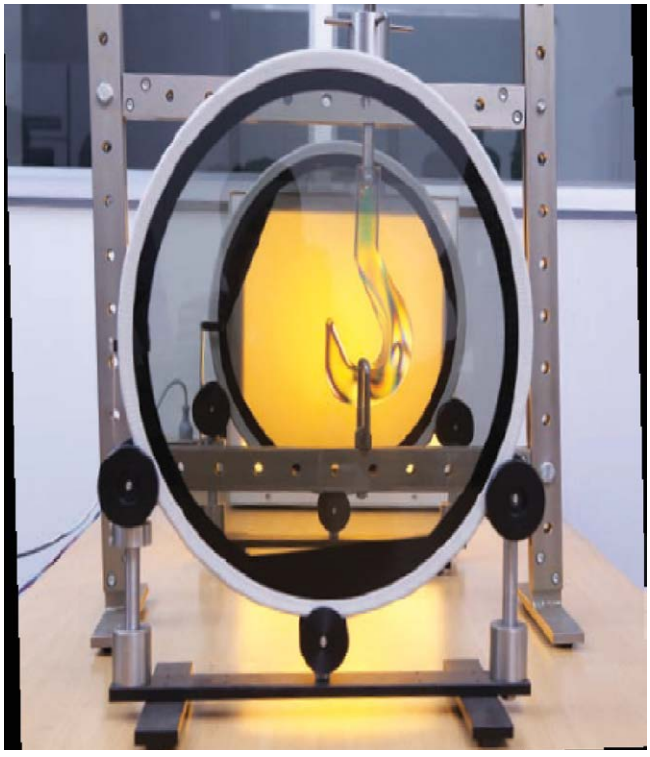
- Advanced Computational Laboratory
- Concrete Technology Laboratory
- Engineering Mechanics Laboratory
- Environmental Engineering Laboratory
- Geotechnical Engineering Laboratory
- Groundwater Hydrology Laboratory
- Hydro-meteorology Laboratory
- Soil Dynamics Laboratory
- Structural Engineering Laboratory
- Surveying Laboratory
- Transportation Engineering Laboratory
- Water Resources Engineering Laboratory

All of the above laboratories are equipped with modern facilities to carry out high-end research works in any of the micro specializations of Civil Engineering field.

In addition to the state-of-the-art laboratories, the classrooms are equipped with multimedia projectors. Besides, the school is having 20 faculty office chambers, 01 seminar room, and 01 conference room.

The school is collaborating with various agencies/ industries like Airport Authority of India Ltd, NBCC, Vedanta Limited, IDCO and Tata Steel Ltd in research and consultancy work. Currently, the school is working on 12 research projects. The school has 3 on-going SPARC proposals.

School of Mechanical Sciences (SMS)



About the School

The School of Mechanical Sciences at IIT Bhubaneswar endeavors to be both globally competent and locally relevant.

Presently the School offers programs as follows:

- B.Tech. in Mechanical Engineering, B.Tech. in Mechanical Engineering + M.Tech. in Mechanical System Design, B.Tech. in Mechanical Engineering + M. Tech. in Thermal Science & Engineering, B.Tech. in Mechanical Engineering + M.Tech. in Manufacturing Engineering.
- M.Tech. in Mechanical System Design.
- M.Tech. in Thermal Science and Engineering.
- M.Tech. in Manufacturing Engineering.
- Ph.D. Programmes

Thrust areas of the School include Systems design, Energy & Environment, Advanced Manufacturing, Autonomous Robotics, Agricultural automation and Product Design. The faculty members of the school are also involved in basic research in their own areas of specialization while also coming together to blend their shared expertise in creating technologies, products and processes that will enrich both the national and local economy. The school sees its role in nation-building via three important avenues of contribution – building of (i) human, (ii) knowledge and (iii) wealth capitals through the creation of a comprehensive idea-to-industry cycle.

Statistics

- No of faculty: 19
- No. of B. Tech Students: 310
- No. of Ph.D. Students enrolled (2019-20): 31
- Number of M.Tech. Students: 100
- No. of publications 2019: 72
- No of Ongoing Sponsored Research Projects for 2019-20: 19

State-of-the-Art Facilities

The Advanced Product Development Laboratory houses a high-end FORTUS 400 FDM based rapid prototyping machine and a high accuracy 3-D Optical Profilometer. The advanced manufacturing laboratory has various in-house developed equipment such as 400W Fiber laser micro workstation, Laser-Milling Hybrid processing and a Pulsed Micro Micro-

Electroforming. Besides, the lab also houses CNC Router with Digitizer for Reverse Engineering, CNC Milling and Gear Hobbing Machine. The thermo-fluid laboratory has NEXA PEM Fuel Cell Training System, Flame propagation & stability unit and Mach-Zehnder Interferometer for visualization of various heat transfer phenomena.

Laboratories

The school has well-equipped laboratories along with a high-end computational laboratory with 30 workstations served by an 18 blade server. This laboratory also provides various software packages like ANSYS, SolidWorks, NASTRAN, Hyper Works, Pro-E, CATIA, ADAMS, COMSOL, MATLAB, Lab VIEW, ASAP-PRO, Tecplot360etc. The school has the following laboratories with major equipment:

Advanced Product Development Laboratory

Fused Deposition Method based Rapid Prototyping Production system, Optical Three Dimensional (3D) Profiler System

Artificial Intelligence and Mechatronics Lab

Stewart Platform, Humanoid robot platforms (Bioloid and Lamark), Manipulator arm, Hexapod robot, four wheeled robots, Tabletop CNC Milling and Turning machines

CAD/CAM/CAE Laboratory

Work Station for CADLAB, UPS for CADLAB, Electrification of CADLAB, Work Station for CADLAB, Blade Server, ANSYS Software (25users), ANSYS Software (75users), PRO Engg. Software, Hyper Works Software, Scanner & Plotter for CADLAB, UPS for CADLAB, MSC Software bundle, PBS Pro, Tech Plot 360, CATIA, DELMIA, and Smart Team.

Computational Aero-Acoustics Laboratory

CWF Laboratory

TIG & MIG welding, general purpose belt grinder & surface polisher, Hydraulic specimen mounting press, Induction furnace, Resistance furnace, Foundry equipment & Machinery, Muffle furnace, 80 Ton Hydraulic Press.

Fluid Dynamics Laboratory

4 Channel Hot Wire Anemometer, 70 cfm 13 bar Screw Type Compressor

Fluid Mechanics Laboratory

Experimental set ups for measurement of fluid viscosity, flow measurement, major and minor losses, forces on immersed bodies, flow visualization (All experimental set ups are developed by U.G. students of IIT Bhubaneswar)

Advanced Manufacturing Laboratory

Optical Profilometer, Profile projector, Grinders, Laser-based Micro-machining Workstation.

Heat Transfer Laboratory

Concentric Tube heat exchanger Unit, Shell and Tube Heat Exchanger Unit, Combined Free and Forced Convection and Radiation Heat Transfer Unit, Radiation Errors in Temperature Measurement, Unsteady State Heat Transfer Unit, Refrigeration Cycle Demonstration Unit, Linear and Radial Heat Conduction Unit, Radiation Heat Transfer Unit, Combined Cycle Refrigeration Unit with Cycle Inversion Valve, Extended Surface Heat Transfer Unit, Single Tube Boiling Heat Transfer Unit, Critical Heat Flux Boiling Heat Transfer Unit, Plate Heat Exchanger Unit, Boiling Heat Exchanger Unit, 5×3 Tube Bundle Boiling Heat Transfer Testing Setup, PCM Based Electronic Chip Cooling Setup

IC Engine Laboratory

Variable Compression Ratio Engine, Axial Flow Gas Turbine Unit, Flame Propagation & Stability Unit, Nexa Fuel Cell Training System, 4 Stroke 4 Cylinder CRDi Diesel Engine with Open ESU, Exhaust Gas Analyzer.

Machine and Mechanism Laboratory

Static and Dynamic Balancing, Whirling of Shaft, Gyroscope, Governor, Anti-Friction Bearing, Hydrodynamic Lubrication, Basic Kinematics Demonstrations – Gears, Linkages, Mechanism, Inversion, Differential, Universal Vibration Apparatus.

Machine Tools & Machining Laboratory

Wire cut EDM, Ultrasonic drilling cum milling machine, CNC vertical milling center, Master gear hobbling, radial drilling machine, Industrial grinder, Lathe machine, Milling machine, Hydraulic surface grinder, Die Sinking EDM, Dynamometer, Lapping Machine, Telerond.

Materials Testing Laboratory

Hardness Testing Machines: Rockwell, Brinell, Vickers, Spring Testing Machine, Torsion Testing Machine, Rotary Bend Fatigue Testing Machine, Erichsen Cupping Test Machine, Photo-elastic Bench

Opto-Thermal Lab (Thermo-Fluid Lab)

Mach– Zehnder Interferometer setup

Sense & Process Laboratory

Sound Impedance Tube, Handheld Sound Analyzer, DAQ Boards & PXI Chassis, Compact CRIO DAQ system

School of Minerals, Metallurgical and Materials Engineering (SMMME)

About the School

The School of Minerals, Metallurgical and Materials Engineering at IIT Bhubaneswar, established in 2012, is a unique initiative where minerals, metals and materials have come into a collaborative existence with a mission to be locally relevant and globally competitive.

Presently the School offers programs as follows:

- B. Tech. in Metallurgical and Materials Engineering,
- B. Tech.-M. Tech. Dual degree in Metallurgical and Materials Engineering,
- M. Tech. in Metallurgical and Materials Engineering and
- Ph.D. Programme

Located in the state of Odisha, one of the most mineral rich states of India, the school is aware that the maximum economic benefit from a mineral could be achieved when economically transformed to its final product leading to ultimate benefit.

Statistics

- No of faculty: 11
- HPC computer clusters: 2
- No. of major equipment: 51
- Number of Sponsored projects (on going): 22
- Number of consultancy projects: 7
- Number of patents granted (till date): 04
- Number of patents pending: 02
- No. of symposiums organized: 06
- Distinguished Visitors:03
- No. of student awards: 09
- No. of publications 2019: 42
- No of Ongoing Sponsored Research Projects for 2019-20- 15

State-of-the-Art Facilities

The School continuously strives to create and upgrade its advanced experimental and computational facilities. The School has procured a Field Emission Scanning Electron Microscope with EDX and EBSD facility which is under the Central Instrumentation Facility. Others include the microscopy facilities like Inverted and upright Optical microscopes with image analysis facility, Melting and heat treatment facilities, Metallography facility for sample preparation, Universal Hardness, Testing Machine, Electrochemical workstation and High Performance Computer Clusters together with multiscale and multiphysics simulation software.

Laboratories

The School has been developing a number of laboratories to cater to undergraduate and postgraduate teaching and well as various research activities of the School and the Institute. Currently, it houses the following laboratories:

- Electrometallurgy and Thermodynamics Laboratory
- High Temperature Processing Laboratory
- Mechanical Testing Laboratory
- Metallography Laboratory
- Modeling and Simulation Laboratory
- Optical Microscopy Laboratory
- Physical Metallurgy Laboratory
- Powder Processing Laboratory
- Materials Characterization Laboratory
- Process Control and Instrumentation Laboratory

The faculty members are engaged in sponsored projects from Science and Engineering Research Board, Department of Science and Technology, UGC-DAE Consortium of Scientific Research - Kalpakkam, Planning Coordination Department - Government of Odisha, Uchchatar Aviskar Yojana – MOE, National Aluminum Company, Naval Research Board and Ministry of Mines, Govt. of India. The school is actively providing technical consultancy services to industries such as Tata Sponge Iron Limited, Jindal Stainless Steels Ltd. and Pradeep Phosphates Ltd.


Zwick/Roel

Centres of Excellence

Virtual and Augmented Reality Centre of Excellence (VARCoE)

Virtual Reality and Augmented Reality (VR and AR) have massive innovation potential across a wide range of industries and research fields. This research and innovation is currently across a range of industries including – product and skill development, health and medical science, art and architecture, transport, construction, tourism, entertainment, education, and productivity software. For achieving goals of such great magnitude Government of Odisha, STPI, Philanthropists like Shri Subroto Bagchi and Ms. Susmita Bagchi and IIT Bhubaneswar have come together to start this CoE.

Objective

The center is intended to span a wide spectrum of disciplines with particular emphasis on interaction technologies including virtual, augmented and mixed reality as well as mobile computing, epigenetic and evolutionary robotics, and haptic communication. The center will engage in research, teaching and services for developing advanced methods and algorithms for near-real 3D user interfaces and exploratory data analysis in virtual environments. Emphasis will also be laid on application-driven, interdisciplinary research in collaboration with all the reputed institutions worldwide, and partners from industry, covering fields like defense, simulation science, production technology, product development, neuroscience, architecture, and medicine.

Our CoE highlights the growth & development of Augmented and Virtual Reality solutions for achieving the digital transformation. This CoE aimed at partnerships among industry, academia, R&D Labs and innovators. The following are the major objectives of IIT Bhubaneswar CoE.

- Give impetus to research, technology development, product development, technology incubation and entrepreneurship in Virtual & Augmented Reality and allied fields.
- Develop a state-of-the-art research, development and testing facility/laboratories for advanced algorithms, applications and methods in aid of Virtual and Augmented Reality for Immersive Visualization and allied areas.
- Develop application platforms for specific skill development programs based on the industry needs and relevance.
- Produce new generation of entrepreneurs and incubators, who are ready to reap the benefits of the incubation and start-up facilities.
- To create a core group of researchers in the area of AR/VR.
- Applications of AR-VR in education including virtual labs (could be primary, secondary, collegiate and higher education)
- Application of AR-VR in skilling and skilling system development.
- Application of AR-VR in Biomedicine/Bio-engineering & health care applications.
- Immersive visualization.
- To create startup grants for select startups registered at Startup Center - IITBBS, STPI – Bhubaneswar and Startup – Odisha and a few for the most innovative projects from PAN India
- Joining of Associations like Global Virtual Reality Association, subsequently creating a Chapter at Bhubaneswar

Conclave and Hackathon

Virtual Reality and Augmented Reality (VR and AR)

IIT Bhubaneswar in association with Software Technology Parks of India (STPI), and Govt. of Odisha organised a Conclave and Hackathon on Virtual and Augmented Reality during 10th-12th Jan 2020 at IIT Bhubaneswar. The Inaugural ceremony of the three day Conclave and Hackathon was inaugurated in the presence of Shri. Omkar Rai, DG, STPI (Chief Guest), Shri Manoj Kumar Mishra, IRTS, Secretary, E & IT Department, Govt. of Odisha (Guest of Honour) and Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar presided over the event. Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar during his inaugural address emphasized the importance of new-age technologies such as Augmented Reality (AR) and Virtual Reality (VR), Artificial Intelligence (AI), Internet of things (IOT) and 5G communication as the current trends in IT, where systems are being developed to incorporate these and are important in realizing the Digital India dream. He also acknowledged the philanthropic support from Smt. Susmita

Bagchi and Shri. Subroto Bagchi (Odisha Skill Development Authority, MSME department of the Govt. of Odisha), STPI for joining hands together with IIT Bhubaneswar for creation of Center of Excellence in AR-VR (VARCoE) at the institute. VARCoE focuses on creating an ecosystem for carrying out R&D in AR-VR, immersive visualization and applications, giving impetus to skill development, manpower creation through the innovative education program and foster technology incubation and entrepreneurship.

Thus, the goal of the conclave and hackathon was to gather people with different backgrounds and experiences to work together in teams and create disruptive and inspiring products/solutions for use in every field of imagination in the AR/VR domain. The Conclave and Hackathon included several guest talks, interactive sessions, workshops by student teams. Some of the esteemed speakers during the three days conclave includes are Dr. Pradipta Biswas (IISc Bangalore), Dr. Kaushal Kumar Bhagat (CET, IIT Kharagpur), Prof. Rajesh M. Hedge (IIT Kanpur), Dr. Shiva Ji (IIT Hyderabad) and Dr. Subroto Bagchi (Chairman Odisha Skill Development Authority). Out of the participated 18 teams in the final round the following two teams have won the 2nd and 3rd prize respectively.

Team: Learn-O-Little (2nd prize)

Contact: 7888868524, Neha Tuli, Chitkara University, Punjab 9565030181

The team developed a portable and affordable Augmented Reality based hands-on learning kit for kids with hearing and speech loss using sign language which would allow them to learn Basic English language skills (alphabet, word building, etc.) on their own without being completely dependent on others. The proposed product would promote embodied learning through physical-digital interactions.

Team: ARHub (3rd prize)

The team showcased their concept by merging the emerging technology of Augmented Reality (AR) with the Internet of Things (IoT) . The main theme of this project was to increase the analytical efficiency in all sectors starting from the big bulky industry to everyday utility tools (example- bike).

Centre of Excellence for Novel Energy Materials (CENEMA)

The core research focus of CENEMA is to work on advanced energy materials using state of the art experimental, theoretical and computational methods. The group has taken a steadfast approach in developing state-of-the-art solutions for both energy harvesting and storage, to promote sustainable growth. Since energy is a multidimensional research topic, collaborative association with institutes such as NISER, IOP, and IMMT has been taken up to provide cutting-edge solutions based on affordable methodologies.

Focus Areas

- To synthesize high-grade, novel and multifunctional materials/compounds as catalysts for energy conversion and as electrode materials for next generation energy storage devices (e. g. battery, super capacitor).
- Fabrication of symmetric, asymmetric, and hybrid coin-cell type supercapacitor devices and to explore the possibilities for the development of larger supercapacitor modules for a wide range of applications such as electric vehicles, smart electronic devices, and wearable electronics.
- Make use of abundant, less-toxic, and non-hazardous elements or compounds to use as core components of the harvesting/storage modules, and to reach out to the general public through technology transfer and rapid commercialization with the help of industrial support.
- Detailed theoretical modelling and computational approach through first principles density functional theory (DFT) to devise a way in sorting out the best possible materials/compounds for energy-related applications. This would help in finding an optimized system for both energy harvesting and storage, and moreover, reduce both time and cost by eliminating undesired synthesis/characterization/measurement steps.
- The center has overseen the research and development of the next generation energy storage technologies, i.e., supercapacitors., and continues to do so in terms of extensive research and academic activities, steadfast collaborative association with industry partners (NALCO and TATA), and dissemination (and sharing) of the research output with scientific communities at the national and international platforms. Our theoretical group is actively involved in carrying out extensive and rigorous modelling-based calculations to help find the most feasible and optimized solution to problems associated with energy harvesting and storage.

Activities at a Glance

- Large scale synthesis through techniques like hydrothermal, sol-gel, and reflux methods to afford high performance electrode materials and catalysts based on two-dimensional layered transition metal chalcogenides and their graphene hybrids.
- Implementation of high-end laboratory synthesis through chemical vapor deposition (CVD) technique for the preparation and specialized application of a certain class of materials.
- Development of flexible and compact supercapacitor modules for smart electronic devices. We have been fabricating 2032 type coin-cell supercapacitor devices using both symmetric and asymmetric configuration of electrodes for use in both powers- and energy-based applications.
- Synthesis of metal-free catalysts for water-splitting reaction to yield hydrogen and oxygen, respectively used for fuel cells and metal-air batteries. Few bi-functional catalytic materials have been developed at the centre which showed good electrochemical activities towards HER and OER.
- Finding suitable alternatives to the commercially available noble-metal-based state-of-the-art catalysts, by exploring low-cost and earth-abundant materials to promote both hydrogen evolution reaction and oxygen evolution reaction.
- Extensive material characterization through X-ray diffraction, Field-emission scanning electron microscopy, High-resolution transmission electron microscopy, Elemental mapping, Energy Dispersive X-ray spectroscopy, and X-ray photoelectron spectroscopy, etc. have been made available at the center and at the collaborating/partner institutes for material characterization.
- Detailed electrochemical investigation of supercapacitor devices (in symmetric, asymmetric, and hybrid configurations) and water splitting with the aid of high-end electrochemical workstations for precise results.

- CENEMA is also working on low-cost and long-term energy storage devices which will be integrated to the solar photovoltaic modules in order to provide a continuous supply of electricity to the grid-deprived population in remote locations.
- Through modelling approach, we have successfully addressed the most notable issue of dendritic growth, often found in the lithium-ion systems, by showing the possibility of replacing bulk metallic lithium or its compound with lithium-atomic-clusters. This will not only eliminate the issue of dendritic growth in lithium-based battery systems, but also enhance the net effective electrode potential of the cluster-based batteries through the selection of a suitable electrolytic solvent.

Industry Partners

- Partnership with industries like NALCO and TATA through various collaborative projects and sharing state-of-art fabrication and characterization techniques for technology development through rapid commercialization.
- In a recent work, our group has synthesized an aluminium-graphene composite system through a powder metallurgy route which showed excellent thermal conductivity values, even better than the copper. The said composite is a potential low-cost alternative to the metallic copper for use in solar water heating modules due to its enhanced thermal conductivity properties. The synthesis and fabrication of the composites have been done in active collaboration with NALCO as the industry partner.
- Strong collaboration with NALCO has been taken up at CENEMA through several innovative research projects worth ₹2.0 crores.

Publications / Patents and Start-Ups

We have recently our work on the enhanced thermal conductivity of aluminium-graphene composite in collaboration with NALCO. Additional results in the form of manuscripts have also been communicated on this topic. Two patents have been filed on our findings and few more are on pipeline. In the collaborative projects with NALCO, we have achieved several results of commercial interest such as improved thermal properties of aluminum-graphene composites, high mechanical strength and current carrying capacity (ampacity), and low-cost energy storage devices. The results will soon be published in peer-reviewed journals and relevant patents will also be filed.

We continue to collaborate with the first start-up from IIT Bhubaneswar, KARMA, on renewable energy research for the development of affordable and customized solar-powered photovoltaic modules and distribute the same through proper channels to the sizeable grid-deprived population at remote locations throughout India. Also, we are connecting with a large framer base and small-scale vendors to help them understand the benefits of solar-powered micro-pump-sets and small cold-storage vehicles to inculcate the long-term impact of renewable energy in our country.

S. K. Dash Centre of Excellence of Biosciences and Engineering and Technology (SKBET)

S. K. Dash Centre of Excellence of Biosciences and Engineering and Technology (SKBET) was established in IIT Bhubaneswar in 2014 with a generous grant from Dr. Dash Foundation, USA to carry out research on probiotics and broader areas of biology. The centre has a world class laboratory with state-of-the-art instrumentation facility to carry our research on microbiology, cell biology, molecular biology, and bioinformatics. The new research laboratories were inaugurated on 18th December 2018 by the director of AIIMS Bhubaneswar, Dr. Gitanjali Batmanamane; the chairman and founder, UAS Laboratories, LLC. Dr. Sita kanta Dash; the director, IIT Bhubaneswar, Prof. Ratnam V Raja Kumar; and the Co-coordinator, SKBET, Prof. Saroj Kumar Nayak.

The center has a goal of developing probiotics nutraceuticals and pharmaceuticals that can be used to improve immunity, reduce aging processes, and to treat various gastrointestinal disorders. In the initial years of the establishment of SKBET, the center focused on its capacity building to carry out the cutting-edge probiotics research. The center has screen various potential probiotic strains for their probiotic properties and successfully identified six novel probiotic strains that are at par with an established probiotic strain, LA DDS1 with respect to antimicrobial activity against various pathogens. Two of the newly identified probiotics strains secrete good amounts of antioxidants. Therefore, these two strains are being investigated for anticancer and anti-inflammatory disorders. Sixteen synbiotic products have been formulated and

characterized in-vitro using the probiotics strains identified in the center. These sixteen products will be clinically trialed to reduce/treat geriatric disorders. In addition, six articles have been published from the center and around fifteen dissertation projects have been successfully carried out in the center as of summer 2020. The center is thriving and advancing to innovate new probiotics products which can be used as nutritional supplements as well as pharmaceutics intervention of various gastrointestinal disorders.

Design Innovation Centre (DIC)

Design Innovation Center, IITBBS along with its four Spoke institutes viz. BOSE, Cuttack, Ravenshaw University (Dept. of Philosophy & Psychology), Cuttack, KV No.1, BBSR and CET, BBSR has involved itself in some progressive engagements since 2015 to till date in the field of creativity. It infuses a culture of innovative thinking in the budding engineers to undertake projects which lead to the development of educational and community-driven products primarily for children but of course, not limited to there. Students have actively participated in some excellent events, alluring activities and praiseworthy projects under DIC. It provided support to the student members in every aspect of project work, may it be physical, moral or financial. As a result, we witnessed some groundbreaking achievements during our work period that directly encourage us to aim at a long drastic journey.

EVENTS and WORKSHOPS (2019-20)

1. A workshop named "Let's BUILD" was organized in our SPOKE institute Kendriya Vidyalaya No.1, BBSR on creative product development for schools having Atal tinkering labs to make the students explore their hidden talents with expertise training and experiments. The workshop went on for a month as it was divided into 4 sessions that continued for 4 days (one day per week). The sessions are:

   Day 1 Blue Print & Design
   Day 2 3D Product Outlook
   Day 3 Real Time Product Development
   Day 4 Embedded Technologies

2. We are organizing workshops on MATLAB every week where the students of IIT, Bhubaneswar (1st Year) are the participants. As per plan, it is being conducted in a specific day of every week which will go on for eight weeks.

3. Indian Institute of Technology observed its 3rd Open Day event on its 12th Foundation Day ceremony on 12th February, 2020 at its Arugul Campus, Jatni, Bhubaneswar. DIC, its sub centers and spokes executed a science and Technology exhibition at the School of Mechanical Sciences with around 40 exhibits which were showcased to the invitees. Around 8500 school students from class- VI to class- XII along with junior engineering students from across the city and state have participated in the observation within the scheduled time from 9:30 AM to 5:30 PM. The students came in contact with the live projects and garnered knowledge about the versed techniques by the skilled students, staffs along with proficient faculties working under DIC. It was clearly reflected from their side that they have deepened the mechanism of the innovations demonstrated by DIC.

   Till date from the day of inception of DIC-IITBBS, a total of 14,850 participants have taken part in different events and workshops as a whole.

DIC Status till Date

- Reached out to: about 14850 students
- Start-ups born there: 03
- Patents filed: 16
- Student projects taken up: about 80
- Major events conducted: about 25

Details of Start-Ups

DIC, IITBBS has supported and handheld in formation of three start-ups through continuous handholding and mentoring

- VASITARS PVT. LTD
- PRAJJAWALA SYSTEMS AND SOLUTIONS PVT. LTD and
- TOBEL.IN

VASITARS PVT. LTD.

VASITARS Pvt. Ltd. has been founded with a view to provide In-Situ composite repair solutions to damaged transmission pipelines (Patent No. allotted is 201731007916). It is the first Indian company to provide "Complete in-situ Composite Repair Solutions" to all kind of damage scenarios in transmission pipelines. The technique is well tested at laboratory scale and presently it is in a pilot scale. It has been supported by Design Innovation Centre (DIC) IITBBS.

Products

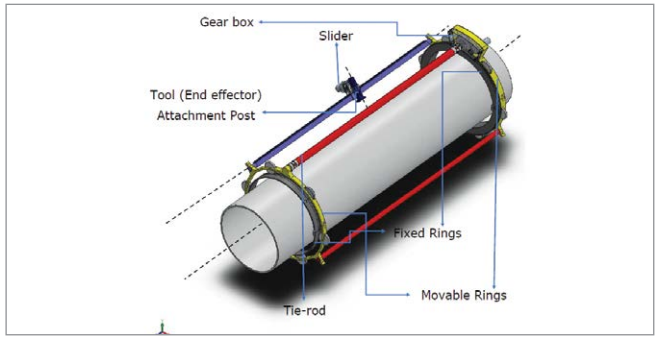
- Nano fillers reinforced polymer composites wrap to repair corroded steel pipelines.
- Development of Rapid Curing Epoxy for Repair of Leaking Defects in Pipelines.
- Development of Pre Pregs based repair methodology using automatic wrapping mechanism.
- Development of resin system for elevated temperature applications.

Salient Features

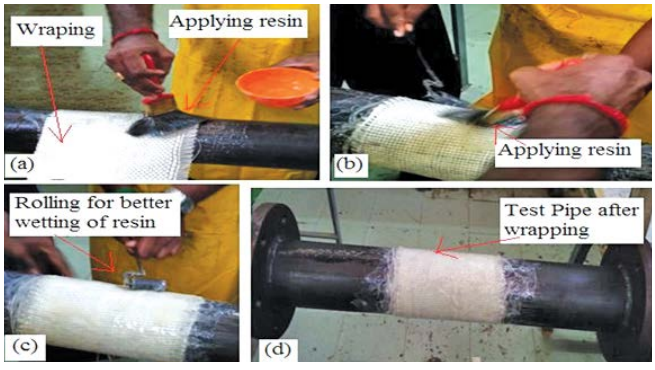
- Enhanced bonding strength of Nano clay dispersed epoxy increases the failure pressure of Fiber Reinforced Composite Overwrap Repair System.
- The repair methodology does not involve any hot works, thus promising a safe working environment.
- The process is quick and less laborious compared to conventional repair techniques.
- The process is In-Situ and hence can be improvised and tailor fit to various kinds of damage scenarios.
- The lifetime of the pipeline is extended to a decade.
- Repair of leaking defects under shutdown conditions can be achieved by the use of Rapid Curing Epoxy Resin developed.
- In non-leaking defects scenario, downtime is reduced to zero and in leaking defect scenario the downtime is lower than the conventional repair methodology.

Achievements

- The said company has been supported by Indian Oil Corporation with a fund of ₹80 Lakhs for Testing & Commercialization.
- Startup Odisha funded Vasitars with an amount of ₹5.0 Lakhs.
- The company was selected among Top 50 innovators in IIGP-2.0 (Indian Innovation Growth Programme).
- They received 1st Prize in Techkriti Innovation Challenge at TECHKRITI-2017, IIT Kanpur.
- They received 1st Prize in Techkriti Upstart Pioneer (B-Plan) at TECHKRITI-2017, IIT Kanpur.
- They received 3rd Prize in Techkriti Elevators Pitch at TECHKRITI-2017, IIT Kanpur.
- The company got incubated at STARTUP CENTRE, IIT Bhubaneswar and IIT Madras Research Park with extended lab facilities.
- Mr. Vikas Sharma BS and Mr. Nitheesh P students' representative from DIC-IITBBS received NRDC National Budding Innovators Awards 2017 for their work on composite materials.
- A total of 3 no.s patent filled (1 from DIC and 2 from Company).
- Vasitars Pvt. Ltd has signed MoU with Gas Authority of India Limited (GAIL) with an amount of ₹350 Lakhs towards product commercialization & marketing
- Vasitars has been successful in implementing the pipeline mechanism at sites of IOCL (Paradeep), IOCL (Mathura), IOCL (Varodara), IOCL (Panipat), Cairn India (Barmer, Rajasthan), ONGC (Karaikal, Puducherry), BPCL (Kakinada), Apollo Tyres (Chennai) etc.
- Vasitars Pvt Ltd a DIC supported start-up and incubated under Start-up Centre, IIT Bhubaneswar has been selected as one of the six successful start-ups of Odisha and was invited to make in Odisha Conclave 2018 to share its success story. They also were featured in the latest booklet containing Information related to startups of Odisha.



Automated Helical Filament Winding Manipulator



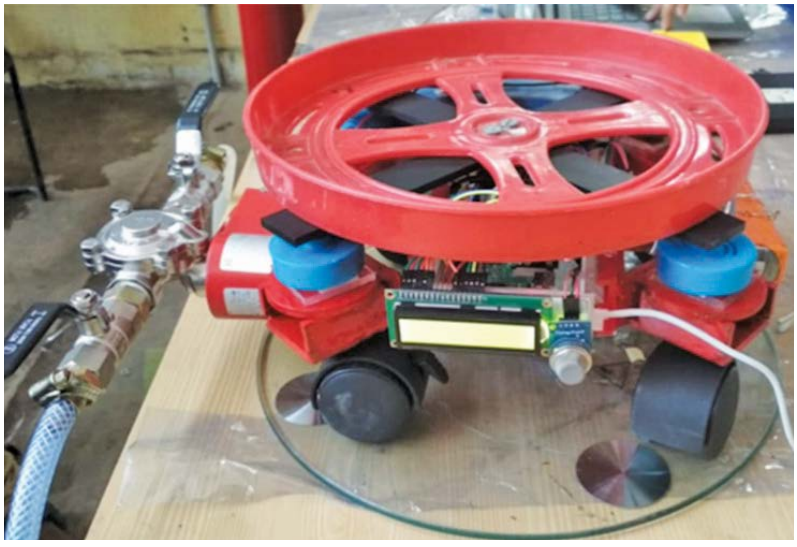
PRAJJAWALA SYSTEMS AND SOLUTIONS PVT. LTD.

An IOT based Data Management solution named as Project Prajjawala: Method and Apparatus for Automation & Optimization of LPG Cylinder Distribution System was initiated and formed with primary contributions includes the alumni of IITBBS. It has been supported by the Design Innovation Centre (DIC) IITBBS. The project is further being developed for commercialization under the flagship of a company called Prajjawala Systems and Solutions Private Limited which has been incubated at Start-up Centre, IIT Bhubaneswar. Project Prajjawala has come up with an IOT based Data Management solution: Method of and Apparatus for Automated LPG Pay-As-You-Use (PAYU) Solution (Filed patent under patent application number 201811018360 by the company) to supplement and catalyze the 100 % clean energy drive under Pradhan Mantri Ujjwala Yojana (PMUY) by introducing the concepts of:

1) Price Fragmentation of LPG.
2) pay-As-You-Use (PAYU) functionality.
3) Automation of Supply Chain Management.
4) Real-time LPG usage and inventory data.
5) Automated Asset Management & Demand Supply Co-ordination.

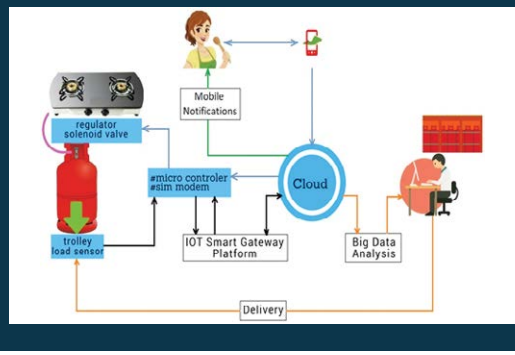
Consumer Base Unit (CBU)

It is an in-house prototype apparatus developed to monitor, track and control LPG usage from your LPG cylinder by communicating the real-time LPG usage data to the central cloud server through an IoT Smart Gateway Platform which can further be used to control the LPG flow from cylinder to the stove by means of a LPG safe valve controlled remotely using electromagnetic signals.



Achievements

1. Received 2nd Prize in Techkriti Social Track B-Plan, Techkriti 2018, IIT Kanpur
2. Received 3rd Prize in GES Pitchers Elevators Pitch Competition, Ges 2018, IIT Kharagpur
3. Received 1st Prize In SRIJAN, B-Plan Competition Purvodaya 2018, Vgsom-IIT Kharagpur
4. Received 1st Prize In E-Summit 2018, IIT Bhubaneswar, Product Design Competition



5. Mr. Rahul Kumar & Mr. Rahul Mahanot student representative from DIC-IITBBS for project Prajjawalla has been selected for NRDC National Budding Innovators Awards 2018 which is to be received in May 2019.
6. Received 1st Prize In Grand India IoT Innovation Challenge 2018, Tata Communications & CII
7. Received 1st Prize In Techkriti Pitch Premier, Techkriti 2019, IIT Kanpur
8. Received 3rd Prize In Smart India Hackathon-2019.
9. The company has filed one patent from its side for the Prajjawalla product.
10. The company has been incubated at Startup Centre-IITBBS.

TROBEL

TROBEL.IN

TROBEL is an entrepreneurial endeavour which aspires to provide the service of a centralized library throughout the country, with the initial stages focusing more on the metropolitans and other major cities of the country, starting with Bhubaneswar, Odisha. We aim to provide the joy of book reading to people in the most convenient, affordable, and accessible in secure manner possible.

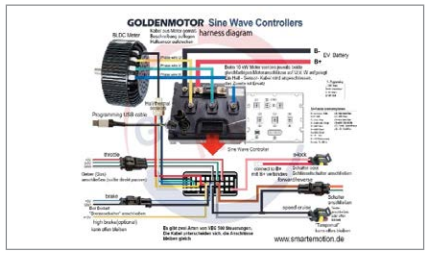
Glances of some Products by Students / Faculties / DIC Officials

Prajjwalla Project (Version-1 & 2) Photonx Dobsonian

Photonx

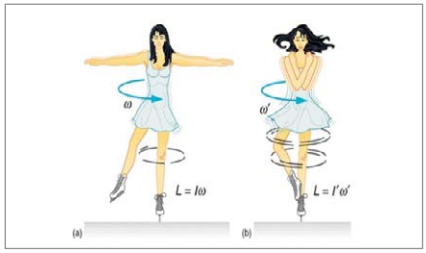
Dobsonian Telescope

Autonomous Self Driving Car

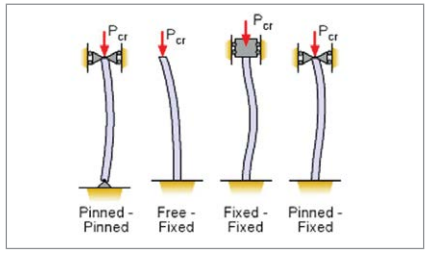


Design & Modelling of an Electric Motor Car

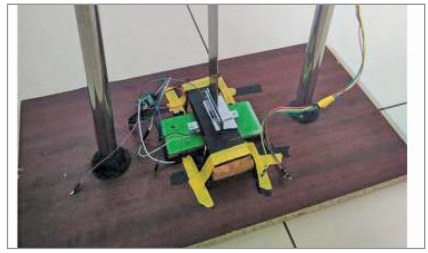
Advancement in the field of Lithium-ion batteries for Robotic Hand Ballistic Chronograph

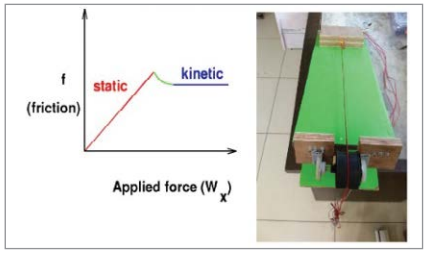


Demonstration of Conservation of Angular Momentum



Buckling of Column



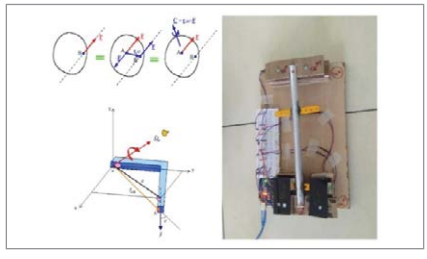


Determination and Comparison of Static and Dynamic Friction

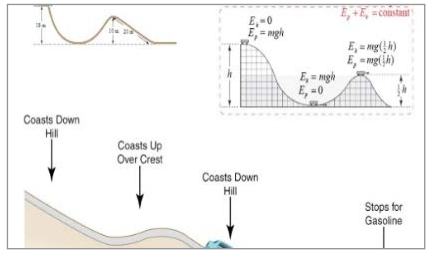
Calculation of Reaction Force in Truss Carrying Load using Load Sensor

Measurement of Deflection and Reaction Forces of a Loaded Beam

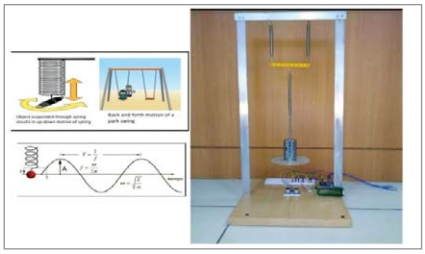
Mechanical Advantages of Pulleys



Line of Action of Force and Moment due to its Transmission

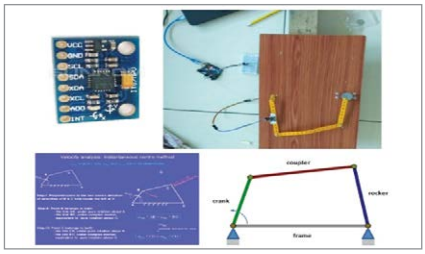


Demonstration of Conservation of Energy



Demonstration of simple Harmonic motion And natural frequency of spring mass system

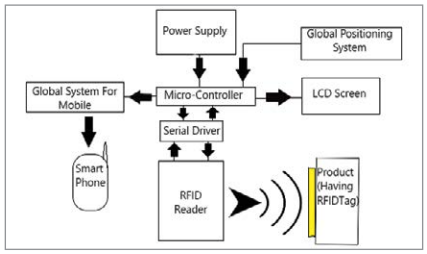
Coefficient of Restitution



Four Bar Mechanism

Glances of some Ongoing Projects of SPOKE Partner BOSE, Cuttack

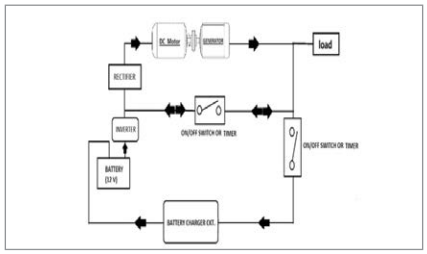
Polar Graph (Wall Drawing Machine)



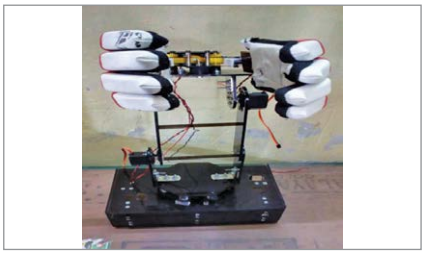
Smart Basket

IoT based flood monitoring and warning system

Automatic stair climbing Chair



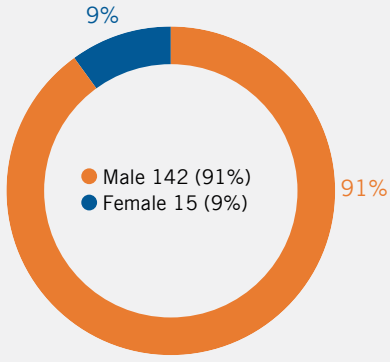
Production of free energy



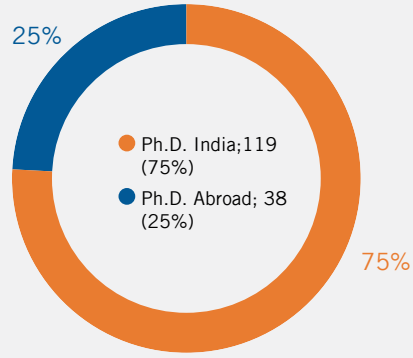
Robotic arm for massaging purpose

Our Faculty

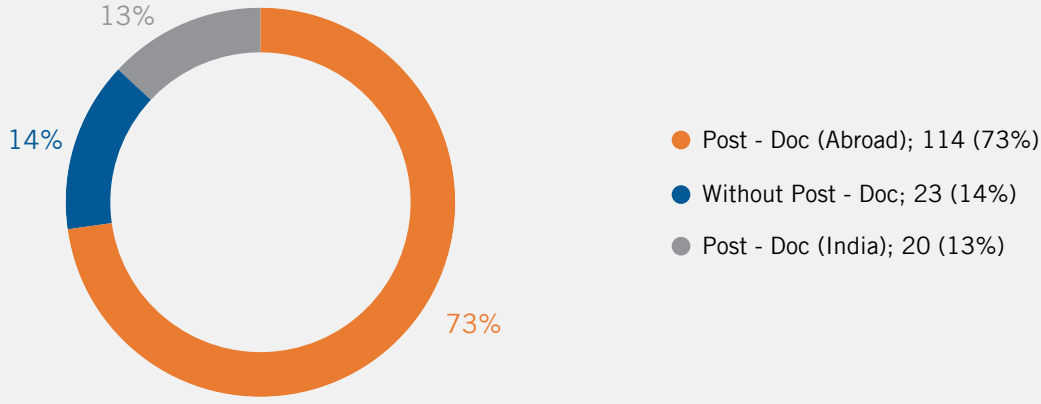
Gender wise Distribution of Faculty



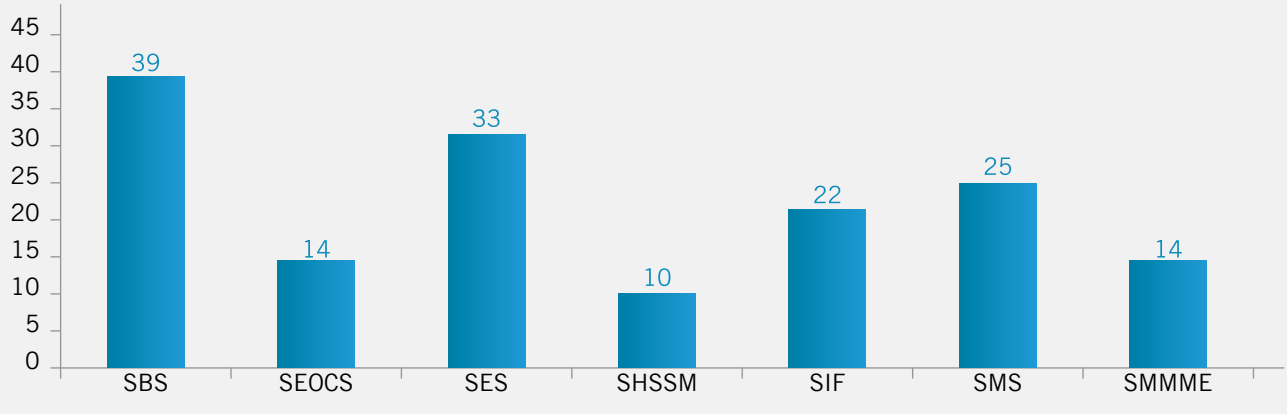
All Faculty with Ph.D.



Faculty with Post-Doctoral Experiences



School wise Distribution of Faculty



School of Basic Sciences

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
1.	**Prof. Saroj Kumar Nayak** Professor nayaks@iitbbs.ac.in	Jawaharlal Nehru University, 1995	First Principles Molecular dynamics Simulations, Nanostructures, Quantum transport, Quantum Biology
2.	**Prof. Sujit Roy** Professor sroy@iitbbs.ac.in	IIT Kanpur, 1987	Organometallic Chemistry, Homogeneous Catalysis
3.	**Prof. V. R. Pedireddi** Professor vr.pedireddi@iitbbs.ac.in	University of Hyderabad, 1993	Solid State Chemistry; Supramolecular Chemistry; Self-Assembly of Biological, Organic and Organic-inorganic Ensembles
4.	**Prof. P. V. Satyam** Professor satyam@iitbbs.ac.in	Institute of Physics/ Utkal University, Bhubaneswar, Odisha, 1997	Surface and interfaces, electron microscopy, experimental condensed matter physics, energy materials.
5.	**Prof. T. V. S. Sekhar** Professor sekhartvs@iitbbs.ac.in	IIT Madras, 1995	Numerical Methods; Computational Fluid Dynamics
6.	**Prof. V. R. Yerikalapudy** Visiting Professor ryvasudeva@iitbbs.ac.in	Andhra University, 1980	Mathematical Modelling for Ultrasonic Nondestructive Testing; Numerical Methods in elastic wave motion and vibration; Techniques of Applied Mathematics
7.	**Prof. Prawal Sinha** Visiting Professor prawal@iitbbs.ac.in	IIT Bombay, 1976	Mathematical Modelling- Lubrication Theory
8.	**Dr. Akshay Kumar Ojha** Associate Professor akojha@iitbbs.ac.in	Utkal University, 1997	Soft computing; Optimization Theory(Geometric programming and Fractional Programming; Data Mining and Portfolio Optimization
9.	**Dr. Kari Vijayakrishna** Associate Professor kvijayakrishna@iitbbs.ac.in	IIT Madras, 2006	Synthesis of task-specific ILs and polymerizable IL monomers; Synthesis of Chiral Polymers and their applications in chiral induction; Synthesis of Achiral and Chiral Resins and their applications in synthesis; PIL stabilized metal nanoparticles and their applications; Polyelectrolyte-DNA interaction studies; PILs for gas separation membranes; Synthesis of MIPs and resins for nuclear waste treatment; Synthesis of (RAFT derived) ionic, pH, temperature and solvent responsive homo- and block copolymers towards their self-assembling for drug delivery
10.	**Dr. Vasudeva Rao Allu** Associate Professor avrao@iitbbs.ac.in	IIT Madras, 2010	Complex Analysis; Geometric Function Theory; Harmonic Mappings in the Plane.
11.	**Dr. Ashis Biswas** Associate Professor abiswas@iitbbs.ac.in	Bose Institute, 2006	Elucidation of structure-function relationships in small heat shock proteins and its importance in human diseases (leprosy and tuberculosis) using biochemical and biophysical techniques.; Investigating the effect of various post-translational modifications on the eye lens crystalline proteins and their role in developing cataract formation in human lens using biophysical methods.; Elucidating the mechanism behind the interaction of metal complexes (anti-cancer agents) with DNA and proteins using various biochemical techniques.

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
12.	**Dr. Chandrasekhar Bhamidipati** Associate Professor chandrasekhar@iitbbs.ac.in	Institute of Physics, 2006	Heat Engines, Thermodynamics and Statistical Mechanics; Black Holes; String Theory
13.	**Dr. Rajan Jha** Associate Professor rjha@iitbbs.ac.in	IIT Delhi, 2007	Optical Devices; Plasmonics; Fiber Optic
14.	**Dr. Sabyasachi Pani** Associate Professor spani@iitbbs.ac.in	IIT Kharagpur, 2004	Variational Inequalities and Complementarity Problems; Applied Functional Analysis; Optimization Techniques
15.	**Dr. Sasmita Barik** Associate Professor sasmita@iitbbs.ac.in	IIT Guwahati, 2007	Combinatorial Matrix Theory; Graph Theory;
16.	**Dr. Shantanu Pal** Associate Professor spal@iitbbs.ac.in	IIT Bombay, 2006	Development of novel methodology and total synthesis of biologically active natural products; Development of chemically modified small molecules as therapeutic agent; Synthesis of modified nucleic acid as anticancer or antiviral drug.
17.	**Dr. Shyamal Chatterjee** Associate Professor shyamal@iitbbs.ac.in	The University of Heidelberg, Germany, 2007	Experimental atomic, molecular and surface physics; Nanomaterials; Biomolecules, clusters
18.	**Dr. Snehasis Chowdhuri** Associate Professor snehasis@iitbbs.ac.in	IIT Kanpur, 2005	Theoretical Chemistry; Statistical Mechanics; Molecular Dynamics Simulation
19.	**Dr. Tarakanta Nayak** Associate Professor tnayak@iitbbs.ac.in	IIT Guwahati, 2007	Complex Dynamics; Fractals; Independence polynomials and independence fractals of graphs
20.	**Dr. Abhijit Datta Banik** Assistant Professor adattabanik@iitbbs.ac.in	IIT Kharagpur, 2007	Queuing Theory, Applied Probability Models, Stochastic Modelling and Simulation, Stochastic Models in Operations Research and their application in Communication systems, Transportation, Manufacturing, Production and Inventory Systems.
21.	**Dr. Akhilesh Kumar Singh** Assistant Professor aksingh@iitbbs.ac.in	IIT Kanpur, 2007	Fluorogenic and Chromogenic Chemosensors; Magnetic Materials and MRI Contrast Agents; Synthesis and Characterization of Task-Specific Ionic Liquids and Their Application
22.	**Dr. Anasuya Roychowdhury** Assistant Professor aroychowdhury@iitbbs.ac.in	University of Texas Medical Branch, 2009	Chemomechanistic physiology and regulation of class of enzyme ATPase; Role of ATPase in Cancer Biology; Role of ATPase in Biological Clock
23.	**Dr. Kousik Samanta** Assistant Professor kousik@iitbbs.ac.in	Texas A&M University, College Station, USA, 2009	Quantum Chemistry; Scattering theory; Mixed quantum-classical dynamics
24.	**Dr. Malay Kumar Bandyopadhyay** Assistant Professor malay@iitbbs.ac.in	Jadavpur University, Calcutta, 2008	Open Quantum System; Non-equilibrium Statistical Mechanics; Nanomagnetism
25.	**Dr. Niharika Mohapatra** Assistant Professor niharika@iitbbs.ac.in	IIT Bombay, 2006	Multiferroics; Thermoelectric; Topological phases of matter

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
26.	**Dr. Satchidananda Rath** Assistant Professor srath@iitbbs.ac.in	Institute of Physics Bhubaneswar, 2006	Semiconductor nanosheets, Dilute magnetic semiconductor, Metal clusters, graphene, Optical properties, fast transitions, Raman scattering, Small-angle x-ray scattering, Rheology; Solar cell, Light Emitting Diodes
27.	**Dr. Seema Bahinipati** Assistant Professor seema.bahinipati@iitbbs.ac.in	University of Cincinnati, Ohio, U.S.A., 2008	Experimental High Energy Physics [B Physics, CP Violation, Beyond Standard Model Physics]
28.	**Dr. Soumendra Rana** Assistant Professor soumendra@iitbbs.ac.in	IIT Bombay, 2007	G-protein Coupled Receptor Biology; Molecular Modelling and Computational Biology; Design, Synthesis and Characterization of Peptides
29.	**Dr. Srikanta Patra** Assistant Professor srikanta@iitbbs.ac.in	IIT Bombay, 2005	Metal Mediated Organic Transformations (Catalysis);Metal Based Anticancer Drugs; Functional Materials, Luminescent Materials, Sensors
30.	**Dr. Tabrez Khan** Assistant Professor tabrez@iitbbs.ac.in	University Of Mumbai, 2009	Synthetic Method Development; Natural products and natural product inspired bioactive molecule synthesis
31.	**Dr. Bankim Chandra Mandal** Assistant Professor bmandal@iitbbs.ac.in	University of Geneva, Switzerland, 2014	Numerical Analysis, Scientific Computing, Partial Differential Equations, Domain Decomposition Methods
32.	**Dr. Sunil Kumar Prajapati** Assistant Professor skprajapati@iitbbs.ac.in	IIT Delhi, 2013	Algebra
33.	**Dr. Abhishek Chowdhury** Assistant Professor achowdhury@iitbbs.ac.in	Harish Chandra Research Institute (DAE), Allahabad, 2016	String Theory; Black Holes; QFT; Moonshine
34.	**Dr. Hemant Kumar** Assistant Professor hemant@iitbbs.ac.in	Indian Institute of Science, Bangalore, 2014	Computational condensed matter; Electronic and magnetic properties of 2D materials; Functional materials; Energy storage; Chromatin folding and DNA transcription
35.	**Dr. Aneesh M.** Assistant Professor aneesh@iitbbs.ac.in	IIT Kanpur, 2016	Operator theory; Operator dynamics; Functional analysis
36.	**Dr. Arpan Kabiraj** Assistant Professor akabiraj@iitbbs.ac.in	IISc. Bangalore, 2016	Geometric group theory ; Low-Dimensional Topology
37.	**Dr. Abhijit Sutradhar** Visiting Faculty abhijits@iitbbs.ac.in	IIT Kharagpur, 2017	Bioluid mechanics; Magnetic drug targeting; Nanofluid convection in porous media
38.	**Dr. Avijit Kumar** Visiting Faculty avijitkumar@iitbbs.ac.in	University of Twente, the Netherlands, 2013	Two-Dimensional Materials; Metal-Organic Frameworks (MOFs); Molecular Assembly; Molecular Electronics; Scanning Tunneling Microscopy (STM); non-contact Atomic Force Microscopy (nc-AFM).
39.	**Dr. Vipin Kumar** Visiting Faculty @iitbbs.ac.in	NTU Singapore, 2016	Energy Storage Materials and Devices

School of Earth, Ocean and Climate Sciences

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
40.	**Prof. Uma Charan Mohanty** Visiting Professor ucmohanty@iitbbs.ac.in	Odessa Hydro-Meteorological Institute, USSR, 1978	Tropical Meteorology, Numerical Weather Prediction, Monsoon Dynamics, Regional Climate Studies and Meso-scale Modelling
41.	**Prof. Hrusikesh Mishra** Visiting Professor hrusikesh@iitbbs.ac.in	University of Wollongong, New South Wales, Australia, 1987	Coal Geology/Petrology, Coal Preparation, Coal Petrology and its application in Coal & Hydrocarbon exploration
42.	**Prof. Rambhatla G. Sastry** Visiting Professor rgsastry@iitbbs.ac.in	Moscow State University, Russia, 1980	Geophysics/ Satellite gravity, Geotechnical geophysics (Engineering Geophysics), Exploration Geophysics
43.	**Prof. Axel Hofmann** Visiting Professor of Foreign Origin alexhofmann@iitbbs.ac.in	University of Johannesburg, 2002	Archaean geology, sediment geochemistry and economic geology
44.	**Dr. Debadatta Swain** Assistant Professor dswain@iitbbs.ac.in	University of Pune, 2009	Satellite & Physical Oceanography; Ocean-Atmosphere Interactions & Modelling; Atmospheric Dynamics
45.	**Dr. Kiranmayi Landu** Assistant Professor kiranmayi@iitbbs.ac.in	IISc Bangalore, 2008	Climate Dynamics; Tropical Meteorology; Extreme Weather events
46.	**Dr. Sourav Sil** Assistant Professor souravsil@iitbbs.ac.in	IIT Kharagpur, 2012	Physical Oceanography; Ocean Circulation Modelling; Coastal Dynamics
47.	**Dr. Raj Kumar Singh** Assistant Professor rksingh@iitbbs.ac.in	IIT Kharagpur, 2009	Paleoclimatology and Paleoceanography; Marine Micropaleontology; Hydrogeology
48.	**Dr. Sandeep Pattnaik** Assistant Professor spt@iitbbs.ac.in	Andhra University, 2006	Tropical Meteorology; Monsoon, Cloud Physics; Extreme Events (e.g. Tropical cyclone, Heavy Rainfall, Lightning)
49.	**Dr. Syed Hilal Farooq** Assistant Professor hilalfarooq@iitbbs.ac.in	IIT Bombay, 2010	Hydrogeochemistry; Geothermal Energy; Organic Geochemistry
50.	**Dr. Vinoj. V** Assistant Professor vinoj@iitbbs.ac.in	IISc Bangalore, 2009	Aerosol Cloud Climate Interactions; Satellite Remote Sensing, Radiative Forcing, Field Measurements; Monsoon and Climate Change, Climate Modelling
51.	**Dr. Yengkhom Kesojit Singh** Assistant Professor yksingh@iitbbs.ac.in	IIT Bombay, 2011	Structural geology and tectonics; geochronology; photogrammetry; GIS and remote sensing; Natural hazard and disaster management; Augmented reality and virtual reality.
52.	**Dr. Pathikrit Bhattacharya** Assistant Professor pathikri@iitbbs.ac.in	Princeton University, 2017	Mechanics of earthquakes and faulting; laboratory friction experiments; physics and mechanics of friction; earthquake statistics; fluid-rock interactions; fault-zone hydrology; high performance computing in modelling of earthquake processes; Bayesian inference on highly correlated spaces.
53.	**Dr. Sourav Bhattacharya** Visiting Faculty sourabh@iitbbs.ac.in	IIT Kharagpur, 2014	Ore Geology; Hydrothermal Ore Deposits; Fluid Inclusions & Laser Raman Microspectroscopy

School of Electrical Sciences

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
54.	**Prof. R. V. Raja Kumar** Professor, Director director@iitbbs.ac.in	IIT Kharagpur, 1987	Wireless communications systems; Wireless networking protocols; Channel equalization and baseband processing; Detection methods and systems; Tracking algorithms; Adaptive filtering algorithms and their performance analysis; Estimation of time-varying signals and systems; Spectral Estimation methods; Audio and video coding; VLSI based processors for wireless communication systems; Voice and multimedia over IP
55.	**Prof. N. C. Sahoo** Professor ncsahoo@iitbbs.ac.in	National University of Singapore, 2001	Renewable Energy Systems; Power System Optimization and Control; Control of Electric Drives
56.	**Prof. Rabi N. Mahapatra** Visiting Professor rnmahapatra@iitbbs.ac.in	IIT Kharagpur, 1991	Embedded Systems: Energy efficient design and Real-time applications; System on Chip: Silicon and Photonic NoC, reconfigurable architecture; Internet of Things: Architecture, Cyber Security; Data Analytic co-design: Big Data Accelerators
57.	**Dr. Chandrashekhar Narayan Bhende** Associate Professor cnb@iitbbs.ac.in	IIT Delhi, 2008	Renewable Energy, Distributed Generation; Power Quality, Custom Power Devices; Application of soft computing techniques to power systems
58.	**Dr. Manoranjan Satpathy** Associate Professor manoranjan@iitbbs.ac.in	IIT Bombay, 1997	Software Testing and verification; Advanced Computer Architecture; Programming Languages
59.	**Dr. Prasant Kumar Sahu** Associate Professor pks@iitbbs.ac.in	IIT Kharagpur, 2008	Optical Communication; Remote Sensing; Speech and Signal Processing
60.	**Dr. Pravas Ranjan Sahu** Associate Professor prs@iitbbs.ac.in	IIT Kanpur, 2006	Digital Communications, Mobile Communications, Receiver performance in fading channels.
61.	**Dr. Subhransu Ranjan Samantaray** Associate Professor srs@iitbbs.ac.in	NIT Rourkela, 2007	Power System protection; Smart-Grid; PMU and WAMs
62.	**Dr. Barathram Ramkumar** Associate Professor barathram@iitbbs.ac.in	Virginia Tech, 2011	Signal Processing; Wireless Communication; Bio-Signal Processing
63.	**Dr. Sankarsan Mahapatra** Associate Professor sankarsan@iitbbs.ac.in	IISc Bangalore, 2011	High Voltage Engineering; Industrial Application of High Voltage for Pollution Control; Renewable Energy Systems
64.	**Dr. Debalina Ghosh** Assistant Professor deghosh@iitbbs.ac.in	Syracuse University, Syracuse, NY, USA, 2007	Remote Sensing; Electromagnetic Engineering and Antennas; Radar Systems
65.	**Dr. Debi Prosad Dogra** Assistant Professor dpdogra@iitbbs.ac.in	IIT Kharagpur, 2012	Visual Surveillance and Computer Vision; Human Computer Interface; Augmented Reality
66.	**Dr. Dipankar De** Assistant Professor dipankar@iitbbs.ac.in	IISc Bangalore, 2011	Switched Mode Power Converter and Design of Integrated Magnetics; Application of Power Electronics in Power Systems; Wide band-gap Device based Power Conversion

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
67.	**Dr. Joy Chandra Mukherjee** Assistant Professor joy@iitbbs.ac.in	IIT Kharagpur, 2015	Distributed Algorithms, Time-varying Network Algorithms, Intelligent Transportation Systems, Smart Grid
68.	**Dr. M. Sabarimalai Manikandan** Assistant Professor msm@iitbbs.ac.in	IIT Guwahati, 2009	Signal and Image Processing; Biometric and Multimodal Interfaces; VLSI and Embedded System
69.	**Dr. Niladri Bihari Puhan** Assistant Professor nbpuhan@iitbbs.ac.in	Nanyang Technological University, Singapore, 2007	Image Processing; Biometrics; Biomedical Imaging
70.	**Dr. Padmalochan Bera** Assistant Professor plb@iitbbs.ac.in	IIT Kharagpur, 2011	Networks and System Security; Cryptography; Software Defined Networks
71.	**Dr. Srinivas Bhaskar Karanki** Assistant Professor skaranki@iitbbs.ac.in	IIT Madras, 2012	Power Quality; DC DC Converters for Renewable energy sources; Power Electronics Applications to Power Systems
72.	**Dr. Sudipta Saha** Assistant Professor sudipta@iitbbs.ac.in	IIT Kharagpur, 2015	Wireless Sensor Network; Cyber-Physical Systems; Internet-of-Things
73.	**Dr. Chandrasekhar Perumalla** Assistant Professor pcsekhar@iitbbs.ac.in	IIT Delhi, 2014	Integration and Control of Renewable Energy Systems; Design and Development of Smart Controllers for Microgrid/Smart Grid Systems; Control of Active Distribution Systems; Energy Management in Hybrid AC/DC Microgrid Systems; Application of Power Electronics to Power Systems; Application of Soft Computing to Power Quality Problems
74.	**Dr. Srinivas Pinisetty** Assistant Professor spinisetty@iitbbs.ac.in	INRIA Rennes, University of Rennes1, France	Formal methods, runtime monitoring
75.	**Dr. Srinivas Boppu** Assistant Professor srinivas@iitbbs.ac.in	University of Erlangen-Nuremberg, 2015	Programmable Hardware Accelerators
76.	**Dr. Debapratim Ghosh** Assistant Professor debapratim@iitbbs.ac.in	IIT Bombay, 2017	Microwave components, circuits, and systems, microwave measurement systems, analog and small-scale embedded systems
77.	**Dr. Anoop Thomas** Assistant Professor anoopthomas@iitbbs.ac.in	IISc. Bangalore, 2018	Coding techniques; Algebraic Error Correcting Codes; Index Coding; Network Coding; Coded caching; Coded Distributed Computing
78.	**Dr. Olive Ray** Assistant Professor olive@iitbbs.ac.in	IIT Kanpur, 2016	Renewable power integration; Converter modeling and control; Digital control of Power Electronics
79.	**Dr. Soumya Prakash Dash** Assistant Professor spdash@iitbbs.ac.in	IIT Delhi, 2019	Communication theory; Power line communication; Smart grid communications; Diversity combining; Soft and evolutionary computing
80.	**Dr. Siddhartha S. Borkotoky** Assistant Professor borkotoky@iitbbs.ac.in	Clemson University, South Carolina, 2017	Wireless Communications; IoT; Application-Layer Coding; Adaptive Transmission Protocols

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
81.	**Dr. Nijwm Wary** Assistant Professor nijwmwary@iitbbs.ac.in	IIT Kharagpur, 2018	Analog CMOS VLSI circuit design; circuit design for high speed serial link; SERDES; on-chip and off-chip interconnects; full-duplex and coded differential signaling
82.	**Dr. Shambhu Sau** Assistant Professor ssau@iitbbs.ac.in	IIT Bombay, 2018	Power electronics and drives, Modular converters for High-Power Drives
83.	**Dr. Balakrishna Pamulaparthy** Assistant Professor balakrishnap@iitbbs.ac.in	IIT Madras, 2016	Power System Automation; Data Analytics for Smart Power Grids; Smart Grids/Micro Grids Technology; Power Distribution Systems
84.	**Dr. Adway Mitra** Assistant Professor adway@iitbbs.ac.in	IISc. Bangalore, 2016	Data Mining; Machine Learning; Climate Informatics; Modelling complex spatio-temporal processes; Bayesian Modeling; Computer Vision; Video Analytics; Social Network Analysis
85.	**Dr. Anwoy Kumar Mohanty** Assistant Professor adway@iitbbs.ac.in	Texas A&M University, College Station, USA, 2015	Research work related to the development of novel algorithms for the analysis of gene sequencing data
86.	**Dr. Shweta Jain** Visiting Faculty shwetajain@iitbbs.ac.in	IISc. Bangalore, 2017	Game Theory; Mechanism Design; Machine Learning

School of Humanities, Social Sciences and Management

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
87.	**Prof. Godabarisha Mishra** Visiting Professor gmishra@iitbbs.ac.in	Madras University, 1986	Sanskrit and Indian Philosophy
88.	**Prof. Johannes Eugene** Marie Houben Visiting Professor in Foreign Origin gmishra@iitbbs.ac.in	University of Utrecht, Netherlands, 1992	Sanskrit and Vedic Language; Sanskrit and Vedic texts; ancient Indian rituals; brahminical philosophies and Sanskrit knowledge systems, esp. Sanskrit linguistics, grammar and philosophy of language
89.	**Dr. Amrita Satapathy** Assistant Professor asatapathy@iitbbs.ac.in	Utkal University, 2009	Commonwealth Studies, Indian Diaspora Literature, Travel Writings/ Autobiographies/ Memoirs
90.	**Dr. Anamitra Basu** Assistant Professor anamitrabasu@iitbbs.ac.in	IIT Kharagpur, 2010	Laterality; Psycholinguistics; clinical Psychology
91.	**Dr. Dukhabandhu Sahoo** Assistant Professor dsahoo@iitbbs.ac.in	Institute for Social and Economic Change, Bangalore, 2007	Open Macroeconomics; Development Economics; Environment and Natural Resource Economics
92.	**Dr. Naresh Chandra Sahu** Assistant Professor naresh@iitbbs.ac.in	IIT Kanpur, 2008	Environmental Economics; Finance; Mining and Rural Development
93.	**Dr. Punyashree Panda** Assistant Professor ppanda@iitbbs.ac.in	Berhampur University, 2008	Postcolonial World Literature, Indigenous Writings; Indian Writing in English; ELT, Cross-cultural Communication

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
94.	**Dr. Rajakumar Guduru** Assistant Professor rajakumarguduru@iitbbs.ac.in	English and Foreign Languages University, Hyderabad, 2011	Developing Critical Vocabulary of ESL Learners; Cognitive Reading Skills; Second Language Acquisition; Teacher Education and Development; Communication Skills; Technology and Language Learning
95.	**Dr. Madhusmita Dash** Assistant Professor madhusmita@iitbbs.ac.in	IIT Kharagpur, 2016	Economics of Natural Resource Management; New Institutional Economics; Environmental Economics; Rural Development; Renewable Energy; Trans-boundary Water Conflict
96.	**Dr. Vineet Sahu** Visiting Faculty at the level of Associate Professor vineetsahu@iitbbs.ac.in	University of Hyderabad, 2009	Philosophy

School of Infrastructure

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
97.	**Prof. Rabindra Kumar Panda** Professor rkpanda@iitbbs.ac.in	Indian Agricultural Research Institute, New Delhi, 1984	Hydrology ;Watershed Management; Non-point Source Pollution of Water Resources
98.	**Dr. Dinakar Pasla** Associate Professor pdinakar@iitbbs.ac.in	IIT Madras, 2005	Concrete Technology
99.	**Dr. Sumanta Haldar** Associate Professor sumanta@iitbbs.ac.in	IISc Bangalore, 2008	Offshore wind energy foundation; Soil-structure interaction; Dynamics of soil and foundation
100.	**Dr. Arindam Sarkar** Assistant Professor asarkar@iitbbs.ac.in	IIT Kharagpur, 2006	Flow through submerged and emergent vegetation; Scour around hydraulic structures; Mathematical flow modeling
101.	**Dr. B. Hanumantha Rao** Assistant Professor bhrao@iitbbs.ac.in	IIT Bombay, 2009	Geotechnical Engineering; Environmental Geotechnics;
102.	**Dr. Debasis Basu** Assistant Professor dbasu@iitbbs.ac.in	IIT Kharagpur, 2008	Sustainable Transportation, Operation of Public Transport; Transportation Economics; Traffic Studies
103.	**Dr. Goutam Mondal** Assistant Professor gmondal@iitbbs.ac.in	IIT Kanpur, 2011	Earthquake Engineering and Structural Dynamics; Seismic Analysis of Bridges; Soil-Structure Interaction
104.	**Dr. Manaswini Behera** Assistant Professor manaswini@iitbbs.ac.in	IIT Kharagpur, 2012	Water and wastewater treatment and reuse; Bioenergy recovery during wastewater treatment in microbial fuel cell; Solid waste management
105.	**Dr. Meenu Ramadas** Assistant Professor meenu@iitbbs.ac.in	Purdue University, USA, 2015	Hydrology; Water Resources; Drought Modelling

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
106.	**Dr. Partha Pratim Dey** Assistant Professor ppdey@iitbbs.ac.in	IIT Roorkee, 2006	Traffic Flow Modelling
107.	**Dr. Pushpendu Bhunia** Associate Professor pbhunia@iitbbs.ac.in	IIT Kharagpur, 2008	Nutrients removal and recovery from wastewater; Vermi-filtration of domestic and industrial wastes; Recovery of energy and biogas generation from biodegradable wastes
108.	**Dr. Rajesh Roshan Dash** Associate Professor rrdash@iitbbs.ac.in	IIT Roorkee, 2008	Environmental Engineering; Treatment of Water and Wastewater; Solid Waste Management
109.	**Dr. Remya Neelancherry** Assistant Professor remya@iitbbs.ac.in	National Chiao Tung University Taiwan, 2010	Microwave photocatalytic treatment of complex wastewater; Catalytic copyrolysis of mixed solid waste; Solar photocatalytic treatment and preparation of supported catalyst
110.	**Dr. Shantanu Patra** Assistant Professor shantanupatra@iitbbs.ac.in	IIT Delhi, 2013	Geotechnical engineering, geosynthetics and their application
111.	**Dr. Suresh R Dash** Assistant Professor srdash@iitbbs.ac.in	University of Oxford, 2011	Structural Dynamics and Earthquake engineering; Soil - Structure Interaction; Seismic Analysis and Design of Pipelines
112.	**Dr. Umesh Chandra Sahoo** Assistant Professor ucsahoo@iitbbs.ac.in	IIT Kharagpur, 2009	Pavement Analysis and Design; Pavement Materials; Low Volume Roads
113.	**Dr. Devesh Punera** Assistant Professor devesh@iitbbs.ac.in	IIT Bombay, 2018	Structural Mechanics; Composite structures; Continuum theories of beams, plates and shell structures; Smart materials; Bio-mechanics.
114.	**Dr. Mohammad Masiur Rahaman** Assistant Professor masiurr@iitbbs.ac.in	IISc. Bangalore, 2018	Solid Mechanics, Fracture Mechanics, Peridynamics; Visco-plasticity and damage
115.	**Dr. Anush Konayakanahalli Chandrappa** Assistant Professor akc@iitbbs.ac.in	IIT Kharagpur, 2018	Transportation and Pavement Engineering
116.	**Dr. Mayank Mishra** Visiting Faculty at the level of Assistant Professor mayank@iitbbs.ac.in	University of Basilicata, Italy, 2017	Non-destructive testing of historical constructions; Machine Learning; Structural health monitoring; Optimization
117.	**Dr. Jothi Saravanan Thiyagarajan** Visiting Faculty at the level of Assistant Professor tjs@iitbbs.ac.in	The University of Tokyo, Japan, 2018	Structural Health Monitoring; Railway Track profile Estimation
118.	**Dr. Akhansha Tyagi** Assistant Professor akanksha@iitbbs.ac.in	National University of Singapore, 2018	Soft soil engineering; Ground Improvement (cement-treated soils); Tunnelling; Centrifuge modelling; Random finite element analysis

School of Mechanical Sciences

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
119.	**Prof. Swarup Kumar Mahapatra** Professor swarup@iitbbs.ac.in	Jadavpur University, 2000	Conjugate Heat Transfer; Radiation Modelling; Bio Heat Transfer
120.	**Prof. P.K. J. Mohapatra** Visiting Professor pkjm@iitbbs.ac.in	IIT Kharagpur, 1978	Industrial Engineering; Systems Dynamics; Operations Research & Management
121.	**Prof. Sunil Kumar Sarangi** Professorial Fellow sks16@iitbbs.ac.in	State University of New York, Stony Brook, 1974	Refrigeration and Air conditioning, cryogenic engineering
122.	**Dr. Arun Kumar Pradhan** Associate Professor akpradhan@iitbbs.ac.in	IIT Kharagpur, 2008	Solid Mechanics, Composite Materials & Structures, Fracture Mechanics & Delamination studies in Composites; Smart Materials & Structures; Natural Fiber Reinforced Composites
123.	**Dr. Manas Mohan Mahapatra** Associate Professor mmmahapatra@iitbbs.ac.in	IIT Kharagpur, 2008	Welding Residual Stress & Distortion control, Friction Stir Welding Tool Design, Friction Stir Processing and Friction Cladding; Thermal Spray and Laser Coating for Wear and High Temperature Applications; In-situ Metal Matrix Composites and their Manufacturability
124.	**Dr. Mihir Kumar Pandit** Associate Professor mihir@iitbbs.ac.in	IIT Kharagpur, 2009	Design and Solid Mechanics; Sandwich Structures; Composite Materials
125.	**Dr. Satyanarayan Panigrahi** Associate Professor psatyan@iitbbs.ac.in	IISc Bangalore, 2007	Underwater acoustic absorbers; Acoustics of mufflers and ducts; Acoustic meta materials
126.	**Dr. Mihir Kumar Das** Associate Professor mihirdas@iitbbs.ac.in	IIT Roorkee, 2006	Two Phase Heat Transfer; PCM based Cooling System; Internal Combustion Engines
127.	**Dr. V. Pandu Ranga** Associate Professor pandu@iitbbs.ac.in	IIT Kharagpur, 2009	Robotics; Manufacturing; Soft Computing
128.	**Dr. Akhilesh Barve** Assistant Professor akhilesh@iitbbs.ac.in	IIT Delhi, 2009	Supply Chain Management; Humanitarian Logistics; Industrial Engineering
129.	**Dr. Anirban Bhattacharya** Assistant Professor anirban@iitbbs.ac.in	IISc Bangalore, 2014	Multi-phase and multi scale transport phenomena; Phase change and grain structure modelling; Boiling heat transfer modelling
130.	**Dr. K. Srinivasa Ramanujam** Assistant Professor sramanujam@iitbbs.ac.in	IIT Madras, 2012	Active Passive Remote Sensing; Engineering Design and Optimization; Atmospheric Radiation
131.	**Dr. Prasenjit Rath** Assistant Professor prath@iitbbs.ac.in	Nanyang Technological University, Singapore, 2007	Transport Phenomena in Materials Processing; Ultrafast Transport; CFD/HT

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
132.	**Dr. Sasidhar Kondaraju** Assistant Professor sasidhar@iitbbs.ac.in	Wayne State University, 2009	Microfluidics; Micro/Nanoscale Thermofluids; Multiphase Flows
133.	**Dr. Satish Dhandole** Assistant Professor satish@iitbbs.ac.in	IIT Delhi, 2009	Dynamic Design; Vibro-acoustic; Mechanisms
134.	**Dr. Venugopal Arumuru** Assistant Professor venugopal@iitbbs.ac.in	IIT Bombay, 2014	Fluid Structure Interaction and unsteady Aero-Hydrodynamics; Heat Transfer augmentation; Acoustics
135.	**Dr. Yogesh G. Bhumkar** Assistant Professor bhumkar@iitbbs.ac.in	IIT Kanpur, 2012	High performance computing; Computational aero acoustics; Transitional and turbulent flows
136.	**Dr. Gaurav Bartarya** Assistant Professor bartarya@iitbbs.ac.in	IIT Kanpur, 2014	Conventional and nonconventional Machining Processes
137.	**Dr. Suvradip Mullick** Assistant Professor suvradip@iitbbs.ac.in	IIT Kharagpur, 2016	Laser material processing, Non-conventional machining
138.	**Dr. Pattabhi Ramaiah Budarapu** Assistant Professor pattabhi@iitbbs.ac.in	Bauhaus University of Welmar, Germany, 2015	Multiscale methods for fracture; molecular dynamics; fracture in multiphysics problems; structural dynamics
139.	**Dr. Soham Roychowdhury** Assistant Professor soham@iitbbs.ac.in	IIT Kharagpur, 2019	Computational Solid Mechanics; Mechanics of Inflatable Structures; Nonlinear Elasticity
140.	**Dr. Chetan** Assistant Professor chetan@iitbbs.ac.in	IIT Delhi, 2018	Sustainable Machining; Micro-Machining; Surface Engineering; Tribology in Manufacturing
141.	**Dr. Sathyanarayana Ayyalasomayajula** Assistant Professor sathya@iitbbs.ac.in	Cornell University, NY, USA, 2007	Turbulence; DNS & LES, Spectral Methods; Experimental Fluid Mechanics
142.	**Dr. Ankur Gupta** Visiting Faculty ankurgupta@iitbbs.ac.in	IIT Kanpur, 2015	Nanotechnology; Micro-system fabrication; Manufacturing
143.	**Dr. Manish Agrawal** Visiting Faculty manish@iitbbs.ac.in	IISc. Bangalore, 2017	Efficient Simulation Strategies for Electromechanical Systems, Contact Mechanics and Time Finite Elements, within the Framework of Hybrid Finite Elements

School of Minerals, Metallurgical and Materials Engineering

Sl. No.	Name/Designation/Email	Ph.D./Year	Specialization/Research Area
144.	**Dr. Brahma Deo** MGM Chair Professor bdeo@iitbbs.ac.in	University of Burdwan, 1975	Iron and steel making; Dynamic process control and optimization; Chaos control in dynamical systems
145.	**Prof. Golok B. Nando** Professorial Fellow golokrtc@gmail.com	IIT Kharagpur, 1979	Rubber Products manufacturing and new materials development, Polymer Blends and Alloys with silicone rubber, Thermoplastic Elastomers and Thermoplastic Vulcanizates, Rubber & Thermoplastic Elastomer nano-composites
146.	**Prof. Brij Kumar Dhindaw** Visiting Professor dhindaw@iitbbs.ac.in	IIT Kharagpur,1971	Solidification Processing and Composites; Physical Metallurgy; Mineral Processing
147.	**Dr. Amritendu Roy** Assistant Professor amritendu@iitbbs.ac.in	IIT Kanpur, 2012	Ferroelectric and multiferroic materials for memory and energy applications; Multi component alloy design; Electronic structure calculations
148.	**Dr. Animesh Mandal** Associate Professor animesh@iitbbs.ac.in	IIT Kharagpur, 2007	Aluminium alloys; Metal matrix composites; Semisolid processing of metallic systems
149.	**Dr. Kaushik Das** Assistant Professor kaushik@iitbbs.ac.in	McGill University, 2012	Mechanical Behaviour of Nanomaterials; Integration of Nanomaterials to Microelectromechanical Systems (MEMS)
150.	**Dr. Kisor Kumar Sahu** Assistant Professor kisorsahu@iitbbs.ac.in	Kyoto University, 2006	Modelling and simulation of materials; Energy materials and systems; Structural and magnetic frustration of materials
151.	**Dr. Partha Sarathi De** Assistant Professor parthasarathi.de@iitbbs.ac.in	Missouri University of Science & Technology, USA, 2010	Friction stir welding and processing; High entropy alloys; Thermo-mechanical processing of metals
152.	**Dr. Soobhankar Pati** Assistant Professor spati@iitbbs.ac.in	Boston University, 2010	Electrochemistry ;Energy Materials; Sustainable Materials and Process
153.	**Dr. Srikant Gollapudi** Assistant Professor srikant@iitbbs.ac.in	North Carolina State University, 2007	Creep behavior of titanium, zirconium, magnesium and aluminum alloys and solders Mechanical alloying of amorphous and nanocrystalline alloys
154.	**Dr. Kodanda Ram Mangipudi** Assistant Professor kodanda@iitbbs.ac.in	University of Groningen, 2012	Computational Mechanics Mechanical behavior of (nano) composite materials Mechanics of cellular solids
155.	**Dr. Rama Krushna Sabat** Assistant Professor rsabat@iitbbs.ac.in	IISc Bangalore, 2015	Evolution of microstructure and texture during severe plastic deformation of a Magnesium-Cerium alloy
156.	**Dr. Sivaiah Bathula** Assistant Professor sivaiahb@iitbbs.ac.in	Delhi Technological University (DTU), Delhi, 2016	Thermoelectric Materials; Advanced Materials Processing Techniques; Advanced Materials Characterization Techniques; Novel Materials Synthesis Methodologies.
157.	**Dr. Mithipati Siva Bhaskar** Assistant Professor mithipati@iitbbs.ac.in	IISc Bangalore, 2017	Phase field modeling; Thermomechanical Processing; Steels; Metal Matrix Composites; Archaeo-metallurgy

Adjunct Faculty 2019-2020

Sl. No.	Name	Parent Institute	Name of the School visited
1.	Prof. P. K. J. Mohapatra	IIT Bhubaneswar	SHSS&M
2.	Dr. Hemant Rath	TCS Innovation Lab, Bangalore	SES
3.	Prof. M. S. Sriram	IIT Madras	SHSS&M
4.	Prof. M. D. Srinivas	Chairman, Centre for Policy Studies	SHSS&M
5.	Prof. Venketeswara Pai R	IISER, Pune	SHSS&M
6.	Prof. K. Ramasubramanian	IIT Bombay	SHSS&M
7.	Padmashree Kumkum Mohanty	Odisha Sangeet Maha Vidyalaya	SHSS&M
8.	Dr. Aruna Mohanty	Odissi Dancer and Choreographer, Odisha Dance Academy	SHSS&M
9.	Prof. Brahma Deo	IIT Bhubaneswar	SMM&ME
10.	Prof. S. Dharmaraja	IIT Delhi	SBS
11.	Dr. Ashwini Nanda	Founder and CEO, HPC Research Inc., USA	SES
12.	Prof. G. B. Nando	IIT Kharagpur	SMMME
13.	Prof. Omkar Nath Mohanty	Director, Technology & Academic Initiative	SMM&ME
14.	Dr. Ileana Citaristi	Odissi Dancer and Choreographer, Founder Secretary Art Vision Dance Academy	SHSS&M
15.	Prof. Surya Narayan Misra	Former Vice-Chairman, IIPA (Odisha)	SHSS&M
16.	Dr. Mrutyunjay Sarangi	Retired IAS	SHSS&M
17.	Prof. Bhaswati Patnaik	Department of Psychology, Utkal University	SHSS&M
18.	Prof. Sangeeta Rath	Department of Psychology, Ravenshaw University	SHSS&M
19.	Dr. Damodar Tripathy	Indian Economic Service (Retd.)	SHSS&M
20.	Prof. Shivashankar B. Nair	IIT Guwahati	SES
21.	Dr. Gyana Parija	Research Lead-Collaborative Cognition, IBM Research-India (IRL)	SES
22.	Prof. Dipankar Dasgupta	University of Memphis	SES
23.	Prof. Pratap Kumar Rath	Centre of Advanced Study in Psychology	SHSS&M
24.	Dr. Sateesh Kumar Peddoju	Indian Institute of Technology Roorkee	SES

Publications

BOOK CHAPTER

School of Basic Sciences

1. Chand, A., Chettiyankandy, P., & Chowdhuri, S. (2019). Application of computer simulation in exploring influence of alcohol on aqueous milieu of a gut-brain octapeptide, cholecystokinin-8 (Vol. 817). https://doi.org/10.1007/978-981-13-1595-4_3
2. Mandal, B. C. (2019). Substructuring waveform relaxation methods for parabolic optimal control problems (Vol. 817). https://doi.org/10.1007/978-981-13-1595-4_39

School of Earth, Ocean and Climate Sciences

3. Pramanik, S., Mandal, S., Shee, A., Halder, S., & Sil, S. (2019). Tidal circulation studies using regional model in the bay of Bengal (Vol. 22). https://doi.org/10.1007/978-981-13-3119-0_55
4. Mandal, S., Pramanik, S., Halder, S., & Sil, S. (2019). Statistical analysis of coastal currents from HF radar along the north-western bay of Bengal (Vol. 23). https://doi.org/10.1007/978-981-13-3134-3_8

School of Electrical Sciences

5. Allamsetty, S., & Mohapatro, S. (2019). Prediction of NO to NO2 conversion efficiency with NTP-based diesel exhaust treatment using radial basis functions (Vol. 817). https://doi.org/10.1007/978-981-13-1595-4_24
6. Ramji, T., & Sahu, P. K. (2019). Temperature resolution and spatial resolution improvement of bocdr-based DTS system using particle swarm optimization algorithm (Vol. 817). https://doi.org/10.1007/978-981-13-1595-4_62

School of Infrastructure

7. Bharat Reddy, G., & Radhika, B. (2019). Evaluation of is 1893-based design using the performance based earthquake engineering framework (Vol. 12). https://doi.org/10.1007/978-981-13-0365-4_46
8. Bhowmik, A., & Sahoo, U. C. (2019). Characterization of cement stabilised flyash for use as structural layer in rural road pavements (Vol. 29). https://doi.org/10.1007/978-981-13-6713-7_9
9. Gangadhara Reddy, N., Hanumantha Rao, B., & Reddy, K. R. (2019). Chemical Analysis Procedures for Determining the Dispersion Behaviour of Red Mud (Vol. 32). https://doi.org/10.1007/978-981-13-7017-5_3
10. Huded, P. M., & Dash, S. R. (2019). Response of Pile Foundation in Alternate Liquefying and Non-liquefying Layers in Spreading Ground (Vol. 28). https://doi.org/10.1007/978-981-13-6701-4_30
11. Nair, G. S., Dash, S. R., & Mondal, G. (2019). Effect of Field Bends on the Response of Buried Pipelines Crossing Strike-Slip Fault (Vol. 28). https://doi.org/10.1007/978-981-13-6701-4_29

School of Minerals, Metallurgical and Materials Engineering

12. Deepak Kumar, S., Chatttee, A., Jha, S. K., Singh, N. K., & Mandal, A. (2019). Deformation behavior of semi-solid forged A356–5TiB2 nano-in situ composites. https://doi.org/10.1007/978-981-13-6412-9_7
13. Deepak Kumar, S., Ghose, J., & Mandal, A. (2019). Thixoforming of light-weight alloys and composites: An approach toward sustainable manufacturing. In Sustainable Engineering Products and Manufacturing Technologies (pp. 25–43). https://doi.org/10.1016/B978-0-12-816564-5.00002-5

School of Mechanical Sciences

14. Gupta, A., & Pal, P. (2019). Micro-electro-mechanical system-based drug delivery devices. In Bioelectronics and Medical Devices: From Materials to Devices—Fabrication, Applications and Reliability (pp. 183–210). https://doi.org/10.1016/B978-0-08-102420-1.00010-8
15. Mandava, R. K., Bondada, S., & Vundavilli, P. R. (2019). An optimized path planning for the mobile robot using potential field method and PSO algorithm (Vol. 817). https://doi.org/10.1007/978-981-13-1595-4_11
16. Ponugoti, G. R., Vundavilli, P. R., & Krishna, A. G. (2019). Optimization of Tribological Properties of Al6061/9%Gr/WC Hybrid Metal Matrix Composites Using FGRA. https://doi.org/10.1007/978-981-13-6374-0_54

17. Srinivas, K., Vundavilli, P. R., & Manzoor Hussain, M. (2019). Optimization of Weld-Bead Parameters of Plasma Arc Welding Using GA and IWO. https://doi.org/10.1007/978-981-13-6374-0_3

18. Swain, A., & Das, M. K. (2019). Anfis modeling of boiling heat transfer over tube bundles (Vol. 817). https://doi.org/10.1007/978-981-13-1595-4_34

19. Bhattacharya, A. (2019). PCM-Metal Foam Composite Systems for Solar Energy Storage. Solar Energy, 207–234. https://doi.org/10.1007/978-981-15-0675-8_11

CONFERENCE PROCEEDINGS

School of Basic Sciences

1. Banik, A. D., Ghosh, S., & Chaudhry, M. L. (2019). On the consecutive customer loss probabilities in a finite-buffer renewal batch input queue with different batch acceptance/rejection strategies under non-renewal service (Vol. 816). https://doi.org/10.1007/978-981-13-1592-3_4

2. Dubey, A., & Bandyopadhyay, M. (2019). DNA breathing dynamics under periodic forcing: Study of first passage time. AIP Conference Proceedings, 2100. https://doi.org/10.1063/1.5098619

3. Lalwani, K., Aihara, H., Aziz, T., Bacher, S., Bahinipati, S., Barberio, E., Baroncelli, T., Baroncelli, T., Basith, A. K., Batignani, G., Bauer, A., Behera, P. K., Bertacchi, V., Bettarini, S., Bhuyan, B., Bilka, T., Bosi, F., Bosisio, L., Bozek, A., … Zani, L. (2019). Performance of the Belle II SVD. 234, 87–92. https://doi.org/10.1007/978-3-030-29622-3_11

4. Nayak, S., & Ojha, A. K. (2019). Multi-objective linear fractional programming problem with fuzzy parameters (Vol. 816). https://doi.org/10.1007/978-981-13-1592-3_6

5. Panda, A., & Pani, S. (2019). An orthogonal symbiotic organisms search algorithm to determine approximate solution of systems ofordinary differential equations (Vol. 816). https://doi.org/10.1007/978-981-13-1592-3_40

6. Panda, R., Sahu, S., & Rout, G. C. (2019). The theoretical study of the correlation between band filling and Coulomb interaction in the charge gap of graphene-on-substrate in paramagnetic limit. International Journal of Nano and Biomaterials, 8(1), 54–63. https://doi.org/10.1504/IJNBM.2019.097593

7. R, Thalmeier, H, Aiharaq, H, Yin, T, Aziz, & Belle-II SVD Collaboration. (2019). Machine learning: Hit time finding with a neural network. Retrieved June 25, 2020, from https://pos.sissa.it/343/065

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Research, Development and Collaborations

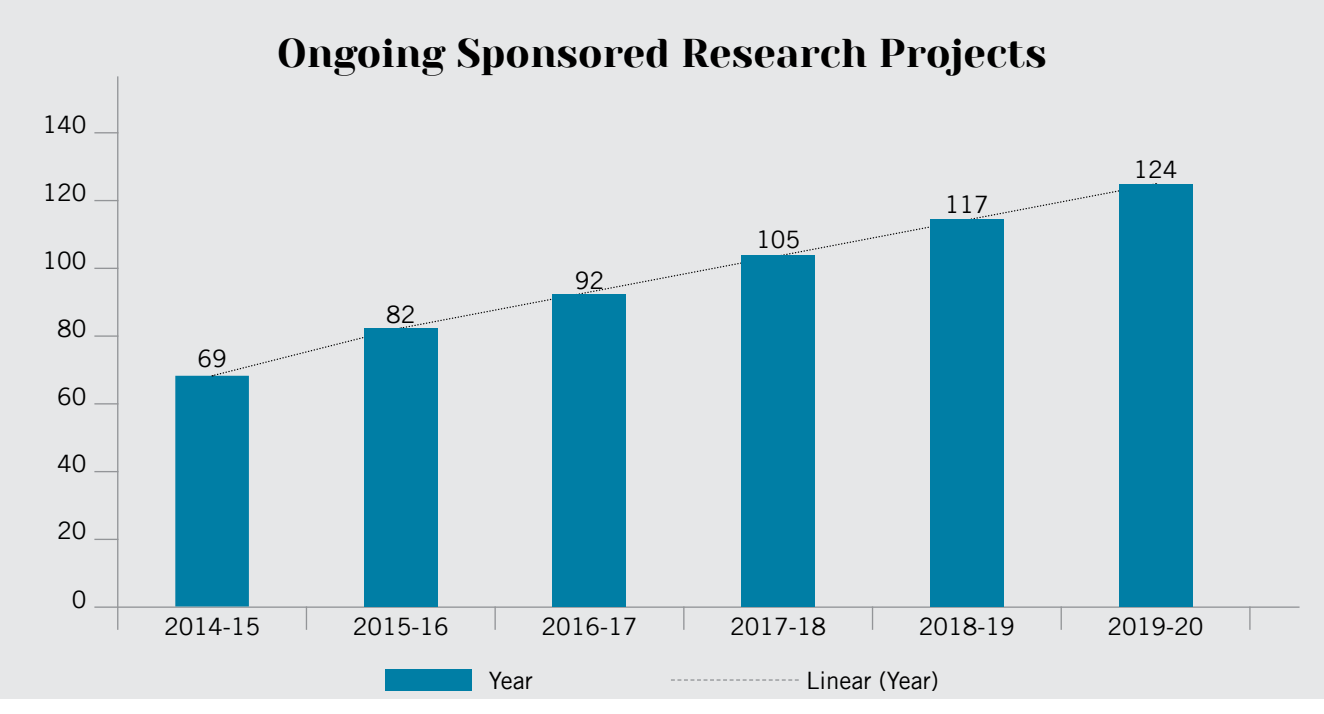
The Research and Development activities are increasing with time. The total value of projects received by the Institute so far (2010-20) is around ₹122 crore through 229 sponsored research and 209 consultancy projects. The breakup values of research and consultancy projects are ₹108 crore and ₹14 crore respectively. During the current year (2019-20), projects worth of ₹16.02 crore have been received, which includes ₹12.83 crore worth sponsored research projects and ₹3.19 crore worth consultancy projects. The major funding agencies are DST, MOE, CSIR, UGC, ISRO, DRDO, ICSSR, DAE, CPRI, DAC, DBT, Deity, NALCO, NPOL, IUSSTF, INCOIS, MoES, MoWR, IITM, NCAOR, BRNS KPIT, P&C Dept.-Govt. of Odisha etc. In addition to the above, a total number of 142 project proposals worth ₹70 crore submitted recently are in pipeline. The major areas covered by these projects are Advance Materials, Energy, Nanotech Hardware, Health Care, Defense, CS & ICT, Environmental Sciences & Climate Change, Water Resources & River Science, Manufacturing and Sustainable Urban Design. Our faculty members participated in major initiatives of MOE like IMPRINT, Uchhatar Avishkar Yojana (UAY), Swachhta Action Plan, FIST and Unnat Bharat Abhiyan (UBA) etc.

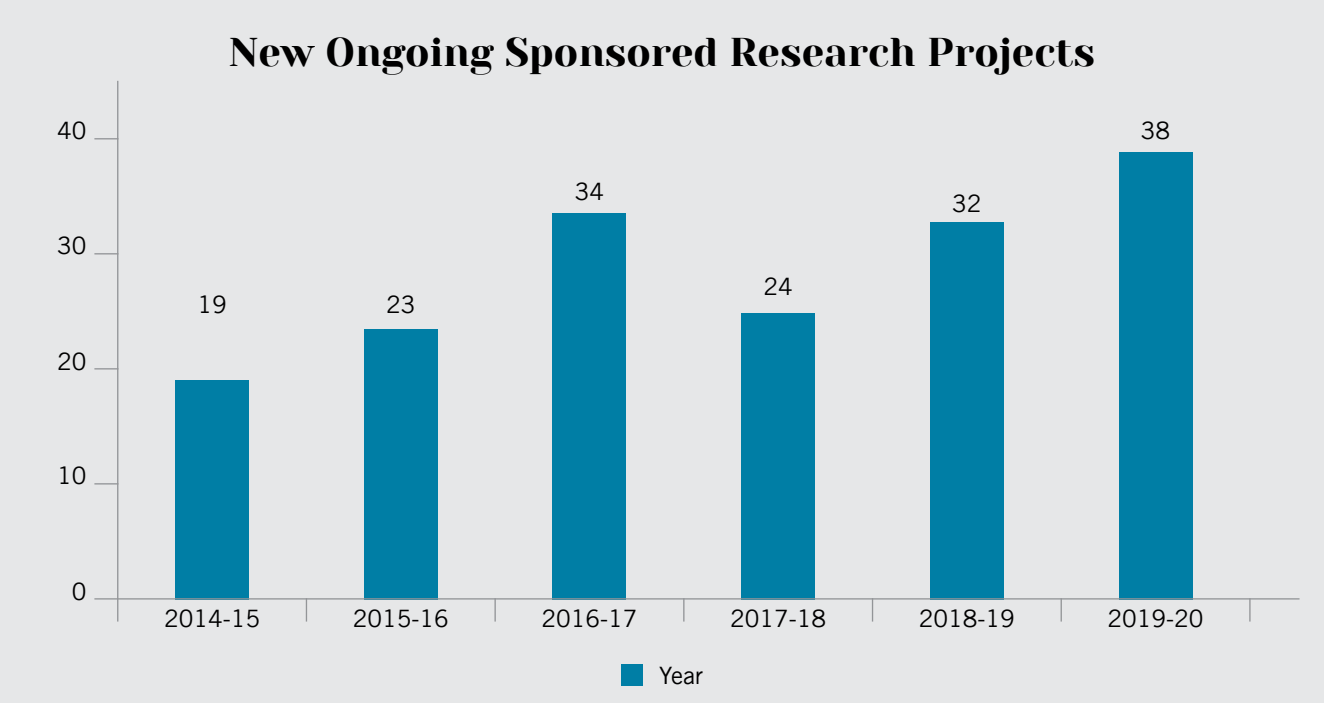
The Institute is also actively participating in the national R&D missions namely: "IMPacting Research, Innovation and Technology (IMPRINT)". Two new project proposals worth ₹0.90 crore have been approved under IMRINT this year making a total of seven projects under IMPRINT. Besides the sanctioned projects, a total of 2 proposals worth ₹0.80 crore under IMPRINT are in pipeline.

Ongoing Sponsored Research Projects for 2019-20

No. of ongoing sponsored projects for the year 2019-20 = **124**

No. of new sponsored projects for the year 2019-20 = **38**





Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
School of Basic Sciences			
1.	Center of Excellence for Novel Energy Materials (CENEMA)	MOE	Prof. Saroj Nayak
2.	Compact Muon Solenoid (CMS) Upgrade, Operation and Utilization	DST	Dr. Seema Bahinipati
3.	Atomic Scale Aluminium as Interconnects in Electronic devices	NALCO	Prof. Saroj Nayak
4.	Process for development of new applications of Aluminium based Materials in Solar light, solar roof sheets and in Battery having Superior Thermal and Electronic Properties	NALCO	Prof. Saroj Nayak
5.	A bound-state electronic structure theory approach to investigate the electron detachment initiated by light	DST	Dr. Kousik Samanta
6.	Study of hybrid improper ferroelectricity in layered perovskites by high resolution neutron diffraction techniques	UGC-DAE	Dr. Niharika Mohapatra
7.	Ion irradiation induced modification of one-dimensional functional nano-materials	BRNS	Dr. Shyamal Chatterjee
8.	Structural studies on the interaction of hc5a with the N-terminus peptides of C5aR and C5L2 receptor	DST	Dr. Soumendra Rana
9.	Design and Development of optical microfiber based acoustic sensors for under/ over water applications	DST	Dr. Rajan Jha
10.	Growth and characterization of semiconductor graphene hybrid nanosheets for solar cell applications	DST	Dr. Satchidananda Rath
11.	Synthesis of some natural marine pyrrole alkaloids and molecules inspired from them for multi-drug resistance (MDR) Cancer Cells	CSIR	Dr. Tabrez Khan

Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
12.	Design and study of Nano and micro displacement sensor based on Photonic Crystal Fiber modal interferometer	ISRO	Dr. Rajan Jha
13.	Materials and related storage devices for grid-deprived communities	DST	Prof. Saroj Nayak
14.	Spectra of multidigraphs and their applications to complex networks	DST	Dr. Sasmita Barik
15.	Impact of lysine acetylation in Hsp16.3 on its structure, chaperone function and the growth, survival as well as pathogenesis of Mycobacterium tuberculosis	DST	Dr. Ashish Biswas
16.	Ion induced modification of nanostructured materials and tuning of surface wetting property	DST	Dr. Shyamal Chatterjee
17.	Development of dppz based mononuclear complexes of iridium and gold as potential luminescent probe and anticancer agent	CSIR	Dr. Srikanta Patra
18.	Independence polynomials of graphs and associated fractals	DST	Dr. Tarakanta Nayak
19.	Development of Cost Effective process and known for production of Al-Mg alloys of enhanced mechanical properties, incorporating graphene/grapheme oxide, suitable for automobile application	NALCO	Prof. Saroj Nayak
20.	Effect of laser shock peening on the fatigue behavior of Nitinol shape memory alloy	DST	Dr. Srikanta Gollapudi
21.	Development of heterodimetallic complexes and their theranostic and catalytic aspects	DST-IMPRINT II	Dr. Srikanta Patra
22.	A Novel fluorescence-based assay for rapid detection and quantification of Exosomes	DST	Dr. Srikanta Patra
23.	Single chip test set for portable 5G network analyzers	DST	Dr. Debapratim Ghosh
24.	Development of Aluminium-based Materials for Energy Storage Application-Supercapacitor	NALCO-IMMT	Prof. Saroj Nayak
25.	High Pure Nano-Alumina for Solar Cell Anti-Reflection Coatings and Reinforcing Aluminum	NALCO	Prof. Saroj Nayak
26.	Taylor column phenomena of axially translating sphere in a rotating fluid - a numerical study	DST	Prof. T. V. S. Sekhar
27.	Design and development of metal-oxide hetero-structures for enhancement of photovoltaic energy conversion efficiency	DST	Dr. Niharika Mohapatra
28.	Space-time domain decomposition methods for non-linear cahn-hilliard equation and their implementations in parallel computers	DST	Dr. Bankim Chandra Mandal
29.	Design, Preparation and Evaluation of S (Sulphur) and P (Phosphorous) Mediated Functional Solids in the Form of Co-crystals, Metal-Organic Frameworks (MOFs) Structures and Covalent Organic Frameworks (COFs)	DST	Prof. V. R. Pedireddi
30.	Blending traditional and newer synthetic methods for regio-/ stereoselective synthesis of functionalized carbo-/heterocycles: Application towards the asymmetric total synthesis of some complex bioactive terpenoid-alkaloids	DST	Dr. Tabrez Khan

Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
31.	Quasi-permutation representations and Gel'fand pair?	DST-MATRICS	Dr. Sunil Kumar Prajapati
32.	A study of harmonic analogue of certain univalent and analytic functions	DST-MATRICS	Dr. Basudeva Rao Allu
33.	Functional consequences of cancer testis antigen ATAD2 in pancreatic cancer	DBT	Dr. Anasuya Roychowdhury
School of Earth, Ocean and Climate Sciences			
34.	Investigations of Aerosol Outflow from Indo Gangetic Plain	ISRO	Dr. V. Vinoj
35.	Assessment and improvement of rainfall forecast skills over the state of Odisha with special reference to Mahanadi and Brahmani-Baitarani river system	CSIR	Dr. Sandeep Pattnaik
36.	Role of cloud physics and dynamics on lifecycle of monsoon low pressure using high resolution observation and modeling	DST	Dr. Sandeep Pattnaik
37.	Estimation of upwelling indices and study of propagating ocean fronts in the Indian and Global Oceans utilizing SCATSAT-1 gridded wind fields	ISRO	Dr. Debadatta Swain
38.	Numerical simulation of sub-mesoscale features along Odisha coast using SCATSAT winds	ISRO	Dr. Sourav Sil
39.	Detection of Lightning Phenomena and Associated Processes and its now-casting	ISRO	Dr. Debadatta Swain
40.	Impact of changing aerosol loading and urbanization on surface temperature and rainfall over select cities over India	DST	Dr. Vinoj. V
41.	Decoding the factors controlling the variations in 'metal-package' within W-Sn-polymetallic province of Erinpura-Malani igneous suite, India	DST INSPIRE	Dr. Sourabha Bhattacharya
42.	Development of long-term high resolution Land Use Land Cover (LULC) data for Bhubaneswar peri-urban & rural areas and future projection	DST-SPLICE	Dr. Debadatta Swain
43.	Quality control of HF Radar Surface currents for investigation of Sub-Mesoscale Coastal Processes and its use for assimilation in the INCOIS model	INCOIS	Dr. Sourav Sil
44.	Evaluation and development of hyperlocal forecasting system for smart city Bhubaneswar and neighbourhood regions	DST	Dr. Sandeep Pattnaik
45.	Urban Modelling: Development of multi-sectorial simulation lab and science based decision support framework to address urban environment issues	C-DAC under MeitY	Prof. U. C. Mohanty
46.	The inter-relationship between atmospheric aerosol distribution and tropical intraseasonal oscillations over the Indian region	DST	Dr. Vinoj. V
47.	Subsurface variability of the Bay of Bengal from observations and models: relationship with Indian Monsoon and Cyclogenesis	DST	Dr. Sourav Sil
48.	High Resolution satellite mapping of particulate pollution (PM205) Hotspots over Bhubaneswar	SPCB	Dr. Vinoj. V

Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
49.	Study of carrying capacity of dolphins/habitatpreference and carrying capacity of tourist boats in Chilika Lake	Chilika Wildlife Division, Govt. of Odisha	Dr. Debadatta Swain
School of Electrical Sciences			
50.	Special Manpower Development Program for Chips to System Design (SMDP-C2SD)	DeitY	Dr. N. V. L. Murty
51.	Design and implementation of MIMO based transceiver for emergency applications	DST	Dr. Barathram Ramkumar
52.	Computer vision guided mass gathering surveillance using crowd flow analysis	DST	Dr. Debi Prosad Dogra
53.	Visvesvaraya Ph scheme for Electronics and IT	DeitY	Dr. N. V. L. Murty
54.	Real time Implementation of Image Fusion Algorithms for IR and CCD Video	ITR Chandipur	Dr. N. B. Puhan
55.	Diesel engine Emission Control using Electrical Discharge based Technique for Clean Environment: A Non-Conventional Approach	DST	Dr. Sankarsan Mohapatro
56.	Design and Development of Affordable and Movable Solar Photovoltaic (SPV) Water Pumping System	DAFP	Dr. S. B. Karanki & Dr. M. S. Manikandan
57.	Design and implementation of High-speed low-power embedded signal processor based custom power devices for power quality improvement	DST	Dr. S. B. Karanki
58.	Fabrication and characterisation of CVD diamond detectors for plasma diagnostics in nuclear fusion reactors	BRNS	Dr. Satchidananda Rath
59.	Driver behavior modelling for autonomous driving	KPIT	Prof. N. C. Sahoo
60.	Techniques and tools for verification of network security policies based on formal methods to assess security of networks	DRDO	Dr. Padmalochan Bera
61.	UK India Clean Energy research institute (UKICERI)	DST	Dr. S. B. Karanki
62.	Brush Less DC Machine Based Solar Pumping System	DST	Dr. C. N. Bhende
63.	Si/SiC Hybrid Semiconductor based solid state transformer for PV application	DST	Dr. Dipankar De
64.	Development of Speech Interface for Form-filling Application in Five Indian Languages	MEIT IMPRINT I	Dr. M. S. Manikandan
65.	UI-ASSIST: US-India collaborative for smart distribution system with storage	Indo-US Science & Technology Forum	Dr. S. R. Samantaray
66.	Online Target Scoring system for consistency trails with scintillation removal in images	DRDO	Dr. N. B. Puhan
67.	HUB and SPOKE consortium for 2W and 3W Electric Drives-Design, Development and Prototyping of advanced IM and Synshronous Reluctance Drives and Vehicle integration for e2W and e3W vehicle applications	NFTDC	Prof. N. C. Sahoo
68.	FIST Programme	DST	Dr. P. K. Sahu

Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
69.	Minimization of storage requirements in renewable rich smart microgrid through coordinated control of resources	DST	Dr. Chandrasekhar Perumalla
70.	Light weight, Reconfigurable Cognitive Radio Platform for M2M and IoT applications	DST-IMPRINT II	Dr. Barathram Ramkumar
71.	Prototype of Imaging Radar in UWB	DST-IMPRINT II	Dr. Srinivas Boppu
72.	Smart Grid Security Control Using Nature - Inspired Decentralised Cooperative Metaheuristic Strategies	DST - TARE	Prof. N. C. Sahoo
73.	Design and Development of tools for detection and prevention of cyber-attacks in Smart Grid Energy Management Systems (EMS)	CPRI	Dr. P. L. Beara
74.	Development of hybrid smart grid communication network for last mile connectivity: A D2D and PLC approach	DST	Dr. Soumya praksh Dash
75.	Grid Interconnection Protocols for Largely Dispersed Minigrids/ Microgrids for Electrification of Rural India (MultiGrid)	DST	Dr. Chandrasekhar Perumalla
76.	Quadratic boost converter based multi-input power converter interface for renewable applications	DST	Dr. Olive Ray
77.	Design and Development of Dynamic Phasor and Frequency Estimator Complying IEEE C37.118 standard under Teachers Associateship for Research Excellence (TARE)	DST - TARE	Dr. S. R .Samantaray
School of Infrastructure			
78.	Rice mill wastewater treatment and bio-electricity generation in low cost microbial fuel cell employing ceramic separator	DST	Dr. Manaswini Behera
79.	Bioelectricity recovery during treatment of kitchen waste in combined leach bed reactor and low cost microbial fuel cell	DST	Dr. Manaswini Behera
80.	Greywater treatment and reuse by combined sequencing batch reactor and solar photocatalytic reactor	DST	Dr. Remya Neelancherry
81.	Study of the effects of Climate Change on Hydro-meteorological processes: Droughts and Floods at Different Spatial and Temporal Scales in Eastern India	DST	Prof. R. K. Panda
82.	Design and analysis of reactor for catalytic co-pyrolysis of biomass and plastic: A treatment technique for mixed solid waste	DST	Dr. Remya Neelancherry
83.	Characterization studies of Nano-enhanced phase change material (NEPCM) in thermal storage devices for sustaiable building design in India	DST	Dr. B. Hanumantha Rao
84.	Measures for Improving the Attractiveness of Pedestrian Facility Accessing Urban Local Bus Stops	MOE IMPRINT I	Dr. Debasis Basu
85.	Treatment for domestic wastewater using microphyte assisted vermifiltration system	MOE share for Swachhta Action Plan (SAP)	Dr. R. R. Dash
86.	Impact Assessment of climate change on Hydro-meteorological processes and water resources of Mahanadi river basin	Ministry of Water Resources	Dr. Arindam Sarkar
87.	Urban Flood Modelling - A Web-based Decision Tool Integrating UAV Based Information	DST	Dr. Meenu Ramadas

Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
88.	Energy Efficiency in Agricultural pumping with smart ground water management through monitoring and targeting aquifers	EESL	Prof. R. K. Panda
89.	Seismic Design of Pipelines	NDMA & BIS	Dr. S. R. Dash
90.	Life Cycle and performance assessment of cold mix roads	NRIDA	Dr. U. C. Sahoo
91.	Cost effective ICT-Data analytics system for efficient management of water and fertilizer in precision agriculture	DST-IMPRINT II	Dr. Meenu Ramadas
School of Minerals, Metallurgical and Materials Engineering			
92.	Recycling of cast alloys scraps to produce alloys with comparable microstructure and properties as that of primary alloys	UAY of MOE & NALCO	Dr. Animesh Mandal
93.	Optimization Of Silos, Bins And Hoppers Designs Through Modelling, Primarily Intended For Iron Ore Storage	UAY of MOE & NMDC	Dr. K. K. Sahu
94.	Panel head of materials panel of Naval Research Board	DRDO	Prof. B. K. Dhindaw
95.	Value added Electrochemical Devices from Zircon Obtained from Beach Sands of Odisha	Ministry of Mines	Dr. Soobhankar Pati
96.	Improving damping capacity of cast Nickel Aluminium Bronze (NAB) Alloys	NRB	Dr. Partha Sarathi De
97.	Online corrosion monitoring in naval structures	NRB	Dr. Soobhankar Pati
98.	Development of stand-alone, cost-effective conversion coatings for Magnesium alloys	UAY of MOE	Dr. K. K. Sahu
99.	Stress corrosion cracking (SCC) evaluation of materials for naval applications: new insights from Double Cantilever Beam (DCB) technique	NRB	Dr. K. K. Sahu
100.	Low temperature electro refining process for production of high purity aluminium (4N and above)	NALCO	Dr. Soobhankar Pati
101.	Centre for H2 Solutions - Materials Energy Systems (H2 - M & ES)	DST-NFTDC	Dr. Soobhankar Pati
102.	Mechanical behaviour of additively manufactured hierarchical micro-architected metamaterials and composites for structural and functional applications	DST	Dr. Kodandaram Mangipudi
103.	Improved surface hardness of bus body panels: A simple route by shot peening	NALCO	Dr. Srikant Gollapudi
104.	Design and characterization of an Al-Ti based high entropy alloys	DST	Dr. Partha Sarathi De
105.	Designing of novel transition metal oxide based ferroelectric perovskites for visible light photovoltaic application	DST	Dr. Amritendu Roy
School of Mechanical Sciences			
106.	Study of Wetting and De-Wetting Transition for Fog-Water Harvesting	DST INSPIRE Research Grant	Dr. Sasidhar Kondaraju
107.	Development of enhanced hydrophobic tube bundle with low pressure drop for two phase shell and tube heat exchanger	DST	Dr. Mihir Kumar Das
108.	Droplet impact and splashing on oblique surface	DST	Dr. Sasidhar Kondaraju

Sl. No.	Title of the Project	Name of the Funding Agency	Name of Faculty (Principal Investigator)
109.	Performance Improvement of Steam Generator through the Enhanced Hydrophobic Surface	CPRI	Dr. Mihir Kumar Das
110.	Investigation on quantification and prevention of high residual stresses and hydrogen assisted cracking in creep strength enhanced ferritic steel welds for low pollution ultra supereritical power plant applications	DST	Dr. M. M. Mahapatra
111.	Evaluation of residual stress in Alloy 617 boiler tube weld joint and 10Cr Steel/ Alloy 617 dissimilar metal weld joint for welded turbine rotor	IGCAR	Dr. M. M. Mahapatra
112.	FIST Program	DST	Dr. A. Satyanarayana
113.	Design and Development of Co-axial synthetic jet for electronics cooling	DST	Dr. Venugopal Arumuru
114.	Development of metal matrix nano-composites using selective laser melting process	DST	Dr. Anirban Bhattacharya
115.	Development of a three dimensional unsteady, compressible flow solver (based on LES methodology) to optimize shape of a launch vehicle for reducing aerodynamic drag and flow induced acoustic noise at transonic Mach numbers	ISRO	Dr. Yogesh Bhumkar
116.	Development of continuous gradient Functionally Graded Materials (FGMs) by using gravity die casting under Teachers Associateship for Research Excellence (TARE)	DST - TARE	Dr. M. M. Mahapatra
117.	Design and Development of Hybrid "PCM-Synthetic Jet" based Heat Sink for Electronic Cooling	DST	Dr. M. K. Das
118.	Dynamic Analysis and Design of Dynamically Balanced Gait Controller for Lower Limb Exoskeleton	DST	Dr. Pandu Ranga Vundavalli
119.	Development of a sub-micrometer resolution electro hydrodynamic jet printer for printing customized polymeric structures	DST-IMPRINT II	Dr. Sasidhar Kondaraju
120.	Design and development of lightweight and crashworthy hierarchical materials and structures	DST	Dr. B. Pattabhi Ramaiah
121.	Prediction of impact dynamics of projectile and armour plate with accurate thermal modelling	DRDO	Prof. S. K. Mohapatra
122.	Thermal Characterization of gun barrel during dynamic firing	DRDO	Prof. S. K. Mohapatra
123.	Development of heat transfer enhancement methods at boiling and evaporation on horizontal tube bundles for falling films and forced flow of liquids	DST	Dr. Mihir Kumar Das
124.	Assimilation of Ground Radar Data with Weather Research and Forecast Model in Information Theoretic Framework	Ministry of Earth Sciences	Dr. Srinivasa Ramanujam Kannan

Consultancy / Development Projects for 2019-20

No. of Ongoing Consultancy Projects for the year 2019-20 = **44**

No. of New Consultancy Projects for the year 2019-20 = **38**

Sl. No.	Title of the Project	Name of the Funding agency	Name of Faculty (Principal Investigator)
School of Electrical Sciences			
1.	Designing of video Synopsys algorithms for visual surveillance	Korea Institute of Science and Technology	Dr. Debi Prosad Dogra
2.	Person re-identification for video synopsis	Korea Institute of Science and Technology (KIST)	Dr. D. P. Dogra
3.	Distributed SDN controller with end to end security	Central Research Laboratory, Bharat Electronics Ltd	Dr. P. L. Bera
4.	Design and testing smart audio processing and communication systmes for voice processing and surveillance applications	Trijatta technologies (P) Ltd	Dr. M. S. Manikandan
5.	Implementation of Advanced Machine Learning Algorithms for Cluster Expansion	M/s Indo Korea Science and Technology Center, Bangalore	Dr. Debi Prosad Dogra
6.	Re-identification guided video synopsis	Korea Institute of Science and Technology (KIST)	Dr. Debi Prosad Dogra
School of Infrastructure			
7.	Core sample analysis of composite clay lining of secured engineering landfill for disposal of hazardous waste	M/s RAMKY Enviro Engineers Ltd	Dr. B hanumatha Rao
8.	Structural vetting of proposed bridge for Private Railway siding near Barbil Station of Chakradharpur division in South Eastern Railway to serve M/s Rungta Mines Ltd	M/s PIR Projects and Consultancy Private Limited	Dr. Goutam Mondal
9.	Testing suitability of dredged sand for use in Road embankment & subgrade	Executive Engineer, R&D Division, Bhadrak	Dr. U. C. sahoo
10.	Request to assess the structural integrity of sports climbing wall	Dept. of Sports & Youth Services	Dr. Dinakar Pasla
11.	2nd phase monitoring settlements and effectiveness of the PVD-Package 2B - Construction of road bed, station buildings, passenger amenities, minor bridges, general electrical works in connection with new BG rail line from Dumuku KM 57.000 to Nuagaon KM 68.300 on Khurdha roda division of East Coast Railway in the state of Odisha, India	M/s RVNL, Bhubaneswar	Dr. B. hanumatha Rao
12.	Design of M25 Grade RCC for Structural Elements	M/s Airports Authority of India, Jharsuguda	Dr. Dinakar Pasla
13.	Checking Structural strength of pier of east coast railway constructed over luna river	Ra9il Vikas N11igam	Dr. Dinakar Pasla
14.	Proof checking of design/drawings of bearings with reference to the grade separator structure at Khandagiri Chowk (Km. 412) on NH-5 (New NH-16), Bhubaneswar	RKD Construction Pvt. Ltd	Dr. S. R. Dash
15.	Structural vetting of 17 bridges for M/s Adani Infra (India) Ltd. At Hansdiha Godda Section under Eastern Railway	PIR Projects and Consultancy Private Limited	Dr. Goutam Mondal

Sl. No.	Title of the Project	Name of the Funding agency	Name of Faculty (Principal Investigator)
16.	Testing of Bituminous core samples of Paga-Gopinathpur-Kuanpal Road	Executive Engineer, QC(R&B) Div. Govt. of Odisha	Dr. U. C. Sahoo
17.	Mix Design for married Accommodation at Chandipur	Military Engineer Services through M/s Komal Buildcon Pvt. Ltd, Jaipur, Rajasthan	Dr. Dinakar Pasla
18.	Stability study in tailings dams and scrutiny of dry stacking procedure of red mud	Vedanta Limited	Dr. B. Hanumatha Rao
19.	Verification of basic and detailed engineering design of RWSS mega water project of Rairakhol	Voltas Limited	Dr. Arindam Sarkar
20.	Technical Scrutiny of structural drawing and design calculations of 3x300 MSV and 1x600 MSV tank	Creative Studio	Dr. Devesh Punera
21.	Stability analysis and method of improving the bearing capacity from KM 56.00 to KM 57.10 - Package 2A (Construction of road bed, station buildings, passenger amenities, minor bridges, general electrical works in connection with new BG rail line from Kendrapara (Incl) KM 42.040 to Dumuku Km 57.000 on Khurdha road division of East Coast Railway in the State of Odisha, India	Rail Vikas Nigam Limited	Dr. B. hanumatha Rao
22.	Design verification of Boudh WSP	Larsen & Toubro (L&T) Construction	Dr. Dinakar Pasla
23.	Structural vetting of bridges and retaining walls of 2x25MW Maithan Right Bank Thermal Power Project for M/s L&T Ltd	L&T Ltd	Dr. S. R. Dash
24.	Technical support for rehabilitation of defunct NH-5, Balugaon from 0/0 km to 8/0 km	Chief Engineer (DPI & Roads) Odisha, Govt. of Odisha	Dr. U. C. Sahoo
25.	Verification of Hydraulic & structural design and drawings of RWSS Mega Water Project of Puri District	M/s Voltas Limited	Dr. Puspendu Bhunia
26.	Vetting of Traffic Density Study for Environmental Clearance for Multiplex Building at Bhubaneswar	M/s CEMC Pvt. Ltd	Dr. R. R. Dash
27.	Mix Design for NTPC-BHEL Project at BARH	RDC Concrete India Ltd	Dr. Dinakar Pasla
28.	Site study at Barang for Construction of Cancer Hospital	Alamelu Charitable Foundation (Tata Trusts)	Dr. Dinakar Pasla
29.	Checking of the stability of foundation and superstructure of pipe conveyor for MCL	M/s L&T Ltd.	Dr. Sumanta Halder
30.	“Design of Cell filled concrete pavements for rural roads carrying heavy traffic	M/s Kohinoor Plastech, Kolkata	Dr. Anush K. C.
31.	Proof check and scrutiny of design and drawings of 1 major bridge substructure and foundation in connection to NTPC-LARA project	RITES Ltd	Dr. S R. Dash

Sl. No.	Title of the Project	Name of the Funding agency	Name of Faculty (Principal Investigator)
32.	Study of ground water table and surface water discharge at Tata Steel Kalinganagar	Tata Steel Ltd	Dr. Arindam Sarkar
33.	Vetting of new South-west red mud pond and PWL (process Water Lake) designs	Vedanta Ltd	Dr. B. hanumatha Rao
34.	Proof checking of design and drawing of road under bridge (RUB) at MCL, Talcher (span 2x6.0x6.0m RCC PRECAST SEGMENTAL BOX)	RITES Ltd	Dr. S. R. Dash
35.	Vetting of construction of civil works for installation of ILS at VSS airport Jharsuguda	Airport Authority of India	PR Construction
36.	Testing of samples for integrated Infrastructure Complex at Dhamnagar, Bhadrak	Bridge and Roof Co, (India) Ltd.	Dr. Dinakar Pasla
School of Minerals, Metallurgical and Materials Engineering			
37.	Process control and optimization at Jindal Stainless Ltd, Jajpur,Odisha	Jindal Stainless Ltd	Prof. Brahma Deo
38.	A Model Based Decision Support & Control System for Accretion Control to increase the sponge iron production to the target annual capacity of 4,25,000 Mt through a R&D Project	M/s Tata Sponge Limited	Prof. Brahma Deo
39.	Process related improvements at PPL	M/s Paradeep Phosphates Ltd	Prof. Brahma Deo
40.	Product quality improvement program at Deem Roll Tech. Ltd	M/s Deem Roll Tech. Ltd., Ahmedabad	Dr. P. P. Dey
School of Mechanical Sciences			
41.	Development of FEM model for Design Improvement of multi layered Baffle	NPOL, DRDO	Dr. S. N. Panigrahi
42.	Residual stress measurement by Deep-hole drilling technique	NMRL, DRDO	Dr. M. M. Mahapatra
43.	Design and development of Flow measurement Solution	Honeywell Technology Solutions Lab Pvt. Ltd	Dr. Venugopal Arumuru
44.	Coriolis flow meter study	Honeywell Technology Solutions Lab Pvt. Ltd	Dr. Venugopal Arumuru

Patents Filed in the Year 2019–20

Sl. No.	Title	Name of the Faculty	Application No.	Year	School
1.	Water assisted underwater direct laser welding method and processing set-up	Dr. Suvradip Malik, Mr. Parag Malhari Sakate, Dr. Muvvala Gopinath and Prof. Ashish Kumar Nath	201931022198	2019	School of Mechanical Sciences
2.	Light weight and low cost tube cross section for improved thermal performance of two phase heat exchanger	Dr. Mihir Das and Rajiv LM	201931039188	2019	School of Mechanical Sciences
3.	Methodology to Develop An Elliptical Rod from Circular Rod using Two and Half Axis CNC machine	Dr. Mihir Das and Rajiv LM	20203100380	2020	School of Mechanical Sciences

Invited Lecture / Presentation / Conference / Workshop / GIAN Programmes / Seminar / Lecture / Colloquium by Faculty

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
School of Basic Sciences				
1.	Deciphering Disruptive Pharmacophores through Drug Repositioning Strategies for Modulating the Function of the Chemoattractant Receptor.	Dr. Soumendra Rana	WCPT 2019	
2.	Complement Targeted Therapeutics: Current Approaches and Future Opportunities	Dr. Soumendra Rana	QIP-Short Term Course on	
3.	Discovery of “Neutraligands” for hC5a peptide through Drug Repurposing Strategies	Dr. Soumendra Rana	Chemistry and Biology of Peptides, Gordon Research Conferences	
4.	Dynamical Systems and Fractals	Dr. Tarakanta Nayak	UGC Autonomy seminar, 22 November 2019	Salipur Autonomous College, Salipur, Odisha
5.	Baker omitted value	Dr. Tarakanta Nayak	34th Annual Conference of the Ramanujan Mathematical Society, 1-3 August 2019	Pondicherry University

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
6.	Maps, Motion and Mandelbrot	Dr. Tarakanta Nayak	Extramural lecture on Complex Analysis, 25 January 2020	Tulasi Womens College, Kendrapara, Odisha
7.	Disconnected Julia sets	Dr. Tarakanta Nayak	Talk on National Mathematics Day during Ramanujan Award ceremony, 22 December 2019	Ramanujan Institute for Advance Study in Mathematics, University of Madras, Chennai
8.	Fractals	Dr. Tarakanta Nayak	Gunupur College, Rayagada, Odisha	Gunupur College, Rayagada, Odisha
9.	Domain Decomposition Method for Hamilton-Jacobi Equation	Dr. Bankim Chandra Mandal	M3HPCST 2020	Received Best Paper Award
10.	Graphs with reciprocal eigenvalue property	Dr. Sasmita Barik	IWM Annual Conference, IIT Bombay, June 10-12, 2019	Invited Talk
11.	Graphs with reciprocal eigenvalue property	Dr. Sasmita Barik	International Conference on Number Theory and Graph Theory, Mysore University, June 27-29, 2019	Invited Talk
12.	Graphs whose independence fractals are line segments	Dr. S. Barik, Dr.T. Nayak and Dr. A. Pradhan	6th India Taiwan Conference on Discrete Mathematics (VI-ITCDM 2019), IIT BHU, Varanasi, November 15-18, 2019	Invited Talk
13.	Non-bipartite graph classes with reciprocal eigenvalue property	Dr. Sasmita Barik	Conference on Linear Algebra and its Applications in honour of Ravindra B. Bapat, Indian Statistical Institute, Delhi, December 26-27, 2019	Invited Talk
14.	A new matrix representation of multidigraphs	Dr. Sasmita Barik	42nd Australasian Conference on Combinatorial Mathematics and Combinatorial Computing, UNSW Sydney, December 9-13, 2019	Paper Presentation
15.	Porous multimetallic nanoparticles systems: Synthesis, characterisation and efficient dye degradation and removal	Dr. Srikanta Patra	National Conference on Recent Advances in Energy, Environment and Health for Sustainable Development (RAEEHSD-2019) during October 18-19, 2019	
16.	Ion beam induced modification of nanostructured oxide surfaces: Role of sputtering and defects	Dr. Shyamal Chatterjee	5th International conference on nanostructuring by Ion Beams (ICNIB 2019), IGCAR, Kalpakkam, November 6-8, 2019	
17.	Ion beam modification of metal oxide based nanostructured surface for frontier applications	Dr. Shyamal Chatterjee	10th International Workshop on Nanoscale Pattern Formation at Surfaces 7-10 July 2019, University of Surrey, Guildford, UK	
18.	Achiral and Chiral Poly(ionic liquids) Synthesis and their Applications"	Dr. Vijayakrishna Kari	DST-SERB sponsored National Conference on "Recent Advances in Materials Sciences for Sustainable Development (RAMSSD-2019) organized by Vignan University, Guntur during 31 August – 1st September 2019. (INVITED TALK).	Invited Talk

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
19.	CHARM PROSPECTS AT BELLEII	Dr. S. Bahinipati	XVI Workshop on High Energy Physics Phenomenology (WHEPP2019)	Presented on behalf of BelleII Collaboration
20.	Unconventional magnetic ground state properties of the double layer Ruddlesden-Popper phase, Sr2MnTiO7	Dr. N. Mohapatra	Discussion Meeting On Recent Advances In Magnetism	
21.	Portfolio Optimization	Dr. A.K.Ojha	Annual conference of Orissa Mathematical Society and National Conference on Mathematical Analysis and Computing,NIST,Berhampur,February 15-16,2020	Invited speaker
22.	Geometric Programming	Dr. A.K.Ojha	National conference on Decision Science and Operation Management: Recent Trends and Development,Birla Global University of Management and Technology, Bhubaneswar,March 7,2020	Invited speaker
23.	Markowitz Tangency Portfolio	Dr. A.K.Ojha	International Conference on Numerical Optimization in Engineering& Sciences(NOIEAS-2019),June 19-21,2019,NIT Warangal	Invited speaker
24.	Introduction to Variational Inequalities and some results on Quasi Variational Inequalities and Complementarity Problems	Dr. S Pani	Int. Conf. on Math. Analysis and Computing 2019	
25.	Beta-Gamma Systems in Conformal Field Theory	Dr. C. Bhamidipati	Journal Club, NISER, Bhubaneswar, 21 January 2020	
26.	AAA+ ATPase ATAD2 signaling networks in gastric cancer	Dr. A. Roychowdhury, Dr. Nayak A, Dr. Bhattacharyya A,	2nd World Congress on Genetics and Genetic Disorders, Stockholm, 13-14th May, 2019	
School of Earth, Ocean and Climate Sciences				
27.	New-Age Observation Systems for the Multi-scale Process studies in the Bay of Bengal	Dr. Sourav Sil	National Conference on "Challenges in Earth System Sciences for Global Sustainability (CESSGS)"	
28.	Climate Change and Extreme Events	Dr. S. Pattnaik	ICAR Winter School on Climate Change, 6-26 Sept 2019	
29.	Heavy Rainfall and Role of Climate Change	Dr. S. Pattnaik	OUAT Students	
30.	Dust and the Indian Monsoon: Our current understanding	Prof. Vinoj. V	International Workshop for Chemistry Climate Interaction, IITM, Pune, March, 2019	
31.	Atmospheric Aerosols and Climate: Focus on South Asia	Prof. Vinoj. V	National Workshop on Severe Weather, University of Calcutta, March, 2020	

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
32.	Satellite based Remote Sensing of Aerosols	Prof. Vinoj. V	Brainstorming for Indian Satellite MIssion, Space Physics Laboratory, Vikram Sarabai Space Centre, Trivandrum, August, 2019	
33.	Revisiting the West Asian Link to Indian Summer MOnsoon Rainfall	Prof. Vinoj. V	Future Water Conference, September, 2019	
34.	NCAP initiatives for Odisha	Prof. Vinoj. V	National Knowledge Network for National Clean Air Program, Lucknow	
35.	Aerosols and the Indian Monsoon: Relevance for Statosphere-Troposphere Interaction	Prof. Vinoj. V	International Conference on the Asian Summer Monsoon Anticyclone: Gateway of Surface Pollutants to the stratosphere. SRM University, Chennai, 2020	
School of Electrical Sciences				
36.	An overview of the ongoing R&D activites in the microwave devices and RFIC research group	Dr. Debapratim Ghosh	Invited talk at RAIT, University of Mumbai	
37.	Adaptive and Intelligent Relaying for Micro-grids	Dr. S. R. Samantaray	2nd National Workshop on "Recent Developments in Smart-Grid Technologies,	IIT, Bhubaneswar
38.	Developments in Microgrid protection	Dr. S. R. Samantaray	UI-ASSIST: Joint meeting-cum-workshop	New Delhi
39.	Issues and Challenges in Micro-Grid Protection	Dr. S. R. Samantaray	13th National Frontiers of Engineering	IIT, Bhubaneswar
40.	Issues and Challenges in Micro-Grid Protection	Dr. S. R. Samantaray	National Renewable Energy Lab (NREL)	Denver USA
41.	Wide-Area Back-Up Protection schemes for Transmission Systems	Dr. S. R. Samantaray	CET Bhubaneswae	CET Bhuabaneswar
42.	Issues and Challenges in "Micro-grid Protection including Renewables	Dr. S. R. Samantaray	ASEC-2019	SOA University, Bhubaneswar
43.	Phasor Measurement Unit (PMU): Design, Testing and Wide-Area Applications,	Dr. S. R. Samantaray	NWET-2019	Silicon Institute of Technology Bhubaneswar
44.	IoT: Problem, Challenges and Solutions	Dr. P. K. Sahu	IIoT & Industry 4.0 Workshop	FDP
45.	Power Quality Issues and Challenges in Microgrid	Dr. S. B. Karanki	2nd National Workshop on	
46.	Renewable Integration to the Grid and its Challenges	Dr. S. B. Karanki	International Conference on Emerging Trends and Advances in Electrical Engineering and Renewable Energy (ETAEERE-2020), 5th and 6th March 2020	
47.	Automated Program Verification	Dr. S. Pinisetty	Workshop on Recent Trends in Software Testing (RTST 2019)	

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
48.	Introduction to Temporal Logic and Model Checking	Dr. S. Pinisetty	Workshop on Formal Methods for Safe and Secure Medical Devices	
49.	Signal Processing Techniques for IoT Enabled Wide-Area Smart Grid Monitoring System	Dr. M. S. Manikandan	RECENT DEVELOPMENTS IN SMART-GRID TECHNOLOGIES NWSGT-2020 Theme: Monitoring, Protection and Control of Microgrids, 2019	
50.	Signal Processing and Deep Learning Schemes for Energy-Efficient AI Powered Edge Computing Devices	Dr. M. S. Manikandan	Special Electrical Engineering Seminar, University of Minnesota,2019	
51.	Signal Processing Techniques for IoT Enabled Wide-Area Smart Grid Monitoring System	Dr. M. S. Manikandan	IEEE Student Branch – National Institute of Technology, Tiruchirappalli	
52.	"Signal Processing and Deep Learning Techniques for IoT Streaming and Big Data Analytics	Dr. M. S. Manikandan	"Colloquium on ML with Signal Processing for Data Analytics" During 27th and 28th September 2019IEEE Kerala Section, India	
53.	Modeling and Control of Single Phase Inverters	Dr. Olive Ray	2nd National Workshop on Recent Developments in Smart-Grid Technologies (NWSGT-2020)	
54.	Duty-Cycle Charts for Phase-Shift ControlledImpedance-Source DC-DC Converters	Dr. Olive Ray and Mr. Sanchari Hajari	IEEE IAS Annual Meeting 2019, Baltimore, USA	
55.	Multi-port Power Converter Technology for Small-Scale Storage Integration	Dr. Olive Ray	HNEI	
56.	Advanced Network Intrusion Detection using Machine Intelligence	Dr. P. Bera	ACM Winter School on Cyber Security	Invited Lecture
57.	A Novel Machine Learning Based Malware Detection and Classification Framework	Dr. P. Bera, Mr. Kamalakanta Sethi, Mr. Rahul Kumar, Mr. Lingaraj Sethi	IEEE Cyber Security 2019	Research paper
58.	A Scalable Attribute Based Encryption for Secure Data Storage and Access in Cloud	Dr. P. Bera, Mr. Kamalakanta Sethi, Mr. Punith R, Mr. A. Pradhan	IEEE Cyber Security 2019	Research paper
59.	Voltage Regulation in Smart Distribution Systems	Dr. C.S. Perumalla	Recent Developments in Smart-Grid Technologies (NWSGT-2020)	IIT, Bhubaneswar
60.	High Penetration of Renewable Energy Sources-Challenges and Probable Solutions	Dr. C.S. Perumalla	TEQIP Sponsored Workshop on "Recent Trends in Renewable Energy Systems and Hybrid Electric Vehicles	Osmania University, Hydrabad
61.	Artificial Intelligence Applications in Smart Grid Management	Dr. C.S. Perumalla	TEQIP Sponsored One Week Refresher Course on "Application of AI Techniques in Electrical Engineering	Osmania University, Hydrabad

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
62.	Control Challenges in Grid Integration of Renewable Energy Sources	Dr. C.S. Perumalla	TEQIP-III and Innovatory Electrical Society Sponsored Faculty Development Program	Government College of Engineering Keonjhar, Odisha
63.	Virtual Synchronous Machines	Dr. C.S. Perumalla	AICTE Sponsored Two Weeks Faculty Development Program	Vasavi College of Engineering (A), Hyderabad
64.	Integration of Renewable Energy Sources and their limitations	Dr. C.S. Perumalla	AICTE Sponsored One Week Short Term Training Programme (STTP) on "Restructured Power System Modelling And Simulation	Anil Neerukonda Institute of Technology & Sciences (Autonomous), Visakhapatnam
School of Infrastructure				
65.	Traffic safety Analysis at Median Openings	Dr. P. P. Dey, Mr. M. Mohanty, Mr. B. Panda, Mr. S. K. Das.	ASCE India conference 2020 on "Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies", March 02-04, 2020, Kolkata.	
66.	Safe and congestion free smart transport system	Dr. P. P. Dey, Mr. M. Mohanty, Mr. B. Panda, Mr. S. K. Das.	ASCE India conference 2020 on "Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies", March 02-04, 2020, Kolkata.	Chairing Technical Session
67.	Riverbank Filtration: An approach towards low cost water purification	Dr. R. R. Dash	National Conference on Recent Advances in Energy, Environmental and Health Sciences (RAEEHS-2019)	Keynote Speaker
68.	Decentralised wastewater treatment using sustainable natural treatment practices	Dr. R. R. Dash	Sustainable Developments in Green Technology for Smart Cities (SDGTSC -2020)	Honorary Keynote Speaker
69.	Advanced Wastewater Management Practices	Dr. R. R. Dash	Recent Advances In Civil Engineering (RACE-2019)	Invited Lecture
70.	Recent advances in separator and electrode materials for microbial fuel cells for wastewater treatment and bioelectricity generation	Dr. M. Behera	National Conference on Frontiers in Advanced Materials (NCFAM-2019), VSSUT Burla, Odisha, India, 27-28 July, 2019	
71.	Natural Calamity Resistant Low Cost Houses	Dr. Suresh Ranjan Dash	Use of Alternative and Low Cost Sustainable Construction Materials and Techniques in Civil Engineering Infrastructure Projects, (UACMTCE-2020) 6-10Jan 2020 IGIT Saranga	Invited Speaker
72.	Introduction to Confined Masonry Buildings	Dr. Suresh Ranjan Dash	Use of Alternative and Low Cost Sustainable Construction Materials and Techniques in Civil Engineering Infrastructure Projects, (UACMTCE-2020) 6-10Jan 2020 IGIT Saranga	Invited Speaker

Sl. No.	Title of Lecture/ Presentation	Author(s)	Conference Name, Year, Duration	Remarks
73.	Design of Masonry Columns	Dr. Suresh Ranjan Dash	Short term course on "Design of Masonry Structures", Institute of Engineers, Bhubaneswar 8-9 Sep 2019	Invited Speaker
School of Minerals, Metallurgical and Materials Engineering				
74.	Influence of rapid solidification parameters on microstructure and thermoelectric performance of SiGe nanostructured alloys	Dr. Sivaiah Bathula [et al.]	12th Asia-Pacific Microscopy Conference (APMC-2020), Hyderabad International Convention Centre, 3 - 7th February 2020, Hyderabad, India	
75.	Solidification and Casting of metals	Dr. A. Mandal	Short Term Course on Advances in Materials and Processing	TEQIP III program
76.	Aluminium alloys for elevated temperature applications	Dr. B.K. Dhindaw, Dr. A. Mandal and Mr. R. Gope,	Thirteenth National Frontiers of Engineering	
77.	Micromachining using Focused Ion Beam	Dr. K.R. Mangipudi	Advancements in Manufacturing & Welding, JNTUK, Kakinada; 2019	Expert lecture in FDP
78.	Metallic muscles: Nanoporous metals as electro(chemo)-mechanical actuators	Dr. K.R. Mangipudi	Advances in Electromechanical systems, CET, Bhubaneswar	Expert lecture in FDP
79.	Image processing for network generation	Dr. K.R. Mangipudi	Physics and biology inspired optimization, machine learning, data mining techniques and their applications in big-data, medical, science and engineering disciplines – GIAN Course, IIT Bhabaneswar	Resource lecture
80.	Effect of Laser Shock Peening on the structural and mechanical properties of Ni-Ti Shape Memory Alloy	Dr. S. Gollapudi [et al.]	6th Asian Conference on Heat Treatment and Surface Engineering, Chennai, March 2020	
81.	Effect of grain boundary relaxation on corrosion behaviour of nanocrystalline Ni-P alloy	Dr. S. Gollapudi, Dr. Soobhankar Pati [et al.]	ADMAT, Hyderabad, September 2019	
School of Mechanical Sciences				
82.	ANN for Mechanical Engineers	Dr. Srinivasa Ramanujam Kannan	MEXPLORE20	Expert talk
83.	CFD in Materials Processing	Dr. P. Rath	Recent Scopes and Technologies in Mechanical Engineering Department of Mechanical Engineering	
84.	Mechanics of stress transfer in polymer nano-composites	Dr. P. R. Budarapu	Webinar 2020	Amity Institute of Applied Sciences
85.	Experiments in Fluids	Dr. Venugopal A.	FDP, RAY2020	

Seminar / Conference / Workshop Attended by Faculty

Sl. No.	Name	Title	Dates		Place	Remarks
			From	To		
School of Basic Sciences						
1.	Dr. Anasuya Roychowdhury	2nd World Congress on Genetics and Genetic Disorders	13-05-2019	14-05-2019	Stockholm, Sweden	
2.	Dr. Niharika Mohapatra	Discussion Meeting On Recent Advances In Magnetism	14-05-2019	16-05-2019	IIT Mandi	
3.	Dr. Sasmita Barik	IWM Annual Conference	10-06-2019	12-06-2019	IIT Bombay	
4.	Dr. Akshay Kumar Ojha	International Conference on Numerical Optimization in Engineering & Sciences (NOIEAS-2019)	19-06-2019	21-06-2019	NIT Warangal	
5.	Dr. Sasmita Barik	International Conference on Number Theory and Graph Theory	27-06-2019	29-06-2019	Mysore University	
6.	Dr. Sunil Kumar Prajapati	Group Algebras, Representations and Computation	14-10-2019	23-10-2019	Bangalore	
7.	Dr. Sasmita Barik	6th India Taiwan Conference on Discrete Mathematics (VI-ITCDM 2019)	15-11-2019	18-11-2019	IIT BHU, Varanasi	
8.	Dr. Seema Bahinipati	XVI Workshop on High Energy Physics Phenomenology (WHEPP2019)	01-12-2019	10-12-2019	IIT Guwahati	
9.	Dr. Abhijit Sutradhar	64th Congress of Indian Society of Theoretical and Applied Mechanics - an International Conference	09-12-2019	12-12-2019	School of Mechanical Sciences and School of Basic Sciences, IIT Bhubaneswar	
10.	Dr. Sasmita Barik	42nd Australasian Conference on Combinatorial Mathematics and Combinatorial Computing	09-12-2019	13-12-2019	UNSW, Sydney	
11.	Dr. Bankim Chandra Mandal	M3HPCST 2020	09-01-2020	11-01-2020	Inderprashtha Engineering College	
12.	Dr. Akshay Kumar Ojha	Annual conference of Orissa Mathematical Society and National Conference on Mathematical Analysis and Computing	15-02-2020	16-02-2020	NIST, Berhampur	

Sl. No.	Name	Title	Dates		Place	Remarks
			From	To		
13.	Dr. Akshay Kumar Ojha	National conference on Decision Science and Operation Management: Recent Trends and Development	07-03-2020	07-03-2020	Birla Global University of Management and Technology, Bhubaneswar	
14.	Dr. Sasmita Barik	Conference on Linear Algebra and its Applications in honour of Ravindra B. Bapat	26-12-2019	27-12-2019	Indian Statistical Institute, Delhi	
School of Earth, Ocean and Climate Sciences						
15.	Dr. Sandeep Pattnaik	Coastal Ocean-Atmosphere Science & Technology 2020 (COAST 2020)	28-02-2020	01-03-2020	Berhampur University	Invited lecture on climate change and extreme events
16.	Dr. Raj Kumar Singh	Assessing spatio-temporal variations in benthic for aminifera abundance and diversity in coastal lagoon and their implications. In 3rd National Geo-Research Scholar Meet	06-06-2019	08-06-2019	WIHG, Dehradun	Oral Presentation by Ms. S. S. Barik (Received funding support from WIHG)
17.	Dr. Raj Kumar Singh	Relationship of metal distribution with salinity gradient in brackish water lagoon Goldschmidt Conference	18-08-2019	23-08-2019	Barcelona, Spain	Poser presented by Ms. S.S.Barik (Received funding support from EAG)
18.	Dr. Raj Kumar Singh	Paleoceanographic changes in East China Sea over last 400 kyr	02-09-2019	07-09-2019	Sydney, Australia	Poster presented by N.Vats (Received full funding from the organisers)
19.	Dr. Raj Kumar Singh	Deep Sea agglutinated benthic foraminifera of Central South Pacific – variability and adaptation. In 27th Indian Colloquium of Micropaleontology and Stratigraphy	04-11-2019	06-11-2019	BHU, Varanasi	Oral Presentation
20.	Dr. Raj Kumar Singh	Assessing Benthic Micro-fauna morphological variability under seasonal and spatial variable stress conditions. In 27th Indian Colloquium of Micropaleontology and Stratigraphy	04-11-2019	06-11-2019	BHU, Varanasi	Poster presented by Ms. S. S. Barik

Sl. No.	Name	Title	Dates		Place	Remarks
			From	To		
21.	Dr. Sandeep Pattnaik	International Conference on Tropical Meteorology (TROPMET-2019)	11-12-2019	14-12-2019	Vishakhpatnam	Awarded: Indian Meteorological Society Research Associate Fellowship
22.	Dr. Kiranmayi Landu	Cyclogenesis Potential of Convectively Coupled Equatorial Waves over Bay of Bengal	11-12-2019	11-12-2019	Vishakapatnam	
23.	Dr. Sandeep Pattnaik	Advances in Coastal Research with Special Reference to Indo Pacific-2019 (AdCoRe IP-2019)	17-12-2019	19-12-2019	Chennai	Presented an invited lecture on Heavy Rainfall of Kerala 2018
24.	Dr Sourav Sil	National Conference on "Challenges in Earth System Sciences for Global Sustainability (CESSGS)"	14-01-2020	17-01-2020	IIT Kharagpur	
25.	Dr. Sandeep Pattnaik	Climate Change and Health, CoE Utkal University	10-02-2020	11-02-2020	Utkal University	Invited Lecture on Climate change and regional variability
26.	Dr. Raj Kumar Singh	Reconstruction of upper Calabrian to Holocene sea ice extent in the Japan Sea – A multiproxy approach. In 3rd National Geo-Research Scholar Meet	06-06-2019	08-06-2019	WIHG, Dehradun	Oral Presentation by M. Das (Received funding support from WIHG)
School of Electrical Sciences						
27.	Dr. Srinivas Pinisetty	Workshop on Recent Trends in Software Testing (RTST 2019)	20-05-2019	24-05-2019	BIT Mesra, Ranchi	Attended on 24th May as invited speaker
28.	Dr. Srinivas Bhaskar Karanki	Centre for Power Electronics Annual Conference 2019	03-06-2019	04-06-2019	Holywell Park Conference Centre, Loughborough University	
29.	Dr. Padmalochan Bera	IEEE Cyber Security 2019	03-06-2019	04-06-2019	Oxford University, UK	Presented research work
30.	Dr. Chandrashekhar Narayan Bhende	IFAC Workshop on Control of smart grid and renewable energy systems	10-06-2019	12-06-2019	Jeju, Korea	
31.	Dr. Dipankar De	EPE'19 ECCE Europe	02-09-2019	06-09-2019	Italy	

Sl. No.	Name	Title	Dates		Place	Remarks
			From	To		
32.	Dr. Debi Prosad Dogra	IEEE BigMM 2019	10-09-2019	15-09-2019	Singapore	
33.	Dr. Srinivas Bhaskar Karanki	2nd Annual JVCEC Conference	13-09-2019	14-09-2019	MNIT Jaipur	Paper Presented
34.	Dr. Debapratim Ghosh	International Workshop on Terahertz Technologies	20-09-2019	21-09-2019	IIT Delhi	
35.	Dr. Soumya Prakash Dash	Vehicular Technology Conference (VTC-Fall)	22-09-2019	25-09-2019	Honolulu, Hawaii, USA	
36.	Dr. N. C. Sahoo	IECON-2019	14-10-2019	17-10-2019	Lisbon, Portugal	
37.	Dr. Olive Ray	UI-ASSIST Joint Meeting/ Workshop	18-12-2019	19-12-2019	New Delhi	
38.	Dr. Olive Ray	PESGRE 2020	02-01-2020	05-01-2020	Kochi, Kerala	
39.	Dr. Joy Chandra Mukherjee	COMSNETS	07-01-2020	10-01-2020	Bangalore	Oral Presentation
40.	Dr. N. C. Sahoo	IEEE CALCON-2020	28-02-2020	29-02-2020	Kolkata	
41.	Dr. Soumya Prakash Dash	Power Line Communications Opportunities for India	02-03-2020	02-03-2020	New Delhi, India	
42.	Dr. Srinivas Pinisetty	ICIT 2019 : 18th International Conference on Information Technology 2019	20-12-2019	21-12-2019	Bhubaneswar	Attended as a session chair on 21th December
School of Infrastructure						
43.	Dr. Debasis Basu	15th World Conference on Transport Research	26-05-2019	31-05-2019	IIT Bombay	Chaired Session, Presented Papers and Networking
44.	Dr. Rajesh Roshan Dash	Recent Advances In Civil Engineering (RACE-2019)	29-07-2019	02-08-2019	VSSUT, Burla	For Delivering Invited Lecture
45.	Dr. Meenu Ramadas	National Workshop on Urban Climate Network	02-08-2019	03-08-2019	IISc, Bangalore	
46.	Dr. Meenu Ramadas	Water Future Conference 2019	24-09-2019	27-09-2019	Bangalore	
47.	Dr. Rajesh Roshan Dash	National Conference on Recent Advances in Energy, Environmental and Health Sciences (RAEEHS-2019)	18-10-2019	19-10-2019	Bhubaneswar	As keynote Speaker
48.	Dr. Suresh Ranjan Dash	Young Scientists' Conference (YSC)	05-11-2019	07-11-2019	Kolkatta	As member of the scientific committee and Jury
49.	Dr. Suresh Ranjan Dash	First Indian Symposium on Offshore Geotechnics (An International Symposium) ISOG2019	05-12-2019	07-12-2019	IIT Bhubaneswar	
50.	Dr. Devesh Punera	ICCMS 2019	11-12-2019	13-12-2019	IIT Mandi	

Sl. No.	Name	Title	Dates		Place	Remarks
			From	To		
51.	Dr. Arindam Sarkar	Coastal and Inland Water Systems	16-12-2019	17-12-2019	Bhubaneswar	
52.	Dr. Meenu Ramadas	International Conference on Coastal & Inland Water Systems (CIS-2019)	16-12-2019	17-12-2019	Bhubaneswar	
53.	Dr. Debasis Basu	5th Conference of Transportation Research Group of India (CTRG)	18-12-2019	21-12-2019	Bhopal	Chaired Session, Presented Papers and Networking
54.	Dr. Goutam Mondal	NDMA sponsored One-day discussion meeting on RVS Primer at IIIT Hyderabad	09-01-2020	09-01-2020	IIIT Hyderabad	
55.	Dr. Rajesh Roshan Dash	Sustainable Developments in Green Technology for Smart Cities (SDGTSC -2020)	14-02-2020	15-02-2020	Bhubaneswar	As keynote Speaker
56.	Dr. Partha Pratim Dey	ASCE India conference 2020 on "Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies"	02-03-2020	04-03-2020	Kolkata	Paper Presented
School of Minerals, Metallurgical and Materials Engineering						
57.	Dr. Kodanda Ram Mangipudi	International Conference on Electron Microscopy & Allied Analytical Techniques (EMAAT - 2019)	17-05-2019	19-05-2019	Shimla, India	Invited Talk
58.	Dr. Srikant Gollapudi	Effect of grain boundary relaxation on corrosion behaviour of nanocrystalline Ni-P alloy	08-07-2019	12-07-2019	Chennai	ISMANAM
59.	Dr. Sivaiah Bathula	Bringing the Nano-world Together 2019 (BTNT 2019)	05-12-2019	06-12-2019	NISER, Bhubaneswar	
60.	Dr. Sivaiah Bathula	Workshop on Enabling Procedures for Increase of Steel Usage for the Growth of Economy	28-02-2020	28-02-2020	Bhubaneswar	
School of Mechanical Sciences						
61.	Dr. Gaurav Bartarya	11th International Conference on Precision, Meso, Micro and Nano Engineering	12-12-2019	14-12-2019	IIT Indore	International Conference
62.	Dr. Suvradip Mullick	International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019) at IIT Indore	12-12-2019	14-12-2019	IIT Indore	
63.	Dr. Srinivasa Ramanujam Kannan	iRAD 2020	05-02-2020	07-02-2020	IIT Madras	

Seminars / Conferences / Workshops Organized

Sl. No.	Title	Organized	Dates		Place	Remarks
			From	To		
School of Basic Sciences						
1.	64th Congress of Indian Society of Theoretical and Applied Mechanics - an International Conference	Conference	09-12-2019	12-12-2019	School of Mechanical Sciences and School of Basic Sciences at IIT Bhubaneswar	The conference was successful with the participation of 157 participants and over 50 delegates across the globe
2.	ISTAM-2019	Conference	09-12-2019	12-12-2019	IIT Bhubaneswar	Member of local organising Committee
3.	IWM Visitors Program	Seminar	29-01-2020	29-01-2020	Ravenshaw University, Odisha	
School of Earth, Ocean and Climate Sciences						
4.	Opportunities in Atmospheric and Space Sciences: Perspectives from National Atmospheric Research Laboratories (NARL)	Seminar	26-07-2019	26-07-2019	Bhubaneswar	Present Director along with one former director of NARL. Students participated with enthusiasm
School of Electrical Sciences						
5.	The World Telecommunication and Information Society Day	Workshop	17-05-2019	17-05-2019	IIT Bhubaneswar	
6.	NATFOE, 2019	Symposium	31-05-2019	02-06-2019	IIT Bhubaneswar	
7.	XILINX ZYNQ SOC and PYNQ	Workshop	02-08-2019	03-08-2019	IIT Bhubaneswar	
8.	5G and beyond: Innovations, Opportunities, and Challenges	Seminar	03-12-2019	03-12-2019	IIT Bhubaneswar	Talk by Dr. Tushar Sharma, NXP Semiconductors
9.	Regarding Inauguration of IEEE Kolkata Section/Bhubaneswar Subsection Power Electronics Joint Section Chapter	Seminar	30-12-2019	30-12-2019	IIT Bhubaneswar	
10.	Workshop on DSP/ F28379D	Workshop	30-12-2019	30-12-2019	IIT Bhubaneswar	
11.	Hands-on Training on VLSI System Design for Energy Constrained AI Powered IoT Devices	Workshop	03-01-2020	10-01-2020	School of Electrical Sciences, IIT Bhubaneswar	Indian Institute of Technology Bhubaneswar and University of Minnesota jointly organize
12.	Workshop on Formal Methods for Safe and Secure Medical Devices	Workshop	10-01-2020	11-01-2020	IIT Bhubaneswar	Workshop related to our SPARC project

Sl. No.	Title	Organized	Dates		Place	Remarks
			From	To		
13.	2nd National Workshop on Recent Developments In Smart Grid Technologies (NWSGT-2020)	Workshop	23-01-2020	24-01-2020	IIT Bhubaneswar	
14.	DST, GoI and IEEE Sections Sponsored National Workshop on Recent Developments in Smart-Grid Technologies	Workshop	23-01-2020	24-01-2020	IIT Bhubaneswar	Second National Workshop on Smart Grids
15.	3rd Open Day & Grand Science and Technology Exhibition	Workshop	12-02-2020	12-02-2020	IIT Bhubaneswar	
16.	Rapid Control Prototyping - Power Conversion, Drives and Power Systems	Workshop	14-02-2020	14-02-2020	IIT Bhubaneswar	
17.	IEEE- IEEE PELS Bhubaneswar Chapter Workshop	Workshop	14-02-2020	14-02-2020	IIT Bhubaneswar	Rapid Control Prototyping Workshop
18.	Basics of VLSI Design	Seminar	24-02-2020	24-02-2020	Hyderabad	
19.	VLSI Design basics	Seminar	01-03-2020	01-03-2020	IIT Bhubaneswar	
School of Infrastructure						
20.	Two day National Symposium on Corrosion, its monitoring and protection (methods)	Symposium	12-04-2019	13-04-2019	School of Infrastructure, IIT Bhubaneswar	Jointly organized with SMMME
21.	One day Workshop on Whitetopping-A sustainable Option for Pavement Rehabilitation	Workshop	08-11-2019	08-11-2019	School of Infrastructure, IIT Bhubaneswar	Myself and Dr. U. C. Sahoo as Coordinators
22.	First Indian Symposium on Offshore Geotechnics (ISOG2019): An International Symposium	Symposium	05-12-2019	06-12-2019	IIT Bhubaneswar	Successfully conducted with more than 100 national and International delegates
23.	First Indian Symposium On Offshore Geotechnics (An International Symposium) ISOG2019	Conference	05-12-2019	07-12-2019	IIT Bhubaneswar	As Organising Committee Member

Sl. No.	Title	Organized	Dates		Place	Remarks
			From	To		
24.	First International Workshop on Future Application of Screw Piles (IWFASP 2019)	Workshop	07-12-2019	07-12-2019	IIT Bhubaneswar	Successfully conducted as part of SPARC program with National and International delegates
25.	Climate Change Impacts on Hydro-meteorological extremes: Research Gaps and Challenges	Workshop	13-12-2019	13-12-2019	School of Infrastructure, IIT Bhubaneswar	
26.	From Knowledge to Action: A Vision for Resilient Rural India	Workshop	07-01-2020	10-01-2020	School of Infrastructure, IIT Bhubaneswar	
School of Minerals, Metallurgical and Materials Engineering						
27.	National Symposium on Corrosion, its monitoring and protection (methods)	Symposium	2019-04-12	2019-04-13	Bhubaneswar	
School of Mechanical Sciences						
28.	Ph.D. Scholars review meeting	Workshop	02-08-2019	03-08-2019	Vignan University, Guntur	
29.	From young innovators to Entrepreneurs	Workshop	20-11-2019	21-11-2019	IIT Bhubaneswar	An Odisha Govt event, in collaboration ith CEP, IITBBS
30.	Data Driven Approaches in Mechanical Sciences	Workshop	06-12-2019	10-12-2019	IIT Bhubaneswar	
31.	Advanced Computational Methods for Fracture/Failure of Materials	Workshop	06-12-2019	07-12-2019	IIT Bhubaneswar	Completed
32.	Advanced Computational Methods for Fracture/Failure of Materials	Workshop	06-12-2019	07-12-2019	School of Mechanical Sciences, IIT Bhubaneswar	Other Organisers: Dr. A. K. Pradhan & Dr. Pattabhi B. Ramaiah
33.	64th Congress of the Indian Society of Theoretical and Applied Mechanics	Conference	09-12-2019	12-12-2019	IIT Bhubaneswar	Organising member
34.	64th Congress of the Indian Society of Theoretical and Applied Mechanics (An International Conference)	Conference	09-12-2019	12-12-2019	IIT Bhubaneswar	Organizing Member
35.	ISTAM 2019	Conference	09-12-2019	12-12-2019	IIT Bhubaneswar	International Conference

Sl. No.	Title	Organized	Dates		Place	Remarks
			From	To		
36.	Indian Society Of Theoretical and Applied Mechanics (ISTAM). 65th ISTAM conference	Conference	09-12-2019	12-12-2019	IIT Bhubaneswar	
37.	The 64th Congress of the Indian Society Of Theoretical and Applied Mechanics (ISTAM), An International Meet	Conference	09-12-2019	12-12-2019	IIT Bhubaneswar	Other Organisers: Dr. A. K. Pradhan & Dr. T.V.S. Sekhar
38.	FDP on Industry 4.0 and Robotics	Workshop	17-02-2020	20-02-2020	GITA EC, Bhubaneswar	
39.	Advanced computational methods for fracture (accepted mini-symposium)	Symposium	14-06-2019	18-06-2019	Atlanta, USA	As part of ICF15, mini-symposium accepted

GIAN Programmes Organized

Sl. No.	Course Name	Dates		Course Coordinator	Foreign Faculty
		From	To		
1.	BioMEMS and Micro/Nanosystems	11/05/2019	16/05/2019	Dr. Ankur Gupta	Prof. Ravi F. Saraf, University of Nebraska/ Lincoln, USA
2.	Physics and Biology inspired optimization, machine learning, data mining techniques and their applications in big/data, medical, science and engineering disciplines.	13/05/2019	22/05/2019	Dr. Kisor Sahu	Prof. Zohar Nussinov, Washington University, USA

Institute Seminars

Sl. No.	Title of the Talk	Speaker	Date
1.	Some Thoughts on the Present and Future of Higher Technical Education in India	Prof. Avijit Gangopadhyay, Professor at the School of Marine Science & Technology at UMass Dartmouth.	06/08/2019
2.	Global Trend in Towers and Opportunities	Shri. Rajah Venkatraman, Director, Fortune Consultants Ltd.	06/08/2019
3.	Rights of Transgender	Dr. Manabi Bandyopadhyay, First Transgender (TG) Transwoman Principal in India.	23/08/2019
4.	Why Education of Bharatiya Sanskriti (Indian Culture) Essential	Prof. Shiva K. Ojha, Author, Former Professor, IIT Bombay.	30/08/2019
5.	Inspired Living, Life Skills	Shri Vivek Atray, Author, Motivational Speaker, ex/ Indian Administrative Service (IAS) officer.	16/09/2019
6.	A Re/look into Gravitation and Inertia and the Emerging Picture of the Universe	Prof. Amitabha Ghosh, Former Director, IIT Kharagpur	22/10/2019
7.	CD Fluidics for Extreme Point of Care	Prof. Marc Madou, University of Caliornia.	11/11/2019
8.	Photonics for 6G Communications	Dr. Ranjan Singh, NTU, Singapore	06/01/2020
School of Electrical Sciences			
9.	Research on Spectrum Sharing at NIST	Dr. Anirudha Sahoo Computer Scientist in the Wireless Networks Division of National Institute of Standards and Technology (NIST), USA	7/8/2019
10.	Cogniculture: Collaborative AI in Social Machines	Dr. Gyana. R. Parija, Principal Investigator, Collaborative AI Member, IBM Academy of Technology IBM Research / India	
11.	3D Radar and 3D Lidar with emphasis on tracking vehicles	Dr. Mahendra Mandava, Sr. Technical Architect with Mavenir Systems, Inc. in Richardson, Texas	26/8/2019
12.	New Technologies, Bitcoin, Blockchain and Their Impact	Prof. N. Viswanadham INSA Senior Scientist; Computer Science and Automation, Indian Institute of Science; Bangalore	16/9/2019
13.	Introducing The Mohamed Bin Zayed University Of Artificial Intelligence, Abu Dhabi, UAE	Dr. Dwarikanath Mahapatra, Senior Research Scientist at Inception Institute of Artificial Intelligence (IIAI)	12/10/2019
14.	5G and Beyond: Innovations, Opportunities and Challenges	Dr. Tushar Sharma, Post/doctoral research associate at Princeton University, NJ, USA.	3/12/2019
15.	Data and I: How data is going to shape our health, food, and environment?	Prof. Binay Panda, Director, Ganit Labs Foundation	16/12/2019
16.	5G and Beyond/ opportunities and challenges in RF power amplifiers	Dr. Tushar Sharma, NXP Semiconductors, Colorado, USA	03/12/2019
School of Mechanical Sciences			
17.	The Bicycle: A Technological Marvel and Great Social Reformer	Prof. Amitabha Ghosh, Former Director, IIT Kharagpur	21/10/2019
18.	The Birth of Mechanical Engineering and the Future Trends	Prof. Amitabha Ghosh, Former Director, IIT Kharagpur	21/10/2019

Faculty Awards / Honours / Distinction / Fellowships / Industry Internships / Scholarships / Memberships

Sl. No.	Faculty Name	Details of the Awards / Honours / Fellowship	Remarks
School of Basic Sciences			
1.	Dr. Vasudeva Rao Allu	Member of the National Academy of Sciences, India (NASI) Allahabad	
2.	Dr. Vasudeva Rao Allu	Teaching Excellence Award/2020, IIT Bhubaneswar	
3.	Dr. Vasudeva Rao Allu	Member of the Editorial Board, The Bulletin of Mathematical Analysis and Applications	
4.	Dr. Ashis Biswas	Member of the Board of Studies, Dept. of Biotechnology, Haldia Institute of Technology, Haldia, West Bengal.	
School of Earth, Ocean and Climate Sciences			
5.	Dr. Syed Hilal Farooq	World Geothermal Congress Fellowship	Awarded UNESCO Grant to attend World Geothermal Congress to be held in Iceland. Program canceled due to CoVID/19
6.	Dr. Raj Kumar Singh	Received an invitation to participate as Shipboard scientist in the International Ocean Discovery Program expedition 383	Funding is provided by IODP/India (NCPOR, Goa, MoES) and IODP
7.	Dr Sourav Sil	Best presentation award	National Conference on "Challenges in Earth System Sciences for Global Sustainability (CESSGS)" 15th to16th January, 2020, IIT Kharagpur
8.	Dr. Sandeep Pattnaik	Indian Meteorological Society (IMS) Associate Fellowship	
School of Electrical Sciences			
9.	Dr. Sankarsan Mohapatro	Odisha Young Scientists Award in the category of Engineering & Technology for the year 2018	
10.	Dr. Sankarsan Mohapatro	IIT Bhubaneswar Commendable Teaching Proficiency Award	
11.	Dr. Debapratim Ghosh	IIT Bhubaneswar Commendable Teaching Performance Award	
12.	Dr. Chandrashekhar Narayan Bhende	DUO/India ASEM Fellowship 2020	
13.	Dr. Subhransu Ranjan Samantaray	PACE Fellowship, National Renewable Energy Lab (NREL), USA/ 2019	Visited NREL, USA under this fellowship during summer 2019
14.	Dr. Olive Ray	PACE Fellowship from NREL to visit HNEI.	June 2019
15.	Dr. Srinivas Boppu	Research Ambassador, DAAD	
16.	Dr. Srinivas Pinisetty	2020 DUO/India Professor Fellowship Award	Award amount 3000 Euro for visiting University of Grenoble, France) Other collaborator Prof. Ylies Falcone from University of Grenoble, France also received the award that he can use for visiting our institute for one month.
17.	Dr. M. S. Manikandan	2019 CVET Most Cited Article Award	2019 CVET Most Cited Article Award jointly awarded by the Biomedical Engineering Society and Springer Nature and presented at the 2019 BMES Conference in Philadelphia, PA, October 16, 2019.

Sl. No.	Faculty Name	Details of the Awards / Honours / Fellowship	Remarks
18.	Dr. Anoop Thomas	Teaching Excellence Award for the year 2019 in large sized class category	Award conferred by Indian Institute of Technology Bhubaneswar
19.	Dr. Padmalochan Bera	MOE Travel Grant for attending IEEE Cyber Science 2020 in Oxford University, UK during June 2/10, 2019	Present Research Paper
20.	Dr. Chandrasekhar Perumalla	Rosalind Member of London Journals Press (UK), 2020	
21.	Dr. Chandrasekhar Perumalla	Delivered IEEE Talk at National Institute of Technology, Tiruchirappalli	
22.	Dr. Chandrasekhar Perumalla	Track chair POWERCON - 2020	
23.	Dr. Chandrasekhar Perumalla	Member, Technical Program Committee, IEEE/iSSSC 2020	
24.	Dr. Chandrasekhar Perumalla	Life Member, National Environmental Science Academy (NESA)	
School of Infrastructure			
25.	Dr. Mayank Mishra	2020 DUO/India Professor Fellowship Award to carry out research work at Universitat Politecnica de Catalunya Barcelona Spain December 2020	
26.	Dr. Manaswini Behera	IconSWM excellence award	Aryama, a research scholar working under supervision of Dr. M. Behera got IconSWM excellence award for her work presented at the 9th international conference on sustainable waste management towards circular economy (IconSWM/CE/19) at Bhubaneswar, during 27th to 30th November 2019.
School of Minerals, Metallurgical and Materials Engineering			
27.	Dr. Kodanda Ram Mangipudi	Best presentation award for our paper presented by Mr. Rahul Kumar (PhD student) at XVIII Mineral Processing Technology Conference	
School of Mechanical Sciences			
28.	Dr. Gaurav Bartarya	Chaired a technical session in 11th International Conference on Conference on Precision, Meso, Micro and Nano Engineering (COPEN11),	On 14th December, 2019, IIT Indore.
29.	Dr. Suvradip Mullick	Chaired a technical session in International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), at IIT Indore on 13 December, 2019.	
30.	Dr. V. Pandu Ranga	Indian society of systems for science and engineering	Member of ISSSE
31.	Dr. Venugopal Arumuru	Indian National Academy of Engineering (INAE) Young Engineer Award	The award consists of cash prize of One lakh and a citation
32.	Dr. M.K.Das	Research article “Pool Boiling Crisis on Porous Coated Surface: An Experimental Study and Model Development' has been awarded with "Prof. V.M.K. Sastri Best Paper Award" at the 25th National and 3rd International ISHMT/ASTFE Heat and Mass Transfer Conference (IHMTC 2019)	IIT Roorkee, 28th to 31st December, 2019

Awards and Achievements of Students'

1. Mr.Tapajyoti Chakraborty, PhD student from SEOCS attended the 2nd ICTP Summer school on "Theory Mechanism and hierarchical modeling of climate Dynamics" to held between 1st July to 12th July 2019 at Trieste, Italy.
2. Ms. Sushree Sova, PhD student from SEOCS had her abstract titled – "Relationship of Metal Distribution with Salinity Gradient in Brackish Water Lagoon" accepted at the Goldschmidt Conference 2019 in Barcelona, Spain for an oral presentation. Goldschmidt/2019 between 18th August to 23rd August 2019 and is widely regarded as the foremost international conference on geochemistry and allied subjects.
3. Mr. Pintu Prusty, PhD student from SEOCS had his abstract titled – "Saltwater Intrusion Vulnerability of a Coastal Aquifer along the Bay of Bengal, India" accepted at the Goldschmidt Conference 2019 in Barcelona, Spain for an oral presentation.
4. Mr. Nishant Vats, PhD student from SEOCS attended the 13th International Conference on Paleoceanography for presenting a poster presentation titled "Paleoceanographic changes at East China sea over the last 400 Kyrs" held at University of New South Wales (UNSW), Sydney, Australia between 2nd and 6th September 2019.
5. Mr. Ankit Sharma from M.Tech Climate Sciences is interning at the Leibniz University, Hannover, Germany through the competitive DAAD KOSPIE fellowship during the period 01.09.2019 to 31.03.2020.
6. Mr. Partho Gogoi, PhD student with Dr. Vinoj, Assistant Professor, SEOCS was lead author on a report in the journal Scientific Reports which received widespread press coverage
7. Abhishek Pasula, M. Tech. Climate Science and Technology has been recommended for the prestigious Prime Minister Research Fellowship for PhD in the field of Interdisciplinary Science and Engineering.
8. Gourav Saha, M. Sc. Atmospheric and Ocean Sciences (2nd Year), was selected for the prestigious TIGP – International Internship Program at Academia Sinica, Taipei, Taiwan. He visited Academia Sinica between May 1st and June 30th where he worked on orographic and oceanic controls on rainfall events in Taiwan.
9. Rahul Kumar received NRDC budding innovative Award in April 2019
10. Shrohan Mahapatra (President gold medalist) got PhD admission in the University of Massachusetts, USA, August, 2019.
11. Ankita Samui received IEI Young Engineer Award 2019
12. Mr Vivekananda Hazra: Best presentation Award: National Conference on "Challenges in Earth System Sciences for Global Sustainability (CESSGS)" 15th to16th January, 2020, IIT Kharagpur.

Distinguished Visitors

Sl. No.	Date	Name of the Event	Distinguished Visitor	Designation
1.	17th May, 2019	World Telecommunication and Information Society Day	Prof. S.L. Maskara	
2.	17th May, 2019	World Telecommunication and Information Society Day	Prof. T.S. Lamba	
3.	17th May, 2019	World Telecommunication and Information Society Day	Prof. B.K. Saraf	
4.	17th May, 2019	World Telecommunication and Information Society Day	Prof. Ganpati Panda	
5.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Prof. Indranil Manna	Vice President, INAE and former director, IIT Kanpur
6.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Dr. Sanak Mishra	President, INAE
7.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Prof. Ashok Jhunjhunwala	Professor, IIT Madras
8.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Dr. Manish Gupta	Co-founder and CEO, Videoken
9.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Shri. R.N. Nayak	Former Chairman and Managing Director, Powergrid Corporation of India
10.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Prof. Jayanta Mukhopadhyay	IIT Kharagpur
11.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Prof. S.A. Soman	IIT Bombay
12.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Prof. Rudra Pratap	Centre for Nano Science and Engineering (CeNSE), IISC, Bangalore
13.	31st May-1st June, 2019	13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE	Prof. M. Parida	Dept. of Civil Engineering, IIT Roorkee.
14.	21st June, 2019	5th International Yoga Day	Mr. Satya Ranjan Sahoo	MD of Utkalika and an Honorary Faculty at The Art of Living and a guest faculty at the Sri Sri University
15.	15th July, 2019	Inauguration of The Brahmaputra (BH-2) and Ganga Halls of Residence (GH-2), of IIT Bhubaneswar by Hon'ble Governor of Odisha	Prof. Ganeshi Lal	The Hon'ble Governor of Odisha

Sl. No.	Date	Name of the Event	Distinguished Visitor	Designation
16.	16th Aug, 2019	Seminar on Global Trend in Towers and Opportunities	Shri Rajah Venkatraman	Director, Fortune Consultants Ltd.
17.	21st Sept, 2019	8th Annual Convocation	Shri. K. Sivan	Chairman, ISRO
18.	22nd Oct, 2019	Institute Seminar on Re-look into Gravitation and Inertia and the Emerging Picture of the Universe	Prof. Amitabha Ghosh	Former Director, IIT Kharagpur
19.	23rd Oct, 2019	Seminar on New Rights of Transgenders by Ms. Manabi Bandyopadhyay	Dr. Manabi Bandyopadhyay	first Transgender (TG) Transwoman Principal in our India, Actor, honorable member of Sahitya academy
20.	31st Oct, 2019	Rashtriya Ekta Diwas 2019	Pt. Hariprasad Chaurasia	Padma Vibhushan and Renowned Flute Player
21.	31st Oct, 2019	Rashtriya Ekta Diwas 2019	Dr. Kiran Seth	Founder of Spicmacay
22.	31st Oct, 2019	Rashtriya Ekta Diwas 2019	Pt. Subhankar Banerjee	Renowned Tabla Player
23.	2nd Nov, 2019	Vigilance Awareness Week 2019	Shri. G.C. Pati	Former Chief Secretary, Govt. of Odisha
24.	2nd Nov, 2019	Vigilance Awareness Week 2019	Shri Sunil Mishra	State Chief Information Commissioner, Odisha
25.	2nd Nov, 2019	Vigilance Awareness Week 2019	General Basant Mahapatra	AVSM
26.	2nd Nov, 2019	Vigilance Awareness Week 2019	Shri Nirmai Charan Padhi IPS (Retd.)	Former Director General of Police
27.	26th Nov, 2019	Constitution Day	Hon'ble Justice Dr. D.P. Choudhury	Retd Judge Orissa High Court
28.	05th Dec, 2019	First International Symposium on Offshore Geotechnics – Isog2019	Prof. G. L. Sivakumar Babu	President, IGS
29.	05th Dec, 2019	First International Symposium on Offshore Geotechnics – Isog2019	Prof. Mark Randolph	On behalf of Chairman TC 209
30.	05th Dec, 2019	First International Symposium on Offshore Geotechnics – Isog2019	Ravindra. K. Ghanekar	IEOT, ONGC
31.	9th to 12th December, 2019	64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2019)	Prof. Guirong Liu	University of Cincinnati
32.	9th to 12th December, 2019	64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2019)	Prof. PVSN Murthy	Chairperson, ISTAM
33.	9th to 12th December, 2019	64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2019)	Mr. D. K. Maiti	Secretary, ISTAM

Sl. No.	Date	Name of the Event	Distinguished Visitor	Designation
34.	15th Dec, 2019	54th Inter-IIT sports meet Inauguration	Shri. Pratap Chandra Sarangi	Hon'ble Minister of State for Animal Husbandry, Dairying and Fisheries and Micro, Small and Medium Enterprises, Govt. of India
35.	15th Dec, 2019	54th Inter-IIT sports meet Inauguration	Ms. Dutee Chand	Indian professional sprinter
36.	21st Dec, 2019	Valedictory Function of 54th Inter IIT Sports Meet	Shri. Tusharkanti Behera	Hon'ble Minister of State (Independent Charge), E & IT, Sports & Youth Services, Govt. of Odisha
37.	21st Dec, 2019	Colloquium on functional and communicative Sanskrit in association with Holistic Science Research Center, Surat. Gujarat	Prof. Amba Kulkarni	Head, Department of Sanskrit Studies, University of Hyderabad
38.	21st Dec, 2019	Colloquium on functional and communicative Sanskrit in association with Holistic Science Research Center, Surat. Gujarat.	Prof. Siniruddha Dash	University of Hyderabad
39.	21st Dec, 2019	Colloquium on functional and communicative Sanskrit in association with Holistic Science Research Center, Surat. Gujarat.	Radhamadhav Dash	
40.	6th Jan, 2020	Photonics for 6G Communications	Dr. Ranjan Singh (NTU, Singapore)	Associate Professor at the School of Physical and Mathematical Sciences, Division of Physics and Applied Physics, Nanyang Technological University (NTU) Singapore
41.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Shri. Omkar Rai	DG, STPI
42.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Shri Manoj Kumar Mishra	IRTS, Secretary, E & IT Department, Govt. of Odisha
43.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Dr. Pradipta Biswas	IISc Bangalore
44.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Dr. Kaushal Kumar Bhagat	CET, IIT Kharagpur
45.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Prof. Rajesh M. Hedge	IIT Kanpur
46.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Dr. Shiva Ji	IIT Hyderabad
47.	10th Jan, 2020	Conclave and Hackathon on Virtual And Augmented Reality	Shri. Subroto Bagchi	Chairman, Odisha Skill Development Authority
48.	12th Jan, 2020	Valedictory Ceremony of AR/VR Conclave and Hackathon	Shri. Subroto Bagchi	Chairman, Odisha Skill Development Authority
49.	12th Jan, 2020	Valedictory Ceremony of AR/VR Conclave and Hackathon	Smt. Susmita Bagchi	Chairperson of the "#MoSchool Abhiyan Parichalana Sanghthan"

Sl. No.	Date	Name of the Event	Distinguished Visitor	Designation
50.	10th - 12th Jan, 2020	E-Summit 2020	Dr. Ramgopal Agarwala	Distinguished Member of Niti Aayog
51.	10th - 12th Jan, 2020	E-Summit 2020	Prof. D. D. Misra	Chairman of the Board of Governors of IIT (ISM) Dhanbad
52.	10th - 12th Jan, 2020	E-Summit 2020	Shri Arun Bothra, IPS	CEO, CESU, Bhubaneswar and Capital region urban transport
53.	10th - 12th Jan, 2020	E-Summit 2020	Ms. Kanika Tekriwal	CEO of JetSetGo
54.	10th - 12th Jan, 2020	E-Summit 2020	Mr. Sharad Vivek Sagar	CEO of Dexterity Social Entrepreneur
55.	10th - 12th Jan, 2020	E-Summit 2020	Mr. Kunal Chandiramani	CEO of K-Star
56.	10th - 12th Jan, 2020	E-Summit 2020	Mr. Anirudh Damani	Managing partner of Artha Ventures.
57.	17th Jan, 2020	Alma Fiesta'20	Dr. Kshiti Bhusan Das	Pro-Vice Chancellor, IGNOU, National Fellow (ICSSR)
58.	17th Jan, 2020	Alma Fiesta'20	DJ Tejas and Akasa Singh	DJ and Renowned Bollywood Singer
59.	23rd Jan, 2020	2nd National Workshop on Recent Developments in Smart-Grid Technologies (NWSGT-2020)	Dr Saurabh Garg	CMD, OPTCL, Principal Secretary, Govt of Odisha
60.	23rd Jan, 2020	2nd National Workshop on Recent Developments in Smart-Grid Technologies (NWSGT-2020)	Prof. S. C. Srivastava	IIT Kanpur
61.	27th Jan, 2020	Workshop on Rights of Working Women	Adv. Namrata Chadha	Social activist and a member of Internal Complaint Committee, IIT Bhubaneswar
62.	27th January, 2020	Workshop on Rights of Working Women	Adv. Chittaranjan Bairisal	Lawyer
63.	28 Jan-31st Jan, 2020	Wissenaire 20	Dr. Manas Kumar Mandal	Former Director General (Life Sciences), Defence Research and Development Organization (DRDO)
64.	12th Feb 2020	12th Foundation Day	Shri Biswa Bhusan Harichandan	Hon'ble Governor of Andhra Pradesh
65.	12th Feb 2020	12th Foundation Day	Mr. Subroto Bagchi	Chairman, Odisha Skill Development Authority and Co-founder Mind Tree
66.	15th Feb, 2020	Interactive Session on Drug Abuse	Dr. Sudhansu Sarangi, (IPS)	Commissioner of Police, Bhubaneswar-Cuttack
67.	20th Feb, 2020	Matribhasa Diwas	Shri.Bibhuti Pattanaik	Renowned Odia Novelist and Columnist
68.	8th March, 2020	International Women's Day Celebrated At IIT Bhubaneswar	Dr. Sanghamitra Pati	Director, ICMR-Regional Medical Research Centre, Bhubaneswar

Central Library

Central Library, a hub of learning resources, is one of the central facilities working with a mission to provide quality information resources in all forms to the academic and research community of IIT Bhubaneswar. The Central Library of IIT Bhubaneswar started functioning in a small room of 300 sq. ft. floor area with a mere collection of 2300 text books at IIT Kharagpur Campus in July 2009 and then moved to Toshali Bhawan, Satya Nagar in 1st April 2011 in a room with floor area of 2200 sq. ft. In 2016, the Library has extended its services to the Institute permanent campus at Argul, Khordha. The Central Library completely shifted to its permanent campus at Argul, Khordha in the year 2018. With a commitment to excel, the library plays a vital role starting from acquiring to disseminating all types of information resources by timely and innovative services to support the academic and research need of the user community. The range and quality of services offered by the Central Library are comparable to any modern libraries in India of International standards.

In a nut shell, currently it is having over 20000+ volumes of books, 52+ full-text as well as bibliographical databases, and other resources like popular magazines/print journals, theses & dissertations, and reports in Engineering, Science & Technology, Management, Humanities and Social Sciences. Apart from the procurement of print books, the Library achieved phenomenal progress in the subscription of e-resources which includes more than 9000 e-journals to its digital collection making "24 x 7 Library" in a real sense on the institute-wide network and off-campus access to e-resources through EzProxy.

Library Collection at a Glance

The Central Library is having a rich collection of print as well as electronic resources that supports the academic and research needs of IIT Bhubaneswar fraternity. The collection includes books, journals, databases, software tools, theses, magazines and newspapers. The library provides supports to more than 2300 users, which includes students, scholars, faculty members, and staff.

The total collection of the Library as on March 2020 stands as follows

Collection (Print & Electronic)	Quantity	Collection (Print & Electronic)	Quantity
Books	20000+	E-Book Databases	02
E-Books	30 Lakhs+	Patent Database	01
E-Journals	9000+	Standalone Databases	01
Print Journals and Magazines	38	Crystallographic Database	01
Daily Newspapers	10	Plagiarism Detection Tool	02
PhD Thesis	95	Reference Management Tool	01
Full-Text Databases	42	Writing Assistance Tool	01
Bibliographic Databases	05	Remote Access Tool	01

Library Services & Facilities

The services rendered by the central library are as follows:

- Library Membership and Borrowing Facilities
- Circulation Service (Issue, Return, Renewal, Reservation, E-mail Alerts)
- WebOPAC (Web version of Online Public Access Catalog)
- Reference Service
- Current Awareness Service (Newly Arrived Books)
- Document Delivery Service
- Research Support Service
- Remote Access Service
- Alert Service (Latest Research Publication of IITBBS through library website)
- Plagiarism check facility
- Writing Assistance using Grammarly tool
- Orientation Programmes
- Reading facility
- Hindi Collection (Rajbhasa Collection)
- Non-Book Materials
- Reserved Collection in reading area
- Special Collection for Scheduled Castes & Scheduled Tribes
- Display of Scholarship and fellowship information
- Author workshops for the Research Scholars and Faculty
- Display of forthcoming conferences, other events, employment opportunities, and prospectus of foreign universities
- Short term internship for different University Master's students (MLIS)

Print and Electronic Resources

The Central Library is having a rich collection of print resources such as books (20000+), theses (94), magazines and newspapers. The bibliographical information of these resources are accessible through the WebOPAC. The institute is also having a rich collection of electronic resources and is getting access to 52+ electronic databases through library subscription and e-SodhSindhu consortium. Electronic databases include full-text databases (e-journals), bibliographic databases, citation databases (Scopus and Web of Science), data sets, software tools, e-books etc. These resources are being subscribed and renewed annually in collaboration with eSS (e-ShodhSindhu: A nationwide initiative by the Ministry of Education for Higher Education e-Resources).

The e-resources subscribed by the Central Library are as follows:

Full-Text Database

1. AAAS (Science)
2. ACI Materials Journals
3 ACM Digital Library
4. American Chemical Society (ACS)
5. American Institute of Aeronautics and Astronautics (AIAA)
6. American Institute of Physics (AIP)
7. American Mathematical Society (AMS)
8. American Meteorological Society (AMS)
9. American Physical Society (APS)
10. American Society of Civil Engineers (ASCE)
11. American Society of Mechanical Engineers (ASME)
12. American Welding Society (AWS)
13. Annual Reviews
14. ASTM Standards & Digital Library
15. Begell House Engineering Collection
16. Cambridge Journals (5 Titles)
17. Cell Press Journals
18. ECS Digital library Online
19. Economic & Political Weekly New
20. Emerald CFTI Collection
21. Geo Science World
22. ICE Thomas Telford
23. IEEE Xplore Digital Library
24. IOP Science Extra
25. ISID
26. JSTOR
27. McGraw-Hill Access Engineering
28. Nature (14 Titles)
29. Optical Society of America (OSA)
30. Oxford University Press
31. Project Muse

32. Proquest Dissertation & Theses (PQDT)
33. Royal Society of Chemistry (RSC)
34. Sage (2 Titles)
35. Science Direct 7 Subject Collection
36. SIAM Online
37. South Asia Archive
38. Springer Journals
39. Taylor & Francis Online
40. Transportation Research Board
41. Wiley Online (68 Titles)

Bibliographical Database

1. SciFinder Scholar
2. MathSciNet
3. Scopus
4. Web of Science (Back files since 1965)

Patent Database

1. WIPS Global Advanced

E-Book Database

1. McGraw-Hill Access Engineering Library
2. World eBook Library

Standalone Database

1. Cambridge Structural Database System (Researcher License)

Crystallographic Database

1. Pearson's Crystal Database

Research Support Software Tools

1. Turnitin
2. Urkund
3. EndNote
4. Grammarly
5. EZproxy

Computing Infrastructure and Services

The Library has its own LAN and WiFi network, which is connected to the Campus LAN. Currently, it has more than 10 PCs dedicated for the user to access electronic resources (e-journals, e-databses, etc), and Blade Server with four blades that hosts Koha ILS, DSpace digital repository, ezproxy remote access web application and RFID middleware application. The computing or IT infrastructure of the Central Library is given below.

Sl. No.	Name of the Library IT Infrastructure	Software/Platform
1.	Library Automation	Koha ILS Software
2.	Institutional Digital Repository (IDR)	DSpace Digital Library Software
3.	Library Website	Inhouse developed CMS
4.	Remote Access	EzProxy
5.	Plagiarism Detection Tool	Turnitin, Urkund
6.	Reference Management Tool	EndNote
7.	Writing Assistance Tool	Grammarly
8.	Relational Database Management System	MySQL, MariaDB, PostgreSQL
9.	Research Information Management	IRINS

Library Website

The Central Library has a comprehensive Home Page as a part of the Institute's website. The Library Home page serves as an integrated interface for all reseources and services available from the Central Library. The library website is regularly updated by the library team. It is available at http://library.iitbbs.ac.in/ and offers the following web-based services:

- Newly Arrived Books displayed at Home Page (Physically Displayed at the Library)

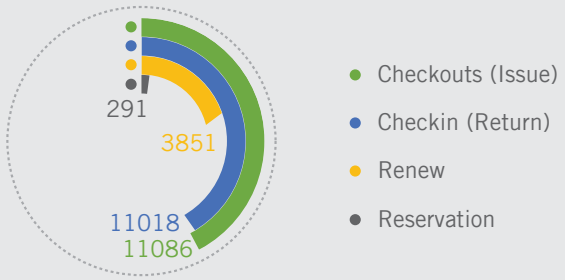
- Latest Faculty Research Publications displayed at Home Page indexed by Scopus
- Electronic Resources subscribed (https://library.iitbbs.ac.in/online-e-resources.php)
- Access to A-Z List of Journals subscribed IIT Bhubaneswar
- Access to the database of Theses submitted by the Scholars of IIT Bhubaneswar
- WebOPAC Search interface at Home page
- Web Access to list of Print Journals and Magazines
- Remote Access to all e-Resources through EzProxy (https://ezproxy.iitbbs.ac.in/login)
- Access to Institutional Digital Repository (http://idr.iitbbs.ac.in/jspui/)

Library Automation

Central Library has been automated all its housekeeping operations using an open-source integrated library management system software "Koha". The software is being maintained regularly and upgraded yearly to the latest stable version by the library team without any third-party support. It supports a web version of the online public access catalog (WebOPAC) through which a user can search books, check issued books, renew and reserve books. Further, it automatically sends transaction alerts to users and also sent overdue notices as well as reminders. The WebOPAC is available at: http://koha.iitbbs.ac.in. The transaction statistics of the library is given below (Source: Koha).

Library Transaction Statistics (From 1st April 2019 to 31st March 2020)

Transaction Type	Total Counts
Checkouts (Issue)	11086
Checkins (Return)	11018
Renew	3851
Reservation	291
Total	26246



Institutional Digital Repository (IDR)

Central Library has also developed an Institutional Digital Repository (IDR) using an open-source digital library software "DSpace" in accordance with the National Digital Library (NDL), IIT Kharagpur mandate. Currently, it archived faculty research publications (metadata only) and annual reports of IIT Bhubaneswar. The repository is being maintained regularly and upgraded to the latest stable version by the library team without any third-party support. The IDR is available at: http://idr.iitbbs.ac.in/jspui

Out-reach Programmes of the Central Library

Central Library organized book exhibitions on various auspicious occasions like Hindi Diwas, Gandhi Jayanti, National Unity Day (Birth anniversary of Sardar Vallabhbhai Patel). Students and faculty members visited the exhibition on the respective occasions. On the occasion of Hindi Diwas, the library displayed all the rajabhasa books to its users for two weeks.

National Unity Day (Birth anniversary of Sardar Vallabhbhai Patel).

Author Workshop

Central Library in collaboration with IOP Publishing Academy organized an Author workshop on "Publishing Papers in Academic Journals" on 6 September 2019 at Central Library, 4th floor, Administrative Building, IIT Bhubaneswar, Argul, Khordha. There were more than 100 participants including faculty members, students, research scholars and staff attended the workshop.

The workshop started with a welcome address given by Dr. Bibhuti Bhusan Sahoo, Deputy Librarian, IIT Bhubaneswar. The workshop was inaugurated and declared open by the Chairman of the Central Library, Dr. Rajesh Roshan Dash in presence of students, faculty members and other dignitaries from the Institute and IOP Publishing Academy. Dr. Dash in his inaugural address highlighted the impact of the Author workshop on researchers of academia. The introduction about the speaker of the event from UK was given by Mr. Prabhu Desikan, Regional Director India and South Asia IOP Publishing. The key resource persons of the workshop were Dr. Antigoni Messaritaki and Dr. Jennifer Sanders from IOP Publishing, UK. Interestingly, both have been directly involved in the editorial and peer-review process of IOP Publishing journals. They have elaborated on how to write a paper, the structure of a paper, the peer-review process involved in a journal, ethics in publishing a paper in a journal, etc. They had also given a task to all the participants and finally narrated the top 10 tricks on how to write a paper. The workshop ended with a vote of thanks by Mr. Sambhunath Sahoo, Assistant Librarian, IIT Bhubaneswar.

Computer and Information Technology Services Cell (CITSC)

The Computer and Information Technology Cell (CITSC) of IIT Bhubaneswar has state of art servers, connected on a high-speed Gigabit Optical Fiber /UTP based network in a distributed environment. CITSC has implemented solution for conducting online classes. Using this solution classes has been conducted Online successfully at IIT Bhubaneswar during the COVID-19 pandemic. CITSC has implemented solution in-house to hold conventional examination Online with invigilation in virtual examination halls and using this solution End-semester examinations has been conducted Online successfully at IIT Bhubaneswar. All the Audio-Visual facilities of classrooms are implemented and maintained by the in-house team of CITSC. All the laboratories, faculty offices and staff offices are provided with desktop/ laptop, printer, and telephone as well as with wired and wireless internet/intranet connectivity. All the faculty members and students have access to the Institute developed ERP system. The ERP system is being used for students grading, feedback & administrative applications including inventory management, Academics, accounts, and admissions as well as for placement related applications.The campus network is protected with state of the art antiviruses and next-generation UTM. All the members of IIT Bhubaneswar campus including students, faculty, staffs and officers are provided with e-mail ID a user-friendly e-mail system to access mails, both from inside and outside of the campus.

The Institute is connected with high-speed Gigabit Connectivity under NKN. Besides this the institute is also having 200 Mbps Vodafone ILL. The Institute is having its own telephone exchange which can cater up to 10,000 users. The Institute is also having a number of hot-spot Wi-Fi points which is being used by the IIT Bhubaneswar users for wireless connectivity as well as an E-class room that allow users to access different academic video content. CITSC team has provided Wi-Fi based internet access in the playgrounds during the 54th inter IIT Sports Meet at IIT Bhubaneswar. CITSC also provides video conferencing facilities to the Institute users by means of desktop video conferencing as well based on hardware video conferencing. All the ICT needs of the institute is being planned and executed by the in-house team of IIT Bhubaneswar. CITSC team provides round the year network and hardware supports to all the members of the Institute. Our team encourage use of free and open-source software among the campus inmates. Our team also provides supports to a number of advanced and special-purpose software's such as Ansys, Matlab, Mathematica, etc.

Career Development Cell (CDC)

The Career Development Cell (CDC) offers a wide range of portfolio which include empowering students to explore, define, and realize their career goals. The CDC also engages in one-on-one counselling sessions, consultations throughout the career planning process, and assistance with goal-setting and goal achievement through a variety of career exploration activities. The ultimate aim is to provide lifetime tools and skills for professional development, job search success, and career satisfaction, supporting the students in shaping and managing their careers by building key ingredients required for a student to be a complete professional.

Campus placements of 2019-20 threw open new challenges in the outbreak of Covid-19 pandemic in terms of safeguarding placement & internship offers made by various recruiters across the globe..

Key Highlights of Campus Placements 2020

- Total 145 students from UG received offers.
- Undergraduate placement is about 85% and placements would continue till September 2020 due to the outbreak of pandemic.
- The highest domestic CTC offered was 43.3 Lakhs per annum.
- M.Tech placements are close to 65%. Placements would continue till September 2020 due to the outbreak of pandemic.
- The highest number of job offers have been received from core industries.
- The average salary is 15.8 Lakh per Annum for UG. A sharp increase of 25% overm the last year.
- PSU's like HPCL, IOCL, Oil India Limited and NCCBM participated in the campus placements.
- MNC companies like Goldman Sachs, GE India, Honeywell, Maruti Suzuki, Mahindra & Mahindra, Infosys, TCS R & D, and Adobe have participated in this year of placements.
- 3rd year students have received internship offers in reputed industries. Majority of CS branch engaged in Internships has the possibility of a full-time offer.

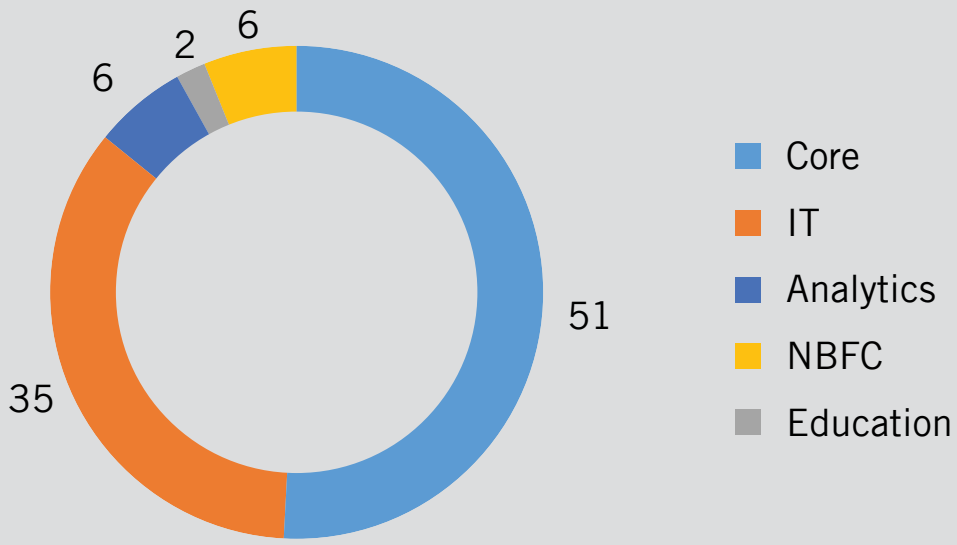
Companies:

Goldman Sachs, IndianOil, wipro, ISRO, NCB, GE, Microsoft, JSL Jindal Stainless, Deloitte, Capgemini, Mahindra, vedanta, Maruti Suzuki Way of Life!, Honeywell, TESCO Every little helps, amazon, MAQ Software, Adobe, Larsen & Toubro It's all about Imagineering, Tata Steel, Tata Steel BSL, Tata Consultancy Services, UnitedHealth Group

Course / Stream wise distribution of Placement: 2019-20

Branch (B. Tech)	No. of students Participated	No. of students Placed
Civil	26	16
Computer Science	36	33
Electrical	30	30
Electronics & Communication Engineering	39	38
Mechanical	26	20
MMME	14	8

Sector wise Placement Analysis



Campus Placement Drive

Companies Recruits in the Academic Year 2019-20

Name of the Company			No. of students placed	Minimum salary Offered	Maximum salary offered	Average salary offered	Median salary offered
Adobe	American Express	Accenture	145	5.0 (LPA)	43.3 (LPA)	15.8 (LPA)	15 (LPA)
Affine Analytics	Angel Broking	Atkins					
Amazon	HPCL	BYJU's					
Capgemini	Caterpillar	Dolcera					
Sigmoid Analytics	Tiger Analytics	Wipro					
HSBC Technologies	Delta Power	FIITJEE					
Flinto Solutions	Oracle	Futures First					
Flytxt Mobile Solutions	General Electric India	Goldman Sachs					
Thorton Tomasetti	HCL	Honeywell					
Infosys	1 mg Solutions	Reliance Jio					
IOCL	Jindal Stainless Ltd	KEC International					
Ittiam Systems	L & T Construction	L & T Ltd.					
Maq Software	Mastercard	MathWorks					
Microsoft	NCCBM	P2 Power Solutions					
PNB Metlife	Raam Group	TRAI					
REConnect Energy	Moneytap	Tatat Steel					
Harman International	Analog Devices	TCS R&I					
TESCO	TETCOS	Thermax					
UHG	Vedanta	Wolfram					
ZoloStays	Hatch	Cognizant					
Lowe's India	Maruti Suzuki	Mahendra & Mahendra					
Sasken Technologies Ltd	CTS Research	TCS Digital					
Tescra Software Services	Nexright Software Solutions	Manikaran Power Infrastructure					
Toshiba Mitsubishi Engineering Co. LPA							

E-CELL

E-SUMMIT 2020

The sixth edition of E-Summit a flagship event of the Entrepreneurship Cell, IIT Bhubaneswar was organized during January 10-12, 2020 with the theme "Shifting Paradigms: Pursuing Purpose Beyond Profit". The event was inaugurated by The Director IIT Bhubaneswar Prof. R.V.Rajakumar and the Chief Guest Dr. Ramgopal Agarwala, distinguished Member of Niti Aayog, in the august presence of Prof. D. D. Misra, Chairman of the Board of Governors of IIT (ISM) Dhanbad.

This winters, E-Summit had seen a 100% growth from its previous edition with a participation of 1200+ students from various institutes, 4000+ virtual participation through Entrepreneurial Ideation which was conducted as a pre-fest competition, 50+ startups for Investors drive & Startup Internship Fair. This edition witnessed 8 talk sessions during the three days in the form of panel discussions, keynote addresses and guest talks by prominent entrepreneurs, industry experts and eminent mentors. The likes of Mr. Sharad Vivek Sagar (CEO of Dexterity, Global Youth Icon), Ms Neha Upadhyay (founder of Guna, social entrepreneur), Mr. Vijay Pratap Singh (president & CEO of Ekgaon) and Mr. Nivesh Raj (Co-founder of The Leadership 30) discussed their contributions to the society through entrepreneurial endeavours and their social impacts. Health Entrepreneurship Conclave witnessed a keynote address by Mr. Pradeep K Jasingh (Founder/Chairman of Health-start) followed by a panel discussion by Mr. Jaisingh, Dr. Sarthak Patnaik (Founder & MD of Lyflink) and Mr. G. Vishwanand (Founder & Ceo of Infocusrx). Also, a total of 7 workshops were conducted on various skills required by entrepreneurs and enthusiasts. Various competitions were organized during these three days to enhance the spirit of entrepreneurship, leadership, patience, creativity and confidence among the participants. The enriching and motivating days of E-Summit'20 came to an end with thunderous stand-up comedy shows by Nishant Suri and Raunaq Rajani respectively.

Start-Up Centre

The Start-up Centre at IIT Bhubaneswar was inaugurated by Prof. R. V. Raja Kumar, Director, IIT Bhubaneswar on 20th June 2016. This facility is available to all budding entrepreneurs of the region. The Institute has earmarked more than 50,000 sq. ft. area for the Start-up centre. So far, fourteen Startups have received incubation at the Start-up Centre and at present 3 Start-ups are incubated in the Start-up centre.

Facilities for the Start-Ups

- Furnished/Semi-furnished/Unfurnished space as per the requirement of the entity
- Library facility, Laboratory and workshop facilities
- Networking
- Mentoring support by faculty members
- Availability of IIT students for internship
- Interactive workshops with Angel Investors and venture capitalists
- Workshop on different issues of Entrepreneurship
- Entrepreneur skill development
- Guidance and support for filing patents
- Fooding and lodging facility available in nearby Atmaram Hotel

IIT Bhubaneswar Research and Entrepreneurship Park

There are numerous colleges and universities offering courses on engineering, science, and agriculture in and around Bhubaneswar. The available rich pool of talent needs to be guided for innovation, research, and the entrepreneurship activities. Professor R. V. Raja Kumar, Director, IIT Bhubaneswar reiterated to promote entrepreneurship and innovation not only in this state but also in the surrounding states.

IIT Bhubaneswar received license and incorporation certificate from Registrar of Companies (RoC) to run IIT Bhubaneswar Research and Entrepreneurship Park, a section-8 (not for profit) company. This company operates from the Samantapuri campus of IIT Bhubaneswar, at the heart of the capital city Bhubaneswar and promotes entrepreneurship, research, and startup activities. The section-8 company has also been successfully registered under section 12AA of the Income Tax Act, 1961 so that it can receive grants under various government schemes promoting entrepreneurship, research, and startup activities. Eventually the park will operate from the permanent campus of the Institute. To shape student's innovation and promote their entrepreneurship interests, IIT Bhubaneswar Research and Entrepreneurship Park will act as a nodal centre.

IIT Bhubaneswar Research and Entrepreneurship Park operates under the chairmanship of Prof. R. V. Rajakumar, Director, IIT Bhubaneswar. He is assisted by Prof. R. K. Panda, Dean R&D IIT Bhubaneswar, and Dr. Yogesh Bhumkar, PIC Startup Centre IIT Bhubaneswar, as two other directors of the company.

The Research and Entrepreneurship Park has already received funds for establishing the Centre of Excellence on Virtual and Augmented Reality (VARCoE) as given below:

I.	Ms Susmita Bagchi	₹2.50 crores
II.	Govt. of Odisha	₹2.50 crores
III.	STPI	₹2.50 crores

Institute has around 36000 Sq. Ft. of area dedicated for the incubation activities in the Institute premises at Samantapuri, Bhubaneswar. In addition, School of Mechanical Sciences and School of Electrical Sciences have provided a space of around 400 sq.ft. Each for VAROCE laboratories in the Argul campus. Apart from these facilities, workshop facilities and different laboratories in the various Schools are used for carrying out research work associated with VARCoE. All the workspaces are well equipped with internet connectivity. At present, there are around 10 faculty members from various Schools who are actively involved in carrying out VARCoE projects.

One of the major activity at VARCoE will be to provide support to the incubates and start-ups in the area of virtual and augmented reality. This centre will act as a feeder for the Start-up centre of STPI, Bhubaneswar. The STP registered units across the country working on AR/VR will get preferential access in AR/VR Lab on concessional rate. All admission in to Centre of Excellence for Virtual and Augmented Reality for Immersive Visualization (VARCoE) will be through a defined process of IIT under the guidance/consent of Project Advisory Committee (PAC). However, the STP registered units across the country working on AR/VR will get preferential access as recommended by STPI.

Rajbhasa Ekak

In pursuance of the Official Language Policy of the Government of India, Rajbhasha Ekak of the Institute is promoting the progressive use of Hindi in IIT Bhubaneswar. Presently the Cell has one sanctioned post of Junior Hindi Translator, which is lying vacant. The institute is wholly tried to follow the rules and regulations of the Govt. of India related to Official Languages Hindi by deputing other staffs and officers of the institute. Some of the highlights of Rajbhasha activities are as follows:

On-Going Activities

Translation of Institute Annual Report, Annual Accounts, Audit Report and various other documents which comes under Section 3(3) of Official Language Act, 1963. In addition, various other letters and correspondence, replies etc. are either translated or prepared in Hindi. The Rajbhasha Ekak also try to ensure the effective implementation of Official Language policy of Govt. of India at Institute. The Ekak ensures the bilingual display and use of different nameplates, notice boards, rubber stamps, routine type forms and also help in preparing bilingual Degrees certificate awarded by the Institute during Convocation. The Ekak involved the students and motivated them to use official language and organise official language program during different institute function with the help of Hindi literary society "Abhivyakti" under student gymkhana.

Hindi Training and Workshop

Time to time, Rajbhasha Ekak impart Hindi training to all Institute employees who have no working knowledge in Hindi. To solve the problem faced by the employees in using official language, the Rajbhasha Ekak organised workshops/training for the employees of the institute and member office of TOLIC Bhubaneswar (C). In the reporting year, the following workshops were organised:

On 13th September 2019 a Hindi Workshop on "Use of online Hindi dictionary (online Shabd Kosh ka prayog)" was organised for the employees. Dr. Raj K. Singh, PIC Rajbhasha Ekak trained the employees, how to use available online Hindi to English or English to Hindi dictionary

Hindi Pakhwada Ceremony

During 01-14 September 2019 Rajbhasha Ekak and Hindi literary Society of students Gymkhana 'Abhivyakti' organised "Hindi Pakhwada" in the institute. Several Programmes and competitions in Hindi were organised for employees and students of our institute and as well as for students of neighbouring institutes during the 14 days long Hindi Pakhwada. Various neighbouring colleges and institutes have participated in these programs. The popular programs for our institute students were Hindi creative writing "Rachnatamak Lekhan" and extempore competition "Bas ye Pal." The inter institute program included Debate competition "Vaad-Vivaad" on various contemporary issues. The main attraction of the Pakhwadas was self-composed Hindi poetry recitation competition "Awaz Dil Ki". Twelve teams have participated in the" Vaad – Vivad" competition and more than 20 in "Awaz Dil Ki". For the employees of the institute Hindi extempore (Aashubhasan), Hindi essay writing (Nibandh Lekhan) and Hindi workshop on "online Hindi dictionary" were organised during the Pakhwada. On 14th September 2019, Hindi Diwas was celebrated in the institute. Hon'ble Director Prof. R.V.Rajakumar graced the occasion and distributed mementoes and certificates to the winners of the various competitions. In his speech, he praised the winners of various competitions and said that institute is committed to implement Rajbhasha Policies of the Govt. of India.

Col (Dr.) Subodh Kumar was also present and highlighted institute efforts in implementing the Rajbhasa policies of the Government. PIC Rajbhasha Ekak read the message of Hon'ble Home Minister Shri Amit Shah Ji on this occasion.


पखवाडा
तम्बर 2019
BANESWAR


खवाडा
र 2019
ESWAR


हिन्दी पखवाडा
1-14 सितम्बर 2019

Bilingual Website

As per the Official Language policy, Govt. of India, Rajbhasha Ekak maintains bilingual updation in the institute's website. Rajbhasha Ekak and TOLIC links are active in our institute website, which contains various useful information related to effective use of Official Language Policy.

Committees

Official Language Implementation Committee

The institute has an Official Language Implementation Committee to look after the implementation of Official Language policies of Govt. of India and to review the progressive use of Hindi in Institute. Three quarterly meetings of the committee were held last year under the chairmanship of the Director of the Institute. In the meetings, discussions were made to accelerate the progressive use of Hindi in the institute. The fourth meeting scheduled for 24th March 2020 was postponed due to COVID-19 lockdown.

Town Official Language Implementation Committee (TOLIC)

The 65th and 66th meeting of TOLIC Bhubaneswar (C) were organised by Principal Accountant General Bhubaneswar office at Institute of Physics, Bhubaneswar. Dr. Raj K. Singh, PIC Rajbhasha Ekak and Lt. Cdr. Rajkumar CSO cum Hindi officer (in-charge) attended the meeting.

Events

Second Alumni Meet at Campus

13th April, 2019

The 2nd Alumni Meet of IIT Bhubaneswar was hosted in its sprawling campus from 12th to14th April marking 10 years of IIT Bhubaneswar's glorious inception. The campus was abuzz as the event witnessed active participation from alumni ranging across various batches from B.Tech, M.Tech and Ph.D from across the country. The Alumni diaspora in the US and the UK also connected over video conference to participate in this celebration. The 3-day long extravaganza started traditionally with the lighting of lamp by Prof. R.V. Raja Kumar, Director of the Institute, Cdr. V.K Jaitly, Chief Guest of the Evening, Shri Swarup Kumar Mohapatra, Dean of Alumni Affairs and International Relations, and other officials from the Alumni Affairs body of the college.

Prof. R.V. RajaKumar, Honorable Director, IIT Bhubaneswar, Chief Guest of the Evening Cdr. V.K Jaitly, Prof. Swarup Kumar Mohapatra, Dean of Alumni Affairs and International Relations, IIT Bhubaneswar and Ms. Lipsa Bharati, President, Alumni Association welcomed the alumni and appreciated their zeal to assemble for the meet despite their busy schedule and called for greater participation of alumni for the development of the Institute as many hold positions of responsibility in various government organizations, PSUs, private sector, academic institutions and have also been recognized as emerging entrepreneurs in the global front, enabling creating of jobs.

On the occasion, Cdr. V.K. Jaitly, he too pledged help including connecting to IIT Kharagpur foundation and PAN IIT associations. The evening was followed by student-organised immersive interactions of Alumni and students where they could relive their memories and connect with everything contemporary. On the second day the program started with open house Ask Your Alumni in the US & UK sessions, Ask Your Alumni Live, followed by Panel Discussions with IIT Bhubaneswar's Entrepreneur Alumni on building systems for fostering the spirit of entrepreneurship in campus and how Alumni can immensely contribute to it. Alumnus Mr. Sanka Aravind, the Co-Founder of bike taxi Rapido and enlisted under Forbes 30 U 30 committed to wholehearted support in mentoring students for this. The other panelists including Mr. Karthikeyan (Co-founder of Wa2cook), whose start-up has been selected in MassChallenge, a top global accelerator, Mr. Pratik Pattnaik (Founder TorrDroid), Mr. Tushar Gautam (Founder of Vasitars') which has received INR 3.5 Cr funding from GAIL recently and Mr. Ashwini Pandey(Founder Celllark). The last session of the day was a Panel Discussion on all the expectations that IIT Bhubaneswar has from its Alumni and vice versa. The objective was for IIT Bhubaneswar and its Alumni to collaborate and jointly work on research, academics and mentoring. The evening ended with a gala dinner hosted by the Director.

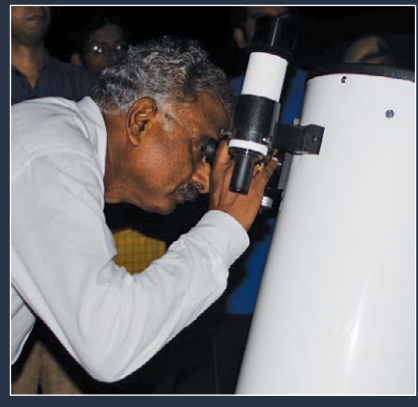
This interaction was vastly important for the juniors to get connected with their alumni. The present batch of students had organised a Food Fest in the campus for the dinner. The night was truly owned by the splendorous cultural performances put forth by the students as a tribute to their senior alumni friends.

The third day started with an upbeat trek by entire Alumni contingent, faculty and students, to the nearby Barunei Hills. Climbing heights together helped all these stakeholders of the Institute further bond with each other. On the third day, a Pan-IIT Panel & Networking, AGM, farewell ceremony was organised followed by lunch. Everyone bid emotional farewell to each other and their beloved Alma Mater, IIT Bhubaneswar with a promise to meet again and with a conviction to contribute back to the Institute through regular webinars, research and academic partnerships.

Observation of International Space Station Facilitated

13th April, 2019

NISER Astronomy Club in collaboration with Nakshatra, the astronomy society of IIT Bhubaneswar successfully organised a live astronomy session at the MHR Sports ground of IIT Bhubaneswar located in its sprawling campus at Argul. The aim was to facilitate observation of the transit of the International Space Station (ISS) in front of the Moon (which is a rare event) was successfully captured through one of the five telescopes having an aperture of 11" as the ISS was passing through Jatni skies. The station was also viewed through the four other telescopes.



The event was well attended by about 100 students, faculty, staff members and their families between 18:00-20:00 hrs.

Medical Camp in Collaboration with AMRI Hospital

28th April, 2019

From the time of its inception, IIT Bhubaneswar has been consistent in its commitment to offer comprehensive medical care and wellbeing of its students, staff including faculty, officers, non-teaching members and dependant of the staff. The Medical camp was organised by Medical Unit of IIT Bhubaneswar in collaboration with AMRI Hospital, Bhubaneswar at the Community Centre located in its campus.

A series of tests viz. Free Blood Sugar, ECG (on doctor's advice), Pulmonary Function Test (PFD), Eye Check Up were undertaken between 9am-2pm. The Faculty members, officers, staff members and their dependants were checked by team of Cardiologists, Medical Specialists, Gynaecologists and Ophthalmologist from AMRI hospital. The camp witnessed active participation from a total of 112 faculty, officers and staff members including their dependants.




Blood Donation Camp

19th April, 2019

Souls for Solace Society, the social welfare society of Students Gymkhana, IIT Bhubaneswar in association with the Odisha State Medical Corporation (OSMC), Odisha Blood Transfusion Council (OBTC) and Capital Hospital, Bhubaneswar organised UMEED-The Blood donation camp at its Community Centre located in its Campus. Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar greeted the occasion to encourage the students, IIT Bhubaneswar for organizing the Blood Donation Camp.

The drive saw close to 200 students, faculty and staff members coming together in large nos. to donate blood for a noble cause. Volunteers helped the people and gave moral support to the people donating blood. Donors were provided with the juice, biscuits and fruits. The samples were carefully sealed and transported to the Blood bank of Capital hospital, Khorda. This camp helped students in getting awareness about their social responsibilities and showed enthusiastic participation for the same.

"Someone lives when someone donates. Sympathy alone cannot save people in chronic conditions, but blood can. A drop of blood donated is a life saved, and this was the stronghold that guided our students into an impressive turnout for the cause" said Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar. Also present at the occasion were Prof. V.R. Pedireddi, Dean, Student Affairs, Dr. Sankarsan Mohapatra, President, Student Gymkhana and Dr. Mansoor Ahmed Khan, Medical Officer, IIT Bhubaneswar.




Anti-Terrorism Day

21st May, 2019

IIT Bhubaneswar observed Anti-Terrorism Day on May 21, 2019. The pledge led by Prof. R.V. Raja Kumar, Director IIT Bhubaneswar was taken by Deans, Registrar, Heads of Schools, Faculty and Staff members to 'fight the forces of disruption threatening human lives and values'. Observing the importance of the day, Prof. R.V. Raja Kumar, Director, IIT BBS delivered an awareness speech and motivated everyone present out there to be vigilant about this practice. The objective behind observance of this day was to wean away the youth from terrorism and the cult of violence by highlighting the sufferings of common people and showing as to how it is prejudicial to the national interest. India has been one of the countries that have been affected by sustained terrorist activities supported, sponsored and financed from abroad.

World Telecommunication and Information Society Day

17th May, 2019

School of Electrical Sciences (SES), IIT Bhubaneswar organised a workshop on the eve of World Telecommunication and Information Society Day. World Telecommunication Day is celebrated annually on 17th May since 1969, marking the founding of ITU and the signing of the first International Telegraph Convention in 1865. The purpose of World Telecommunication and Information Society Day (WTISD) is to help raise awareness of the possibilities of the use of the Internet and other information and communication technologies (ICT).The workshop was graced by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar along with dignitaries such as Prof. S.L. Maskara, Prof. T.S. Lamba, Prof. B.K. Saraf, Prof. Ganpati Panda and Prof. Swarup Kumar Mahapatra, Dean - Continuing Education, Dean - Alumni Affairs & International Relations. Present at the occasion was Dr. P. K. Sahu, Head of School (HOS), and other faculty and staff members, School of Electrical Sciences (SES), IIT Bhubaneswar.

The workshop had interesting lectures from all the four dignitaries of the function who talked at length on the topic of "Bridging the Standardization Gap" by giving an overview into the evolution of mobile technology along with sharing their valuable insights about the new age technology 5G and how it will benefit the masses at large. The current theme of 2019 encourages participation of developing countries in ITU's standards-making process, empowering local experts in the standardization process at the national, regional and international levels and promoting the implementation of international standards in developing countries. The session ended with vote of thanks by Dr. P.R. Sahu, Dean - Academic Affairs, IIT Bhubaneswar to all the dignitaries, faculty and staff members, research scholars, students, security and housekeeping for their commendable support for the event.

13th National Frontiers of Engineering Symposium (13NatFoE) in association with INAE

31st May-1st June, 2019

The Inaugural session of the two day thirteenth National Frontiers of Engineering (13NatFoE) Symposium was held on 31st May at IIT Bhubaneswar. The Indian National Academy of Engineering (INAE) organised it in association with IIT Bhubaneswar. Dr. Sanak Mishra, President, INAE was the Chief Guest and Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar was the Guest of Honor. Prof. Indranil Manna, Vice President, INAE and former director, IIT Kanpur was also present at the symposium. Prof Swarup Kumar Mahapatra, Dean- Continuing Education, Alumni Affairs and International Relations and Prof. S R Samantaray, Associate Professor, School of Electrical Sciences (SES) were the Coordinators of 13NatFoE Symposium.

The aim of the symposium was to bring together young and outstanding engineering professionals (aged~30-45 years) from the industry, universities, and research organizations to deliberate upon emerging and leading-edge research and development work in the domain of engineering and technology. Convening engineering professionals and technologists from various fields were provided a platform for brainstorming the contemporary and futuristic issues related to frontiers areas cross-disciplinary translational research and innovation. The overall purpose of the symposium was to interact and achieve synergy at distinctive scientific levels through presentations and discussions in the following four thematic areas:

- Augmented Reality and Virtual Reality (AR & VR)
- Smart Grid
- Advances in Materials and Manufacturing Technology
- Next Generation Transportation Systems

About 60 professionals from various institutes and R&D labs, industries & start-ups attended the event and shared their contributions. A large number of research scholars and faculty members of IIT Bhubaneswar also attended the symposium and contributed in the organization of the symposium. The cross-functional interactions and networking between the participants from various domains of engineering in the symposium allowed a larger perspective to the participants, and exposed them to some of the immediate need of the society and also gave them an overview of research work happening in various parts of India.

The programme of the symposium included 21 presentations by domain experts in the thematic areas and plenary talks by eminent speakers like Prof. Ashok Jhunjhunwala, Professor, IIT Madras, Dr. Manish Gupta, Co-founder and CEO, Videoken, Shri. R.N, Nayak, Former Chairman and Managing Director, Powergrid Corporation of India, Prof. Jayanta Mukhopadhyay, IIT Kharagpur Prof. S.A. Soman, IIT Bombay, Prof. Rudra Pratap, Centre for Nano Science and Engineering (CeNSE), IISC, Bangalore, Prof. M. Parida, Dept. of Civil Engineering, IIT Roorkee.

Plantation Drive carried out on the eve of World Environment Day

5th June, 2019

IIT Bhubaneswar on the eve of World Environment Day organised a plantation drive inside the campus aimed at campaigning for green culture and promoting a greener ecosystem along with providing a pollution-free atmosphere to the residents inside the campus. The drive was inaugurated by Prof R.V. Raja Kumar, Director, IIT Bhubaneswar. The plantation of the trees was successfully carried out as per the planned schedule. Many plant saplings of different types and large size were planted during the plantation drive. The plantation saw active participation from the Institute members, faculties, staff, their respective families and students.

Successful Completion of Open House on JEE Counselling

18th June, 2019

IIT Bhubaneswar successfully organised an Open House, JEE Counselling and Interaction meeting on 18 June 2019, for the benefit of IIT aspirants, in particular, those who qualified in JEE (Advanced) 2019 and for those who will be appearing in 2020. More than 150 students/parents actively participated in the counselling session. The session started with welcome note by the Chairman, JEE Cell, IIT Bhubaneswar.

Prof. R. V. Rajakumar, Director IIT Bhubaneswar welcomed the students and parents to IIT Bhubaneswar and congratulated the JEE (Adv.) qualified students for their commendable achievement. He gave an in-depth overview into the evolution of the IIT system in India including a brief talk on the 1st, 2nd and 3rd generation IITs, and IIT education in general. He also mentioned in detail about the philosophy of IIT's as they believe in not just creating an engineer by profession but a noteworthy personality. He emphasized that the UG education in IIT's is at par with any of the global class institutions in the world. He also briefly spoke about the rapid strides being made by IIT Bhubaneswar on several fronts, including education, infrastructure, research, and about the innovative steps such as foreign origin faculty engagement.

This was followed by an introduction to programs of study by Prof. P.R. Sahu, Dean, Academic Affairs and presentation on general procedures to be followed for admission and counselling at IITs by Dr. C. Bhamidipati, Chairman JEE Cell, IIT Bhubaneswar. Also present at the event was Dr. V.R. Pedireddi, Dean, Student Affairs, IIT Bhubaneswar.

The inclusion of supernumerary seats for female students from 2018 as per the policy of the Central Government, aimed at bringing gender balance in the engineering education was highlighted. The girl students were also counselled by the JEE help desk team to fill as many choices as possible to maximize their chances of getting a seat in IITs. Various schemes of financial assistance including "Vidyalaxmi" scheme introduced last year by MOE, Govt. of India including the "Kalinga Sikshya Saathi Yojana" by Govt. of Odisha for Odisha based students were presented by the SBI team at the event.

IIT Bhubaneswar would conduct Reporting Centre (RC) activity for JEE Advanced 2019 for qualified candidates in its campus at Argul from 28th June, 2019 to 19th July, 2019. Candidates allotted seats in any of the IITs can do their reporting, document verification and accept their seats at IIT Bhubaneswar during this course of time. More details can be found on the website: http://josaa.nic.in.

The Q & A session was highly interactive with an active participation of all the participants. There were several very pertinent questions put by the IIT aspirants and their parents regarding choice of branch, seat, suitable career choices, dual specialization, sub specialization, difference between regular and integrated dual degree programs, and suitability of female students to branches such as mining engineering along with several questions pertaining to choice and seat allotment in Joint Seat Allocation Authority (JOSAA).The participants expressed happiness on the

initiative of IIT Bhubaneswar in educating the students as well the parents on various technicalities in IIT Education, JEE Admission Process and general queries on various academic programs. Post the completion of the session, the students and parents were given a hands on opportunity to visit the facilities at IIT Bhubaneswar.

For more information, please visit our homepage at: http://www.iitbbs.ac.inand/or write to jeew.helpdesk@iitbbs.ac.in

5th International Day of Yoga

21st June, 2019

The 5th International Day of Yoga was celebrated on 21st June 2019 at IIT Bhubaneswar with great enthusiasm and vigour. It was a three day program which commenced from 19th June, 2019 at the permanent Campus. **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar** with students, faculty, officers, staff and their family members actively participated in the event. The theme for this year's International Yoga Day is *'Yoga for Harmony, Peace and Progress'*. All the participants, and Yoga teachers assembled in the earmarked area at 6:30 am itself so as to ensure that the practice session is conducted in the most conducive manner even for the novice participant. The Yoga teacher initially briefed about the essence of Yogic exercises on the health of individuals and thereafter, held a long practice session. The participants were introduced to Yogasanas, Kapalbhati, Pranayama, Dhyna, Sankalpa and Meditation, as per the common protocol issued by Ministry of Ayush, Govt. of India.

IIT Bhubaneswar goes green with Battery Operated Vehicles Services inside the Campus

27th June, 2019

A battery operated vehicle service in its campus of IIT Bhubaneswar was inaugurated today by Prof. R.V. Raja Kumar, Director of the Institute. As a part, IIT Bhubaneswar adopted a green culture and promoting a greener ecosystem along with providing a pollution-free atmosphere to the residents inside the campus, this initiative has been taken up. The inaugural ceremony saw active participation from students, faculty and staff members in large nos.

Digital India Day

1st July, 2019

"Digital India" is a flagship programme of the Government of India initiated with a vision to transform India into a digitally empowered society and knowledge economy. IIT Bhubaneswar has been conducting research and academic programmes and carrying on extensive research in Digital Technologies. In this backdrop, on the occasion of celebrating the 5th Anniversary of Digital India, IIT Bhubaneswar in association with Software Technology Parks of India, (STPI) organised a visit of press and media to its Centers of Excellence in *"Virtual and Augmented Reality for Immersive Visualization"* (VARCoE), the school of Electrical Sciences and the Design and Innovation Center at its permanent campus. These centers have showcased research and development work focused on digital technologies ranging from Artificial Intelligence (AI), Internet of Things (IOT), Digital Image Correlation, and 5G cellular.

The press interaction was followed by series of interesting Q & A session along with visits to the centers of excellence in Virtual and Augmented Reality for Immersive Visualization (VARCoE) along with visits to the other labs of AI, IOT, and 5G Cellular. Several live demonstrations of projects in all these key areas were showcased at IIT Bhubaneswar during the course of visit.

Hon'ble Governor of Odisha Inaugurates the New Halls of Residence

15th July, 2019

The Brahmaputra (BH-2) and Ganga Halls of Residence (GH-2), part of Phase-II constructions of IIT Bhubaneswar was inaugurated on 15th July, 2019 by Prof. Ganeshi Lal, The Hon'ble Governor of Odisha in the presence of Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar. The event started with the unveiling of both the halls of residence, cutting of the ribbons and lighting of the lamp by Prof. Ganeshi Lal, Hon'ble Governor of Odisha. Before commencement of the event, the National Anthem was recited by the students, faculty and staff members

Orientation Programme for M.Tech and M.Sc Students

20th July, 2019

IIT Bhubaneswar conducted registration for Ph.D. and PG students on 17th July, 2019 and 19th July, 2019, respectively. An Orientation programme for these students will be conducted students on 20th July 2019 to welcome and orient them to the systems of the institute, i.e., to academic, extra-academic and hostel activities of the institute. Director Prof. R.V. Raja Kumar will address the fresher batch on 20th July 2019 at 10 am followed by Prof. V.R. Pedireddi, Dean, Student Affairs and Dr. P.R. Sahu, Dean, Academic Affairs at the ground floor common hall of the new Brahmaputra Halls of residence. Thereafter President Gymkhana will address the students. In addition, there is a *Fresher's) got talent"* programme on 12th Aug respectively for PG students at Brahmaputra Halls of Residence at IIT Bhubaneswar.

Prof Raja Kumar said that the M. Tech and Ph.D. students constitute an important class of students who have done well in their Bachelors, proved themselves typically in the university system and come to IIT for specializing in a narrow area of their domain. Most of them either join in

R&D organizations or educational institutions of the country or thus add to the R&D pool of the country. He said that with the objective of help rising this R&D pool of the nation, last year the institute started three new programmes in M Tech. Prof Kumar said that the institute also implemented EWS reservation for M Tech and MSc students.

By 5pm about 197 M Tech students and 88 MSc students reported at the institute for admission and Registration. Prof Kumar said that the number has significantly raised this year. On 15th of this month, the institute inaugurated an 800 seated Brahmaputra Hall of Residence for boys and 400 seated Ganga Hall of Residence for girls, by Prof Ganeshi Lal, hon'ble Governor of Odisha. The fresh M Tech and MSc students are allotted accommodations in these Halls of Residences.

73rd Independence Day

15th Aug, 2019

IIT Bhubaneswar celebrated the 73rd Independence Day at its Permanent Campus in the playground adjacent to Mahanadi Hall of Residence. Prof R.V. Raja Kumar, the Director, IIT Bhubaneswar hosted the National Flag, offered floral tribute to the Father of the Nation and Bharat Mata and delivered his Independence Day address followed by national anthem sung by everyone in a rhythmic chorus. The faculty, staff, students, children of the institute participated in the celebrations in large numbers with patriotic fervour.

Institute Seminar on "Global Trend in Towers and Opportunities"

16th Aug, 2019

Large number of students (300+) gathered in the hall to listen the talk and gave very warm welcome to the speaker. Shri. Venkatraman spoke about importance and key role played by the various engineering disciplines (ex. Civil, Mechanical, Electronics, Materials, etc.) in design and building of tall towers of international standards. He emphasized on vertical technology (VT) for the towers and buildings and told that they are economical as well. He told that there is technological aspects, financial aspects, human psychological and natural influences (Tsunami, Earthquake), etc. which play major role to withstand through and provide optimal solution for such structures. The technical requirements start from the basic design parameter assumptions, the occupancy considerations, the expectancy in waiting interval, the loading of elevator cars, etc., to the exact need for specific cases. Later, he talked about safety and reliability of elevators and how technology has changed in the years for safer elevators. Students participated with enthusiasm and asked many interesting questions to the speaker. One of the students asked, can large towers be connected together (for example say top floors of two adjacent towers).

Massive Plantation Drive at Primary Schools across the Khudupur, Podapoda and Kansapada Villages as part of Unnat Bharat Abhiyan

30th Aug, 2019

Horticulture Department along with National Service scheme (NSS) team, IIT Bhubaneswar under the Unnat Bharat Abhiyan (UBA) conducted a plantation drive across all the primary schools of Khudupur, Podapoda, Kansapada villages in association with Youth Booth, a group of youth volunteers. Khudupur, Podapoda, Kansapada are among the three of the six villages adopted by IIT Bhubaneswar under UBA. The motive behind this campaign was to promote a greener ecosystem along with providing a pollution-free atmosphere to the residents and to recreate the lost greenery during the course of super-cyclone, Fani, that had hit the state 03rd May, 2019. The saplings had been collected from Forest Department, Government of Odisha by Youth Booth

Health and Hygiene Camp at Haripur Panchayat Area as part of Unnat Bharat Abhiyaan

8th Sep, 2019

The National Service Scheme (NSS), Unnat Bharat Abhiyan (UBA) and medical teams from IIT Bhubaneswar jointly conducted a health and hygiene camp at Argul High school which comes under the Haripur, Panchayat of Khordha District. Several people from Haripur, Podapada, Kansapada, Arugul and other neighbouring villages attended the health camp to get treatment for various ailments. Podapada, Argul and Kanspada are in fact villages adopted by IIT Bhubaneswar under the UBA scheme with a vision to make a positive difference to the quality of life of the people residing in these villages. About 400 people attended the camp wholeheartedly and drew benefits from the health camp. Our doctors conducted free health check-up for the attendees and based on their prescription, free medicines were provided to the villagers. A first-aid kit box was also gifted to the Sarpanch of Haripur Panchayat. The NSS students as part of their Extra Academic Activity (EAA) embarked on a *'Cleaning Mission'* at the neighbouring villages.




8th Annual Convocation

21st Sept, 2019

IIT Bhubaneswar celebrated its 8th Annual Convocation at 11.00 AM on 21st September 2019 in the Community Centre of the Institute at Argul, Jatni. The Chief Guest for the Convocation was Shri. K. Sivan, Chairman ISRO. Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar presided over the function. Also present were the Members of Board of Governors, Senate Member, Deans, Heads of Schools, faculty, staff members of IIT Bhubaneswar and esteemed guests. The Convocation began with a majestic and grand academic procession followed by the National Song sung by the students of the Institute.




Swachh Bharat Programme Observed on the Eve of Gandhi Jayanti

2nd Oct, 2019

Swachh Bharat Abhiyan, was observed at IIT Bhubaneswar on 2nd October, 2019 at its permanent campus to commemorate the birth anniversary of the Father of the Nation, Mahatma Gandhi. Prof. R V Raja Kumar, Director, IIT Bhubaneswar offered floral tribute to *"Bapuji"* in the presence of other faculty, students and staff. The *"Swacchta"* pledge was administered by the Registrar, after which the Director addressed the gathering. The students at IIT Bhubaneswar also presented an effective short play based on the theme of cleanliness. All the students, faculty and staff members at IIT Bhubaneswar participated in the Cleanliness Drive to clean outside the Main gate, work place and Campus as the part of *"Swachh Bharat Abhiyan"*.

Hindi Pakhwada

14th Sept, 2019

On the occasion of Hindi Diwas, Rajbhasha Ekak and Hindi literary Society of students Gymkhana '*Abhivyakti*', Indian Institute of Technology Bhubaneswar organised a 15 day (1st Sept-14th Sept, 2019), *"Hindi Pakhwada"* in the Campus. The programme organised included various competitions like debates, quiz competitions, poetry recitation, essay competition etc. The Pakhwada was organised to celebrate, the importance of *"Hindi language"* along with creating awareness about its use in daily life.

Medical Camp for Students in Collaboration with KIMS Hospital

19th Oct, 2019

From the time of its inception, IIT Bhubaneswar has been consistent in its commitment to offer comprehensive medical care and wellbeing of its students. The Health camp was organised by Medical Unit of IIT Bhubaneswar in collaboration with KIMS Hospital, Bhubaneswar at the Community Centre located in its campus. The Health Camp was inaugurated by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

Rashtriya Ekta Diwas Observed

31st Oct, 2019

IIT Bhubaneswar organised *"Rashtriya Ekta Diwas"* on the occasion of birth anniversary of Sardar Vallabhbhai Patel's on 31st Oct, 2019 at its permanent campus, Argul. The event was initiated with a floral ceremonial tribute by the Prof. R. V. Raja Kumar, Director, IIT Bhubaneswar. The Faculty, Staff members and students actively took the *Rashtriya Ekta Diwas* pledge on the solemn occasion, in which they pledged to dedicate themselves to preserve the unity, integrity and security of the nation and also strive hard to spread this message among fellow countrymen in the spirit of unification of the country, which was made possible by the vision and actions of late Sardar Vallabhbhai Patel. Furthermore, on the eve of Rashtriya Ekta Diwas, a "Run for Unity" was organised starting from IIT Administrative Building to Hari Bhaina Chaka, Jatni and return to end up at the Main Gate of the institute, covering a distance of approximately 8 kms. As many as 550+ students, family and staff participated in the Unity Run with a lot of enthusiasm and patriotic fervour.




National Education Day

11th Nov, 2019

National Education Day was celebrated on the eve of birth anniversary of Maulana Abul Kalam Azad, great freedom fighter, eminent educationist, first Union Minister of Education at its permanent campus of IIT Bhubaneswar. The day started by offering floral tribute to Maulana Abul Kalam Azad by Prof. Swarup Kumar Mahapatra, Director in charge and Col (Dr) Subodh Kumar, Registrar, IIT Bhubaneswar and other faculty, staff members and students.

On the occasion an online essay competition on the topic, "Importance of Education and Nation's commitment to all aspects of education" which saw active participation from faculty, staff and students. An interesting seminar was organised at the Lab Complex, IIT Bhubaneswar on the topic, *"CD Fluidics and extreme point of care"* by Prof. Marc Madou (University of California).The seminar was well attended by faculty, staff and students.

Visit of Delegation of IIT Bhubaneswar to Global Institutions in Singapore

19th Nov, 2019

In the endeavor of shaping itself into the cream of global class through a line of spirited actions, IIT Bhubaneswar is on course of hiring capable and bright faculty from the graduates of globally reputed Institutions. In this pursuit, the Director Prof. R V Raja Kumar along with some of the Deans visited Singapore during 6th – 11th November, 2019, to establish collaborating connections with well reputed Institutions in Singapore. The delegation visited to globally famous and highest ranked universities, Nanyang Technological University (NTU) and National University of Singapore (NUS) in Asia. The team also visited the highly acclaimed research Institutions under A*STAR to study the faculty hiring and recruitment processes, basic infrastructure, teaching programs, research environment prevailing in those Institutions.

The delegation was well received at NTU with a warm reception. Director, IIT Bhubaneswar had a fruitful meeting with Prof. Subra Suresh, President, NTU to discuss and establish interactive relations between the two Institutions. In addition there were broad discussions with Prof. Subodh Mhaisalkar, Associate Vice President, Strategy & Partnerships and Prof. B.V.R Chowdhury, NTU-India Global Connect Director for establishing long term co-ordination in the areas of Education and Research.

Director, IIT Bhubaneswar made presentations on the prospects of faculty recruitment and growth factors at NTU and NUS to a large no. of students pursuing Ph. D and Postdoctoral career giving them a valuable insight into the future growth prospective at IIT Bhubaneswar.

The delegation also had an interactive meeting with the Pan-IIT Singapore Alumni Association, and participated in its Annual meeting where Director, IIT Bhubaneswar was a Guest of Honor. The delegation also met Scientists at Institution of High Performance Computing of A*STAR for a possible long term collaboration was discussed and chalked out strategical planning to establish immediately joint project submissions to enable faculty and student exchange across the Institutes.

Sustainable Environment Awareness Campaign by Students

1st Dec, 2019

The student committee at Wissenaire, the Annual techno-management fest of IIT Bhubaneswar organised an environmental awareness campaign. The students organised the campaign choosing prominent malls namely BMC Bhawani Mall, Pantaloons, Esplanade across the smart city of Bhubaneswar as a venue in a bid to spread awareness about the importance of planting trees and usage of paper bags instead of plastic ones for creation of sustainable ecosystem for all. The motive behind this campaign was to promote a greener ecosystem along with providing a pollution-free atmosphere to the residents and to recreate the lost greenery during the course of super-cyclone, "Fani", that had hit the state on 03rd May, 2019. Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar and Shri. Shri. Ananta Narayan Jena, Member of Legislative Assembly (MLA), Odisha graced the venue of the campaign and complimented the efforts of the students.

The distribution of the plant saplings and paper bags was successfully carried out as per the planned schedule across all major malls of Bhubaneswar. Through today's event, the students and citizens of the city are reminded about the need to intimately connect with nature in their efforts of building a green environment in and around the city of Bhubaneswar. Such efforts towards environmental responsibility like the one shown by students of IIT Bhubaneswar is sure to have a good impact and go a long way in the campaign.

Vigilance Awareness Week

2nd Nov, 2019

IIT Bhubaneswar observed Vigilance Awareness Week 2019, a week long programme started on 28th October to 2nd November 2019 as mandated by the Central Vigilance Commission (CVC). On 28th Oct, 2019, a pledge taking ceremony addressal was organised at the Main Admin Building. On 2nd Nov, 2019, a half day workshop on, "Integrity: A way of life" was organised at the Community Centre of IIT Bhubaneswar. The chief guest of the event was Shri. G.C. Pati, Former Chief Secretary, Govt. of Odisha who delivered a talk on topic Integrity and transparency in Public Administration. The event was presided by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar and Prof. R. K. Panda, the Chief Vigilance Officer (CVO) of the Institute along with the other dignitaries. To commemorate this celebration, special talks were organised at the Community Centre where the plenary speakers like Shri Sunil Mishra, State Chief Information Commissioner, Odisha spoke on Integrity in Enforcement: The Ground and Goals of Governance, General Basant Mahapatra, AVSM on Integrity: The Essence of Life, Shri Nirmai Charan Padhi, IPS (Retd.), Former Director General of Police, Odisha on Integrity in Policing the Public: Retrospect's and Prospects. Prof. Godabarisha Mishra and Dr. Vineet Sahu, School of Humanities and Social Sciences, IIT Bhubaneswar spoke on Rights and Duties: Indian Epic and Dharmic Accountability.

Constitution Day

26th Nov, 2019

Indian Institute of Technology Bhubaneswar celebrated the *"Constitution Day"* also known as ***"Samvidhan Divas"*** at the community centre to commemorate the adoption of Constitution of India as per the directives of the Ministry of Education, Govt. of India. The chief guest of the event was Hon'ble Justice Dr. D.P. Choudhury, Retd Judge Orissa High Court. Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar welcomed the audience and presided over the function. Registrar administered the reading of the preamble to Constitution followed by integrating the live telecast of the commemoration function of Samvidhan Divas address by Shri. Ram Nath Kovind, Hon'ble President of India, Shri. Venkaiah Naidu, Hon'ble Vice President of India and Shri. Narendra Modi, Hon'ble Prime Minister of India from Central Hall, Parliament House. The audience got an opportunity to hear out the Hon'ble President, Vice-President, and Prime Minister and get truly inspired by their speech. The event saw active participation from faculty, staff and students. The live telecast was followed by National anthem along with vote of thanks by Debraj Rath, Jt. Registrar, IIT Bhubaneswar.

64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2019)

9th Dec, 2019

The 64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2019) was organised at IIT Bhubaneswar from 9th to 12th December, 2019. The Annual Congress of the society in the past have been held at all reputed and premier institutes across the country and this time by turn organised at IIT Bhubaneswar. Prof. Guirong Liu, University of Cincinnati, USA graced the occasion as the Chief Guest. The inaugural event was presided over by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

The event had memorial and invited lectures from eminent international and Indian experts from academics, research institutions and industries. This year too, the congress attracted a large number of delegates from India and abroad. The event proved to be immensely beneficial for students, academicians, researchers, professionals from various public and private sectors and industries.

School of Infrastructure Organised First International Symposium on Offshore Geotechnics – ISOG2019

5th Dec, 2019

School of Infrastructure (SIF) of Indian Institute of Technology Bhubaneswar organised an international symposium on offshore geotechnics for the first time in India. The event *"First Indian Symposium on Offshore Geotechnics"* (ISOG 2019) was held at IIT Bhubaneswar during December 5-6, 2019 under the aegis of the technical committee, TC 209 of International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE); and Indian Geotechnical Society (IGS), Bhubaneswar Chapter. Prof. R.V. Rajakumar, Director, IIT Bhubaneswar was the chief guest of the inaugural symposium and the event started off with the welcome address

by the Dr. Sumanta Haldar, organizing secretary. This was followed by interesting addresses by Prof. R. K Panda, Head, School of Infrastructure and Prof. Swarup Kumar Mahapatra, Dean Continuing Education, IIT Bhubaneswar, Prof. G. L. Sivakumar Babu, President, IGS, Prof. Mark Randolph on behalf of Chairman TC 209, ISSMGE, Ravindra. K. Ghanekar, IEOT, ONGC.

The event had theme lectures from eminent international and Indian experts from academics, research institutions and industries. The symposium proved to be an excellent opportunity for practicing engineers, students, academician, and decision makers to meet and deliberate on the state of the art in offshore geotechnics and future application of screw pile. The symposium was accompanied by the first **International Workshop on Future Application of Screw Piles** (IWFASP 2019) to be held on 07 December 2019. The event was immensely beneficial for students, academicians, researchers, professionals from various public and private sectors and industries.

54th Inter-IIT Sports Meet

15th Dec, 2019

The 54th Inter-IIT Sports Meet was inaugurated at IIT Bhubaneswar. This is for the first time in the history of Inter IIT, a second generation IIT is cohosting the event and in this perspective, it assumes a lot of historical significance. Eight sports will be organised by IIT Kharagpur while the rest four by IIT Bhubaneswar. Shri. Pratap Chandra Sarangi, Hon'ble Minister of State for Animal Husbandry, Dairying and Fisheries and Micro, Small and Medium Enterprises, Govt. of India was the Chief Guest. Ms. Dutee Chand, Indian professional sprinter was the Guest of Honour. The event was presided over by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

The four events to be co-hosted by IIT Bhubaneswar are Badminton, Squash, Table-tennis, and Volleyball. About 800 students are expected to participate from 22 IITs in the 54th Inter IIT Sports meet. The eight-day sports meet will see students of the institutions participating in four different sports activities at IIT Bhubaneswar and the remaining eight sports will be held at IIT Kharagpur and will be concluding on 22nd Dec, 2019. The event also marked some great cultural dance performances by professional dancers in the form of Gotipua and Paika Akhada organised as a part of the inaugural session. The event saw active participation from Deans, Faculty, staff, students, family of the campusites.

Valedictory Function brings 54th Inter IIT Sports Meet at IIT Bhubaneswar to a Grand Fitting Closure

21st Dec, 2019

IIT Bhubaneswar successfully conducted the mega extravaganza 54th Inter IIT Sports Meet– between 14th to 21st Dec 2019 at the Greenfield sports complex with a sense of style and grandeur. This is for the first time in the history of Inter IIT, a second generation IIT is co-hosting the event and in this perspective, it assumes a lot of historical significance. Shri. Tusharkanti Behera, Hon'ble Minister of State (Independent Charge), E & IT, Sports & Youth Services, Govt. of Odisha was the Chief Guest on the occasion. The event was presided over by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

The event also marked some great cultural performances in the form of Odissi dance by Ms. Aruna Mohanty. This was followed by the result declaration of the winners in their respective categories. The event saw active participation from Deans, Faculty, staff, students, family of the campusites.

Conclave and Hackathon on Virtual and Augmented Reality (AR/VR)

10th Jan, 2020

IIT Bhubaneswar in association with Software Technology Parks of India (STPI), and Govt. of Odisha is holding a Conclave on Hackathon on Virutal and Augmented Reality was inaugurated today 10th-12th Jan 2020 at its campus. The Inaugural ceremony of the three day Conclave and Hackathon is inaugurated today where **Shri. Omkar Rai, DG, STPI graced as the Chief Guest, Shri Manoj Kumar Mishra, IRTS, Secretary, E & IT Department, Govt. of Odisha as Guest of Honour and Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar** presided over.

Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar during his inaugural address emphasized the importance of new age technologies such as Augmented Reality (AR) and Virtual Reality (VR), Artificial Intelligence (AI), Internet of things (IOT) and 5G communication are the current trends in IT, where systems are being developed to incorporate these and are important in realizing the Digital India dream, today. He said that the Hackathon is conceptualized to encourage creativity and technology development amongst the engineering students across the country, in AR-VR. He also briefed about the research activity taking place in the Institute in these core areas. He credited Shri. Narendra Modi, the Hon'ble Prime Minister of India for popularizing and providing momentum to the concept of Digital India among the masses. He also acknowledged the philanthropic support from Smt. Susmita Bagchi, Shri. Subroto Bagchi, Odisha Skill Development Authority, MSME department of the Govt. of Odisha, STPI for joining hands together with IIT Bhubaneswar for creation of Center of Excellence in AR-VR (VARCoE) at the institute.

VARCoE focuses on creating an ecosystem for carrying out R&D in AR-VR, immersive visualization and applications, giving impetus to skill development, manpower creation through innovative education program and foster technology incubation and entrepreneurship.

Thus, the goal of the conclave and hackathon is to gather people with different backgrounds and experiences to work together in teams and create disruptive and inspiring products/solutions for use in every field of imagination in the AR/VR domain. Also present on the occasion were Prof. P.K Sahu, Professor-in-charge, VARCoE, Prof. M. Sabarimalai Manikandan Organizing Committee Member, VARCoE, IIT Bhubaneswar, Mr. Manas Panda, Director, STPI Bhubaneswar and Mr. Prasant Biswal, Evangelist, Startup Odisha Secretariat, IEDO, Bhubaneswar. The inaugural ceremony ended with vote of thanks.

The Conclave and Hackathon includes several guest talks, interactive sessions, workshops by student teams. Some of the esteemed speakers during the three day conclave include talks by Dr. Pradipta Biswas, IISc Bangalore, Dr. Kaushal Kumar Bhagat, CET, IIT Kharagpur, Prof. Rajesh M. Hedge, IIT Kanpur, Dr. Shiva Ji, IIT Hyderabad and Dr. Subroto Bagchi, Chairman Odisha Skill Development Authority. The talks and sessions will be followed by award ceremony.

E-Summit 2020, the three Day Entrepreneurial Conclave

10th Jan, 2020

The sixth edition of the annual three day Entrepreneurial Conclave of IIT Bhubaneswar, **E-Summit'20** was inaugurated by **Dr. Ramgopal Agarwala, distinguished Member of Niti Aayog**, the Chief Guest on the occasion and **Prof. D. D. Misra, Chairman of the Board of Governors of IIT (ISM) Dhanbad**, the Guest of Honor. The event was presided over by **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar**. The event commenced with lamp lighting ceremony where **Prof. R V Raja Kumar, Director, IIT Bhubaneswar** accompanied by the Chief Guest ignited the lamp in the spirit of entrepreneurial exuberance. This was followed by a welcome address by Dr. Bankim Chandra Mandal Chairman of E-Summit'20.

The Chief Guest, Dr. Ramgopal Agarwala, distinguished Member of Niti Aayog in his thought provoking talk motivated the students to work on innovative ideas and inculcating spirit of entrepreneurship thereby contributing

to the progress of the nation. He also made a special mention that E Summit is a unique platform for academicians, new-age entrepreneurs, eminent business personalities, venture capitalists and the students to gather at one place and share their entrepreneurial endeavours and experiences, and to pledge to take entrepreneurship to the next level.

Also present at the event were Prof. V.R. Pediredi, Dean Student Affairs, Dr. Suvradip Mullick, Vice-Chairman, E-summit and Col (Dr) Subodh Kumar, Registrar, IIT Bhubaneswar. The inaugural ceremony concluded with a vote of thanks.

E-Summit'20 (10th January – 12th January) includes several guest talks, interactive sessions, panel discussions by eminent personalities, seasoned entrepreneurs, mentors and investors centered on theme "Shifting Paradigms-Pursuing purpose beyond profit". Some of the esteemed speakers are Shri Arun Bothra, IPS, CEO, CESU, Bhubaneswar and Capital region urban transport, Ms. Kanika Tekriwal, CEO of JetSetGo, Mr. Sharad Vivek Sagar, CEO of Dexterity Social Entrepreneur, Mr. Kunal Chandiramani, CEO of K-Star, Mr. Anirudh Damani, Managing partner of Artha Ventures.

Major events include social & health Entrepreneurship Conclaves, Investors Drive, Start-up Internship Fair, Innovation Expo, Informal Nites and many other entrepreneurial, managerial and marketing competitions. E-Summit 2020 is a complete package of knowledge, inspiration, opportunities and fun for entrepreneurial enthusiasts. More than 500 participants from various colleges are participating in the conclave.

Valedictory Ceremony of AR/VR Conclave and Hackathon

12th Jan, 2020

IIT Bhubaneswar successfully conducted the three day conclave on AR/VR Conclave and Hackathon at IIT Bhubaneswar in association with Software Technology Parks of India (STPI), Govt. of Odisha with a sense of style and grandeur. The valedictory ceremony had an interesting talk by **Shri. Subroto Bagchi, Chairman, Odisha Skill Development Authority, Govt. of Odisha**. The valedictory ceremony of this three day event was held on today with **Shri. Subroto Bagchi, Chairman, Odisha Skill Development Authority, Govt. of Odisha gracing as the Chief Guest, Smt. Susmita Bagchi, as**

Guest of Honour and **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar** presided over.

Shri Subroto Bagchi, Chairman, Skill Development Authority gave thought provoking and an inspiring talk by citing real life examples to the participants and encouraged them to take up activities in the field of AR/VR.

The valedictory ceremony was followed by award distribution by Smt. Susmita Bagchi who handed over the awards to the winners of the AR/VR Conclave and

Hackathon in presence of the dignitaries. The two best teasm who got the cash award of ₹50,000 and ₹25,000 were **Learn-O-Little team (Neha Tuli, Gurwinder Singh, Shivam Dhall) and AR Hub (Rahul Talukdar, Kumar Utkarsh, Yelchuri Venkata Sai Subhha, Sushant Shukla)** respectively. Also present at the event were **Dr. P.K. Sahu, Professor-in-charge, VARCoE, Prof. Ashok Panda, and Dr. Soumya Prakash Dash, Coordinator** of the event along with **Col (Dr.) Subodh Kumar, Registrar, IIT Bhubaneswar.**

ALMA FIESTA'20 - The Social Cultural Fest Starts off on a Grand Note

17th Jan, 2020

Like every year, Alma Fiesta, the annual sociocultural fest of IIT Bhubaneswar is back with it 11th edition with its cultural theme "India's Cultural Melange: A Voyage to India's Heritage Roots" and social theme "Jal Sanrakshit, Bhavishya Surakshit. Almafiesta 2020 (17th Jan-19th Jan 2020) was inaugurated by Dr. Kshiti Bhusan Das, Pro-Vice Chancellor, IGNOU, National Fellow (ICSSR), and the Chief Guest on the occasion. The event was presided over by Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

Addressing the gathering, Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar said that "Alma Fiesta is the annual Socio-Cultural fest of IIT Bhubaneswar has become a beacon of culture and it has made a mark unprecedented and unachievable by its contemporaries. It gives me immense pleasure to let you know that IIT Bhubaneswar has made rapid strides in imparting global class education together with innovation and creativity in science, sports, arts and technology. There is a great sense of importance of Indian classical music and dance in today's times, and I urge each and every student to use the fine arts as a medium to enhance their technical creativity. I welcome everyone out here to the green and serene campus of IIT Bhubaneswar at the foothills of the Barunei which is famous for its inspiring history. I wish the fest a grand success, an immensely fruitful time for all the participants, campusites and congratulate the organizing team of Alma fiesta 2020".

Dr. Kshiti Bhusan Das, Pro-Vice Chancellor, National Fellow (ICSSR), Chief Guest of the evening appreciated the Director's words, and reinforced the importance of classical music and dance among the students for enhancing technical creativity. He also expressed happiness at the rapid growth strides by IIT Bhubaneswar and congratulated the Institute and complimented Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar for putting forward a green, serene and beautiful campus. He also stressed on the importance of having good teachers as role models for the students to take up careers in science, technology and creative arts.

This was followed by a brief overview about the various event and the great cultural extravaganza unfolding during the three day fest by Dr. Rajesh Roshan Dash, Chairman, Alma fiesta and Dr. Manaswini Behera, Vice Chairman Alma Fiesta. The inaugural session also involved the children's fest *"Bachpan Ka Rangmanch"*. More than 150 orphanage children participated in events ranging from music and dance competition, musical chairs, poster making, dumb charades, book balancing, essay recitals, and many more fun activities organised specially for them with a motto to give them a day of profound happiness. The underprivileged children were also provided with single day meal. This was followed by prize distribution ceremony where in the Chief Guest and Director gave away the prizes in connection with the Children's fest.

Alma Fiesta, the three day fest includes dance, music, dramatics and fine arts, literary, technical workshops such as Android App development and self-driving cars, Star Nites (DJ Tejas and Akasa Singh - Renowned Bollywood Singer), Cyber Crusades and many more. Also present at the event were Prof. V.R. Pedireddi, Dean Student Affairs, Col (Dr) Subodh Kumar, Registrar, Dr. Sankarsan Mohapatra, President, Student Gymkhana IIT Bhubaneswar. The inaugural ceremony concluded with a vote of thanks by Chief Coordinator Mr. Deep Pathak.

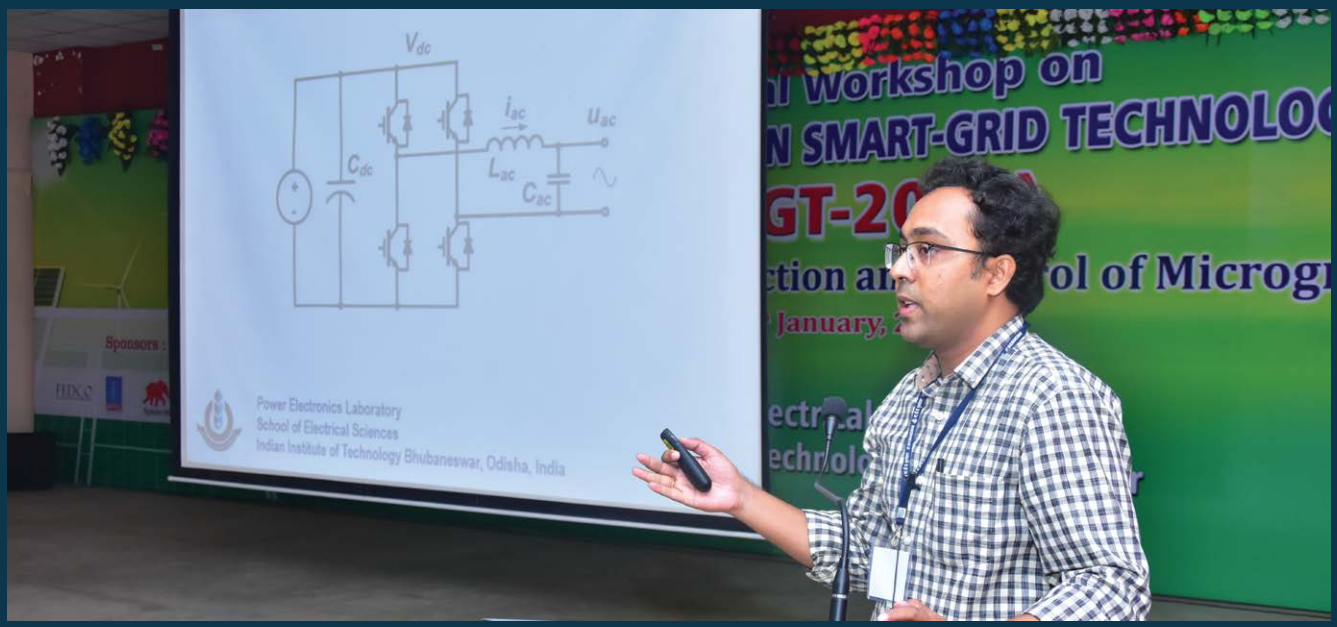
2nd National Workshop on Recent Developments in Smart-Grid Technologies (NWSGT-2020)

23rd January, 2020

The 2nd National Workshop on Recent Developments in Smart-Grid Technologies (NWSGT-2020) was inaugurated today at IIT Bhubaneswar. It will be a two day workshop from **23rd Jan-24th Jan**, 2020. Dr Saurabh Garg, CMD, OPTCL, Principal Secretary, **Govt of Odisha**, graced the inaugural function as Chief Guest. The inaugural event was presided over by **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar**. The event started off with the welcome address by **Dr. S. R. Samantaray, Coordinator of the workshop**, followed by an interesting address by **Prof. S. C. Srivastava, IIT Kanpur**. The workshop received excellent response from all corners of the country and prestigious institutions, nominating their researchers, working engineers and faculty.

Developments in **Smart-Grid Technologies** have gained momentum in recent years. It brings various issues starting from wide-area monitoring, control, protection, and communication, security for effective and reliable operation of the electrical power networks. The event had theme lectures of eminent speakers from reputes Institutes like IIT Kanpur, IIT Delhi, IIT Kharagpur and IIT Bhubaneswar, research institutions like, PRDC and industries, like OPTCL, DelSoft. The workshop proved to be an excellent opportunity for practicing engineers, students, academicians, and researchers to meet and deliberate on the state of the art in Smart Grid technologies and their future verticals.

Present during the occasion **were Col (Dr.) Subodh Kumar, Registrar and Dr. Sabarimalai Manikandan, Assistant Professor, School of Electrical Sciences**, IIT Bhubaneswar. The program was concluded with vote of thanks by **Dr. Chandrasekhar Perumalla, Co-Coordinator** of the workshop.


Power Electronics Laboratory
School of Electrical Sciences
Indian Institute of Technology Bhubaneswar, Odisha, India


Outline
1 Introduction
2 IEEE 1159 standards
3 CBEMA Curve
4 Impact of PQ problems
5 Unified Power Quality Conditioner (UPQC)
6 PSO based Feedback Controller Design of UPQC
7 A Hybrid DSTATCOM Topology with Reduced DC-link Voltage
8 A Modified Three-phase Four Wire UPQC Topology
9 Conclusions

71st Republic Day with Patriotic Fervour

26th Jan, 2020

IIT Bhubaneswar celebrated the **71st Republic Day** in the Institute with patriotic fervour. The function started with unfurling of the National Flag followed by review of the Parade by **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar**. The Faculty, Staff, Students and children participated in the celebrations in large numbers.

The republic day celebrations comprised of march-past, dare-devil performances by the security unit and national cadet corps (NCC) unit of IIT. This was followed by cultural program put up by the faculty, staff and students of the Institute. Also present during the event were Prof. R.K. Panda, Dean Alumni Affairs & International Relations, Prof. Sujit Roy, Dean Research and Development (R & D), Dr. V.R. Pedireddi, Dean, Student Affairs, Col (Dr) Subodh Kumar, Registrar and Dr. Sankarsan Mahapatro, President, Student Gymkhana, IIT Bhubaneswar.

12th Foundation Day of IIT Bhubaneswar Celebrated in a Grand Manner

12th Feb, 2020

Indian Institute of Technology (IIT) Bhubaneswar celebrated its 12th Foundation Day on 12th February 2020. **Shri. Biswa Bhusan Harichandan, Hon'ble Governor of Andhra Pradesh** graced the occasion as **Chief Guest** and inaugurated the function. **Mr. Subroto Bagchi, Chairman, Odisha Skill Development Authority and Co-founder Mind Tree** was the **Guest of Honour** and delivered the Foundation day Lecture on the topic, "In search of Tomorrow". The event was presided over by **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar**.

The day witnessed successful execution and organizing of Open Day and Exhibition in the campus spanning across all of its schools from 09:30 AM to 5: 30 PM which attracted active participation from students of various Schools and Colleges within and outside Odisha. In this Grand exhibition, the Institute faculty and students showcased the science and technology initiatives undertaken in various areas, such as Energy, Materials, Healthcare, Engineering, Physics, Chemistry and Biosciences at IIT Bhubaneswar through simple, easy to understand 250+ live experiments and exhibits.

The motto was to promote and ignite the scientific learning curiosity among the students especially the girl child in particular, across all schools and colleges of Science and Engineering. It turned out to be an exciting and enriching experience for all the participating students. All the visiting students and volunteers are provided with hygienic lunch using contributions from several sponsors and Institute end. More than 8000 +students from various schools and colleges participated in this programme. On this day students excellence and faculty awards were also distributed.

The inaugural ceremony ended with vote of thanks. Also present during the event were Prof. R.K. Panda, Dean Alumni Affairs & International Relations, Prof. Sujit Roy, Dean Research and Development (R & D), Prof. V R Pedireddi, Dean Student Affairs, Dr. P R Sahu Dean Faculty & Planning I/C and Dean Academic Affairs, Col (Dr) Subodh Kumar, Registrar, Shri Debraj Rath, Joint Registrar and Dr. Sankarsan Mahapatro, President, Student Gymkhana, IIT Bhubaneswar.

Preventive Health Check up Camp in Collaboration with AMRI Hospital, Bhubaneswar

15th Feb, 2020

In an endeavour of IIT Bhubaneswar's commitment to offer comprehensive medical care and wellbeing of its students, staff including faculty, officers, non-teaching members and their dependants, a Medical camp was organised by the Medical Unit of Institute in collaboration with AMRI Hospital, Bhubaneswar at the Community Centre located in its campus.

A series of tests viz. Random Blood Sugar, ECG and BMD(Bone Mineral Density), ECG and Eye Check Up were undertaken between 9am-2pm.The Students,faculty, officers, staffs and their dependants were checked by team of Medicine Specialist, Gynaecologist, Paediatrician and Orthopaedician from AMRI hospital. The camp witnessed active participation from a total of 250 students, faculty, officers and staff members including their dependants.

IIT Bhubaneswar and AICTE Join Hands to Execute PM's Scholarship Scheme for J&K Students

24th Feb, 2020

The Indian Institute of Technology (IIT) Bhubaneswar signed a memorandum of understanding (MoU) with All India Council of Technical Education (AICTE) at New Delhi for providing a research internship and exposure to youth from Jammu and Kashmir studying in various AICTE accredited institutions under Prime Minister's Special Scholar Scheme to the field of science and technology. The MoU was signed between Dr. Anil Sahasrabudhe, Chairperson, AICTE and Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

The MoU was exchanged between officials of AICTE and Prof. V.R. Pedireddi, Dean, Student Affairs, IIT Bhubaneswar who represented the Institute in presence of Shri. Ramesh Pokhriyal, Hon'ble Union Minister of Education. Under this MoU, IIT Bhubaneswar will enrol students from Jammu and Kashmir for research internship at IIT Bhubaneswar with the objective to provide exposure to the youth from Jammu and Kashmir in the fields of academics, education and research.

On the occasion, the Shri. **Ramesh Pokhriyal, Hon'ble Union Minister of Education** expressed his happiness, he stated that the MoU will facilitate in providing the much needed exposure

to the youth from Jammu and Kashmir under Prime Minister's Special Scholar Scheme to the academic culture at Higher Learning Institutes of India. He further encouraged other IIT's also to be involved in this nation-building initiative.

The MoU includes academic, education and research collaboration. Under this IIT Bhubaneswar will be responsible for designing a detailed programme with popular science and engineering lectures from distinguished IIT Bhubaneswar faculty as well as guest faculty from outside IIT Bhubaneswar. The nature of the internship will primarily be research based. It will be conducted under various professors at the university. Besides, the Centres will also demonstrate advanced model experiments in their respective departments. The accommodation and food arrangements for these interns will be made in the various hostels of IIT Bhubaneswar. In addition the internship module will also cover Yoga, Sports Group Activities in line with the EAA activities of B.Tech program of the Institute along with heritage trips for making them aware about rich culture and traditions from the state of Odisha.

International Women's Day

8th March, 2020

International Women's Day is celebrated on **8th March** every year to celebrate the womanhood and is a time to reflect courage and determination by ordinary women who have played an extraordinary role in the history of their countries and communities. A three day programme starting from 6th March - 8th March, 2020 was organised at IIT Bhubaneswar by Women Welfare Committee (WWC), as part of International Women's day Celebration. This year's theme for International Women Day, "I am Generation Equality: Realizing Women's Rights." explores the way to mobilize global action to achieve gender equality and human rights of all women and girls. The Chief Guest of the event was **Dr. Sanghamitra Pati, Director, ICMR-Regional Medical Research Centre, Bhubaneswar**. The event was presided over by **Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar**.

Dr. Sanghamitra Pati, Director, ICMR-Regional Medical Research Centre, Bhubaneswar and Chief Guest of the evening expressed her heartiest congratulations to the students and faculties for toiling hard to reach IIT Bhubaneswar, the elite class and Institution of National Importance in the country along with special mention to Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar for his dynamic leadership and for being culturally oriented. She also expressed heartfelt congratulations to all the faculty members at IIT for moulding the best brains in the country. She emphasized that she is passionate about gender equity and not gender equality. She stressed that while women's rights are human rights, in these troubled times, the rights of women and girls are being reduced, restricted and reversed. She emphasized that only by empowering women and girls their rights can be protected and their full potential be ensured. She further added that gender equality has a transformative effect that is essential for fully functioning communities, societies and economies. She also talked about the disparity in health care when it comes to maternity care, so there is strong need to make this experience respectable, enjoyable and joyous. She further added that our country believes woman as the engine of growth and it is committed to advance the rise of women nationally and globally.

The celebration was a three day affair with a series of activities ranging from debate, poetry writing on first day followed by interesting talks. Also present at the event were **Dr. (Col) Subodh Kumar and Dr. Sankarsan Mohapatra, President, Student Gymkhana**. The event was followed by the illumination of the lamp, welcome address by **Dr. Remya Neelancherry, Chairperson, WWC, IIT Bhubaneswar**, prize distribution ceremony, cultural programs followed by vote of thanks.

IIT Bhubaneswar – Riding on Technology Edge in Covid-19 Crisis

21st March, 2020

The ongoing outbreak of Novel Corona Virus (COVID-19) globally is a matter of high concern. In India too, the concern is raised with the identification of a number of positive cases and also three causalities have been identified across the country. Indian Institute of Technology Bhubaneswar is committed to the health and welfare of its students and campsites and has taken up a number of proactive measures during the epidemic outbreak. However as the situation is not alarming in the state of Odisha, the Institute has maintained a collective stand to take all possible steps to counter the spread of the pandemic outbreak and to continue the academics through normal as well as live online streaming of the theory classes for its students in an innovative way as per the initiative of Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar.

Safety against the Coronavirus is of utmost importance, the Institute is taking all adequate precautionary steps to prevent exposure at its campus. The institute has put itself on high alert, took all the actions related to cancelling of all foreign travel, took steps like putting biometric attendance in abeyance, the hostel workers were asked to stay inside the campus, restricting movement to outside, maintaining sanitation of high standards and hygiene, thermal screening particularly of those coming into the campus, preparedness for right medical care and transitory isolation if any, procurement of related equipment's such as Thermal screening scanners, fumigation apparatus etc. Proper Sanitation of classrooms, tables, door handles, railings, dustbins is being strictly carried out and spraying of disinfectant is effectively been practised. In addition, the Institute had already organised awareness talks and circulated relevant information to all in the campus.

The Institute has observed the "Janata Curfew" to 100% in a spirited manner on 22nd March, 2020 inside its campus as lead and advocated by Shri. Narendra Modi, Hon'ble Prime Minister of India through his address to the nation. The campsites confined themselves to respective homes/ hostels, nobody moved out except for only three construction technicians going out due to medical urgency. A 5 min clapping and bell sound making etc., at 5 pm was made by the institute including the participation by the Director as called upon by the hon'ble Prime Minister. The institute has been also following all the guidelines issued by the Ministry of Personnel, Public Grievances and Pensions (DoPT) through MOE and the guidelines provided by the State Government are being strictly followed by the Institute.

Ek Bharat Shreshtha Bharat

During April, 2019 – March, 2020

The "Ek Bharat Shrestha Bharat (EBSB)" programme, is an idea of a sustained and structured cultural connect between denizens of different regions was mooted by Prime Minister Shri Narendra Modi during the Rashtriya Ekta Divas held on 31st October, 2015, to commemorate the birth anniversary of Sardar Vallabhbhai Patel. Hon'ble Prime Minister propounded that cultural diversity is a joy that ought to be celebrated through mutual interaction & reciprocity between people of different states and union territories so that a common spirit of understanding resonates throughout the country. All the 36 States/ union territories (UTs) in India have been sixteen paired for an entire year, during which they would carry out a structured engagement with one another in the spheres of language, literature, cuisine, festivals, cultural events, tourism etc.

India has diverse cultures and rich cultural heritage in each of them. The cultural exchange programs will help us admire and appreciate our cultures mutually and thus, build a sense of togetherness and bonding. National integration, irrespective of the regions that we hail from, is of vital importance since the key to our progress is hidden in our unity amidst our diversity. The spirit of mutual understanding amidst a shared history has enabled a special unity in diversity, which stands out as a tall flame of nationhood that needs to be nourished and cherished into the future.

Under able supervision of Director, Prof. R. V. Raja Kumar, IIT Bhubaneswar geared up fully responding to directive of MOE for this integrative initiative to celebrate the unity in diversity of our Nation and to sustain and toughen the fabric of traditionally existing emotional bonds between the people of our country. After completing organisation of sixteen informative cultural events of sixteen paired states during November 2017 to March 2019 in a spirited manner, IIT Bhubaneswar is organising the monthly celebration of EBSB

day with different paired state throughout the year starting with this event held on 15th February 2020. IIT Bhubaneswar has formed an EBSB club to conduct the regular EBSB activities and interact with students and faculty members of institute of higher education in the paired state.

On 15th February 2020, IIT Bhubaneswar has conducted the first EBSB day celebration in a grand way with the paired states of Odisha and Maharashtra. There was huge participation from all groups of IIT Bhubaneswar family. On this occasion, many performers including students, staffs, faculty and their family members from different age groups, cultures, and states participated in the social and cultural events of these paired states Odisha and Maharashtra. The programme started with informative video display, and slideshow showing the photographs with information depicting the history, culture, flora, fauna, heritage, art and craft of the paired states. Several beautiful Odia and Marathi songs were sung by students along with poetry recital. More than 300 audiences witnessed the brilliant event and appreciated the entertaining performances. NSS team has performed a beautiful skit on the theme of EBSB. In this event quiz completions based on the paired states at different level of difficulties for participants including students, staffs, faculty, residents of IIT Bhubaneswar were organised in the institute with the help of Quiz Club of IIT Bhubaneswar and winners were awarded on this occasion.

Prof. R.V. Rajakumar, Director, IIT Bhubaneswar inaugurated the first EBSB day celebration and appraised the audience the role of unity and the vision of being Ek Bharat Shrestha Bharat. He has expressed his pleasure with this initiative of MOE and congratulated the organising team for organising the event enthusiastically. Coordinator Dr. Rajesh Roshan Dash, and Co-ordinators Dr. Manaswani Behera, Dr. Seema Bahinipati and Dr. Sankarshan Mohapatro organised the event. Continuing this further, EBSB club has been celebrating EBSB day on second Saturday of every month by conducting quiz competitions, learning new words, discussing on the history of paired states. Students and faculty members of IIT Bhubaneswar (Odisha) has been interacting with students and faculty members of NITIE Mumbai (Maharashtra) on these EBSB days, in view of exchanging of culture between the paired states of Odisha and Maharashtra.

EAA Activity

Brief Report of EAA Activities 2019-20

- International day of Yoga
- Cleanliness drive
- Visit to Children's and Old-age Home
- Anti-plastic drive and Swachh Bharat Abhiyan
- Plantation drive
- Health camp
- Constitution day celebration
- Road safety awareness week
- Self-defence training
- Trekking
- Watering of plants
- Cleanliness drive
- Ek Bharat Shrestha Bharat skit
- Dr. B.R. Ambedkar celebration

Besides the above mentioned activities, the EAA students were regularly participating in Yoga classes and National Sports Organization activities. First year students were regularly attending Yoga classes on Friday and Saturday and were learning the benefits of Yoga from trained instructors. Yoga is compulsory for all first year students.

Similarly many first year students were actively participating in sports activities such as Football, Cricket, Badminton, Basketball, Volleyball, Table Tennis, Lawn Tennis and Track and Field events.

5th International Day of Yoga

The 5th International Day of Yoga was celebrated on 21st June 2019 at IIT Bhubaneswar with great enthusiasm and vigour. It was a three day program which commenced from 19th June, 2019 at the permanent Campus. Prof. R.V. Raja Kumar, Director, IIT Bhubaneswar with students, faculty, officers, staff and their family members actively participated in the event. The theme for 2019's International Yoga Day was 'Yoga for Harmony, Peace and Progress'.

Visit to Jeevan Jyothi Ashram

Fifty numbers of first year undergraduate EAA-NSS student volunteers of IIT Bhubaneswar, accompanied by EAA coordinators, visited Jeevan Jyothi Ashram on October 19th, 2019 as part of their National Service Scheme (NSS) activity. The Jeevan Jyothi Ashram run by the Jeevan Jyothi Charitable Trust is a Children and Old age home. The Ashram provides support and attends to the developmental needs of 75 underprivileged children. It also provides care and supports 15 senior citizens.

Health Camp at Argul High School, Haripur

The EAA-NSS team along with the UBA team organised a Health camp at Argul high school in Haripur panchayat area. About 200 people attended the camp wholeheartedly and drew benefits from the health camp. Our doctors conducted free health check-up for the attendees and based on their prescription, free medicines were provided to the villagers. A first-aid kit box was also gifted to the Sarpanch of Haripur Panchayat

Anti-Plastic and Cleanliness Drive on Gandhi Jayanthi

The EAA-NSS team along with the UBA team organised an Anti-plastic and cleanliness drive on the occasion of the 150th Gandhi Jayanthi. Students, staff and faculty members visited the nearby villages and created awareness about the harmful uses of plastic. The occasion was also marked by a cleanliness drive as part of the Swachh Bharat Abhiyan.

Self Defense Training Camp

The EAA-NSS volunteers along with the first year B.Tech. Girl students participated in a self-defense training camp organised in IIT Bhubaneswar with the help of 'Balaram defence school', Bhubaneswar. The students sharpened their skills under the supervision of the self-defence trainer, Mr. Balaram Naik, during the training session. The volunteers are hopeful to conduct such self-defence training programmes in the schools of our adopted villages.

Barunei Hill Trekking

The EAA-NSS team organised and participated in a trekking to the sacred Barunei Hill as part of the Fit India drive. Apart from the NSS volunteers a good number of first year enthusiasts also took part in this event. The occasion was also marked by a cleanliness drive around the temple premises at the foot hill as part of the Swach Bharat Abhiyan

Road Safety Awareness Week

IIT Bhubaneswar organised a 'Road Safety Awareness Drive' for creating awareness about safe riding and driving practices on the road. A cycle rally was organised by EAA-NSS team. The cycle rally was used to highlight the importance of physical fitness in everybody's life in line with the 'Fit India Campaign' launched by Shri. Narendra Modi, the Hon'ble Prime Minister of India. The Cycle rally started from the IIT Main Gate and the end point was the Sub-Registrar Office, Jatni, Khordha. More than 100 students, faculty and staff members participated in the cycle rally.

Watering of Plants in IIT Bhubaneswar

About 80 EAA-NSS volunteers participated in watering of plants inside IIT Bhubaneswar Campus under the guidance of the Institute horticulturist. The students brought their own bucket and mug and watered a stretch of 3 kilometers water the plants. Following watering, the students also removed unwanted weeds along the well maintained grass and plants.

Dr. Bhimrao Ramji Ambedkar Jayanti Celebration with Essay Competition

On the occasion of Dr. Bhimrao Ramji Ambedkar Jayanti (on 14th April 2020) NSS volunteers enthusiastically participated in an online essay competition to celebrate and commemorate the contribution of Shri B.R. Ambedkar to strengthen the foundation of modern India. Three topics given to the EAA-NSS volunteers:

a. Dr. B. R. Ambedkar and his vision for modern India
b. How to achieve social equality in the 21st century in India
c. Importance of technology for achieving social equality / social justice in India

All the NSS Students have participated in the competition with very well written essays on the above-mentioned topics.

Unnat Bharat Abhiyan Report

Brief Report of UBA Activities 2019-20

HEALTH and HYGIENE CAMP: These are conducted at regular intervals. Such a camp is organised on July 6, 2019 at Sundaria, Jajpur district of Odisha.

PAINTING AND QUIZ COMPETITION: A painting and quiz competition was organised at Khudupur Upper Primary School on August 10, 2019. Several kids participated in the competition and drew pictures related to our nation, such as national flag, national bird and recent news.


PLANTATION DRIVE AT ARUGUL HIGH SCHOOL: UBA and Horticulture department of the institute conducted a plantation drive in association with Youthbooth, a group of youth volunteers at Arugul High School on August 3, 2019.


CLEANLINESS DRIVE: On September 14, 2019, UBA team conducted a massive cleanliness and anti-single use plastic drive in the shops at Jatani and Arugul High School.


150TH GANDHI JAYANTI: As part of Swachhta Hi Seva campaign, cleaning of shops at the maingate is made. The volunteers then left for five nearby villages (adopted under UBA), and distributed specially designed degradable bags with messages NO TO SINGLE USE.


INTER-SCHOOL SPORTS: On November 16, 2019, the UBA Team organised an inter-school sports competition amongst the students of the schools from UBA-adopted villages. About 37 students participated in this event.

SANSKAR BARG: Weekly session of Yoga, story-telling at Khudupur and Kansapada were running till the breakout of COVID.

Service during Covid-19 to Migrant Workers

44 buses carrying migrant workers from their work places in different south Indian cities like Hyderabad, Bengaluru, Vijaywada, Chennai, Amarkantak and Thiruananthapuram to their homes in Odisha, West Bengal, Bihar, Kashmir and Jharkhand are stopped and 1008 packets of cooked and packed food and water are served to migrant workers. The first batch of distribution was led by the Director Prof R V Rajakumar himself at the National Highway No 16 near Khordha over bridge on the afternoon of 20 May 2020 amidst the spell of Cyclone Amphan. In the evening of the same day and on 21 May 2020, a team of volunteers continued the distribution near at the National highway.

Service to construction workers during COVID-19: The UBA cell of IIT Bhubaneswar in association with IIT community have served 1014 construction workers including 92 children and reached out to the family of a deceased worker with a token of financial assistance. They were engaged in building construction of IIT and are staying inside IIT Bhubaneswar campus. They were served with dry food, soaps and masks. Cookies are distributed to their children. 11 quintal Chuda (flattened rice), 6 quintal Sugar, 93 packets of Amul milk powder, 960 packets of Biscuit, 4750 pieces of Cookies, 1410 Soaps and 550 Masks were distributed. The required money was raised by voluntary donations from 56 people of IIT community. This includes a generous donation from Kalinga Renewable Energy manufacturers Pvt Ltd, Bhubaneswar.

Students' Activities

Technical Council

Neuromancers – The Programming Society

Workshops

- **Coding Blocks Workshop**

  A two day workshop on the fundamentals of Machine Learning using Python was conducted on 24th and 25th August 2019 by the coveted software training institute based in Delhi - Coding Blocks. Over 70 students registered and attended the same.

- **Introductory Coding Workshop**

  A workshop was held on 11th October 2019 for the first year students to introduce them to different paradigms of programming and how they can start with different areas of development. Solutions to the Hello Coding contest were discussed.

- **Crio.Do's micro-experiences**

  Neuromancers in association with a famed name in the field of software development training - Crio.Do, organized a three days long development based workshop. Essential skills of software development encompassing the know-how of RESTful APIs, testing tools like Postman and third-party API integration was explored in the micro-experience. Impressed with the immense participation and enthusiasm shown by students from our institute, Crio.Do has offered us to be an official learning partner in their endeavour. Under this program, the society receives access to four more development micro-experiences, exclusive passes for Crio.Do developer events and a sponsorship for conducting major competitions in IIT Bhubaneswar.

- **Introductory workshop on Open Source Development and Google Summer of Code program**

  A 2-hour introductory session was conducted on open source software development on January 16, 2020. The session emphasized on the application process of the prestigious summer program viz. Google Summer of Code 2020. Students who have already completed the said program in the past, presided over the meet. Aditya Pratap Singh and Aman Pratap Singh of fourth year and Vatsalya Choubey of third year guided the students through the entire process. Over 50 students attended the session.

- **Workshop on web-app development and deployment using NodeJS and Azure Cloud services**

  An introductory workshop was conducted by the society secretary, Aashay Palliwar for the first and second year students on January 4, 2020. The workshop was attended by over 65 students. The students got a taste of what it is like to develop a web-app that goes into production. They got hands-on experience with the intricacies involved in real life cloud-deployment processes. All the 65 students were given post-workshop support. Interested students were given guidance on how to proceed with web-app development.

- **Workshop Azure Cloud Computing**

  Jayesh Sharma, a second year member of the society conducted a two part workshop on cloud computing using the Azure Cloud Services. The workshop, which was held on January 26, 2020, was open for all students of IIT Bhubaneswar. Jayesh elucidated complicated topics such as backend development, containerisation of applications and many more. He also spoke about the trending technologies such as Docker and Kubernetes. The workshop was attended by over 60-70 enthusiastic students of our institute.

Participation in Competitions

- **Hello Coding! contest**

  An online coding contest was held on 7th September 2019 for the first year students to give them a taste of how competitive coding contests are and to introduce them to the concept of time-constrained problem solving. Over 80 participants tried their wit to solve 7 challenging questions on programming, data structures and algorithms.

- **Participation in ACM-ICPC 2019 preliminary round**

  Several teams participated in the International Collegiate Programming Contest 2019 online preliminary round. Team 'Champions' secured a rank of 507 among around 4000 teams that participated in the contest. Team 'Optimize prime' secured a rank of 622 and team 'Code Buster' secured 648th position in the same contest. A total of 4 teams have cleared it successfully and will go for onsite rounds of this prestigious programming contest in December 2019.

- **Participation in ACM-ICPC 2019 on-site rounds**

  The four teams that cleared the preliminary rounds participated in the on-site round of the prestigious programming contest. Exemplary performance was

shown by team Optimize prime comprising Hrishabh Yadav, Arooshi Verma and Rishabh Gupta. They secured 24th position amongst 99 strong contenders across the country.

- **Online coding challenges**

  First year members of the programming society showed exhilarating performance in the monthly Long Coding Challenges held on coveted online coding platform CodeChef. Sarthak Gupta, Agamya Yadav, Arpit Kesharwani, Anand Amar, Divyansh Agrawal and many other members consistently secured ranks in top 150 competing with coders all across India. This is the first time IIT Bhubaneswar is being seen in this bracket of ranks.

- **Google Hash Code 2020**

  Hash Code is a team programming competition, organized by Google, for students and professionals around the world. Teams pick a programming language and try to solve an engineering problem. This year's contest kicked off with an Online Qualification Round, where teams around the world competed remotely. Team from our institute comprising Arooshi Verma, Sourabha Bharadwaj and Hrishabh Yadav stood 7th in the entire nation and secured an International rank of 224.

- **Bosch's Route Optimization Algorithm at Inter IIT Tech Meet 2019**

  A team comprising of members from the programming society - Yash Raghuvanshi, Amabarish Banerjee, Sourabha Bharadwaj, Arooshi Verma and Hrishabh Yadav made IIT Bhubaneswar proud by bagging silver medal in the problem statement set by Bosch at the 8th Inter IIT Tech Meet.

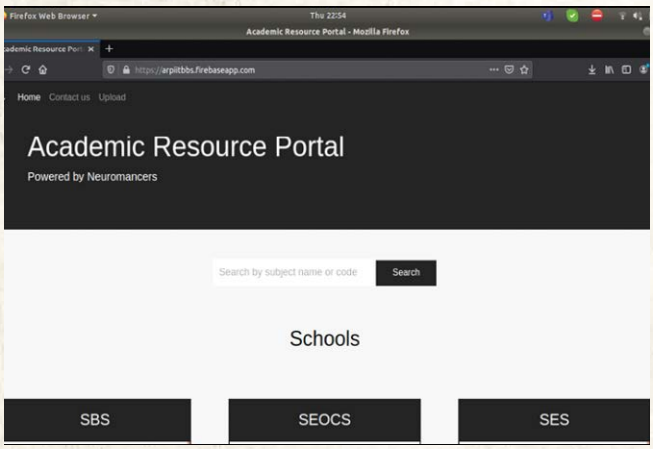
- **Coding Hackathon at Inter IIT Tech Meet 2019**

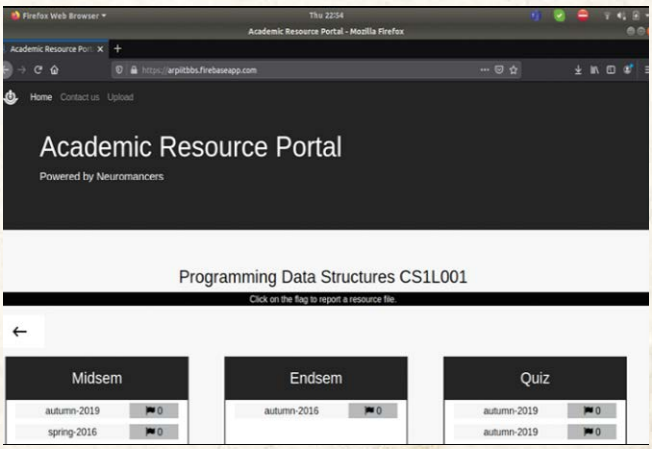
  The hackathon held at the 8th Inter IIT Tech Meet saw the participation of best teams from various IITs across the country. A team comprising Aditya Pal, Saksham Arneja, Madhav Tumalla and Aman Pratap Singh bagged second position in the prestigious competition. All these are senior members of the society and are bringing accolades from the tech meet for the second year in a row.

Projects

- **Academic Resource Portal**

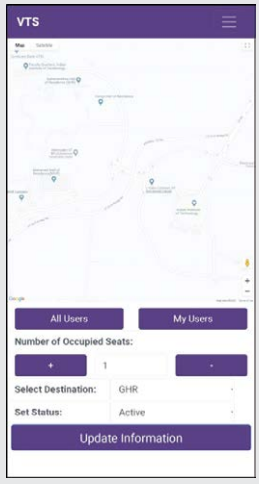
  The exclusive Academic Resource Portal was designed from scratch by the team led by Society governor Rishabh Gupta. The portal is a one-stop destination for students to share their academic resources with their pee Robust review functionality plans to keep it spam free. The portal is live on https://arpiitbbs.firebaseapp.com

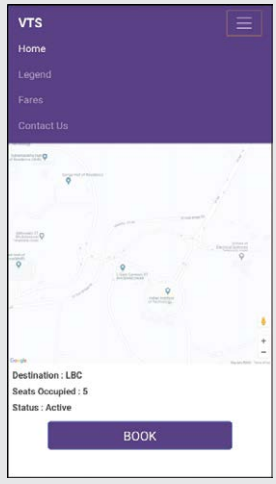




- **Vehicle Tracking System**

  A team led by the society governor Rishabh Gupta is developing a robust web application to track vehicles used by the student community of IIT Bhubaneswar for their daily commute. Our institute has a number of battery-operated vehicles and buses. In order to facilitate the students with real-time location and availability of various vehicles in the institute, the web-app is planned to be released in autumn 2020. The web-app is going to be migrated to native android/ios application after the feasibility testing in the coming semester.





- **Gymkhana Android app**

  The previously launched gymkhana app was completely revamped. A very innovative methodology was adopted by the society for development of this project. The development of this app is going on by the process of "learn & work". First years are being guided in the field of app development and they are being given a chance to have hands-on experience on the development of this app.

Community Strengthening Activities

- **Neuromancers' Winter Coding Bootcamp 2019**

  Neuromancers was successful in conducting a massive online remote program for the first year students in December 2019. Over 95 students from first year were mentored by the senior members of the society to get deep into coding. The program had three different tracks to suit students of different coding knowledge. The proper structured program helped neuromancers generate a good set of problems and roadmaps for equipping new students with preliminary to intermediate knowledge of data structures and algorithms.

- **Microsoft Student Partner Program**

  Two students from IIT Bhubaneswar - Aashay Palliwar and Jayesh Sharma received the prestigious opportunity to enter the student outreach and networking program by tech-giant Microsoft. As MSPs, these students received several perks including Azure cloud credits, learning opportunities, workshop material and immense networking opportunities. The two members of the programming society got a chance to attend the All India Microsoft Student Partner Summit at New Delhi on January 24, 2020. They could gain insights about new cloud technologies and connect with representatives of Coding Clubs of leading colleges of India.

- **The Roadmap initiative**

  Absence of structured guidelines for learning various programming and development topics has rendered the learning process for beginners very ineffective. To give an impetus to quick learning of various technologies, senior members of the society have taken up the task to formulate exhaustive and structured roadmaps that would have curated best resources and pointers available on the internet to learn the same. The Machine Learning roadmap is already released in the public domain. The roadmap was curated by third year members - Vatsalya Choubey, Aryaman Sinha and Sourabha Bharadwaj. On similar lines, the web-development, mobile-app development, cloud computing and DS-Algo roadmaps are under curation. These roadmaps are scheduled to be released at the beginning of Autumn 2020.

- **A new Induction Methodology**

  In order to make the programming society more inclusive and accessible, we have dumped the obsolete method of inducting members based on one coding competition. From spring 2020, a continuous assessment methodology is being employed for inductions. Student's performance and activity in frequent coding contests on standard platforms like CodeChef and CodeForces is now being given priority for induction. Students working exceptionally hard on personal projects based on software development are also being inducted.

- **Making the community stronger by inducting competent second and third year students**

  The society has decided to induct members from second and third year strictly based on their personal projects and special achievements. This would make sure that good quality students are not left out and contribute their part to the development of all.

- **Internal Mentorship Program**

  All the first years are being provided with permanent mentors from second years. These mentors make sure that the first year students do not face difficulty in learning new technologies and help them delegate their queries to the right people.

- **Outreach**

  In order to pitch for the activity and achievements of the society to the external world, we are in the process of launching our social media handles. This will give neuromancers an opportunity to showcase their know-how and reach out to alumni, prospective recruiters and collaborators in the near future.

- **Inter-college Collaboration and Knowledge Transfer**

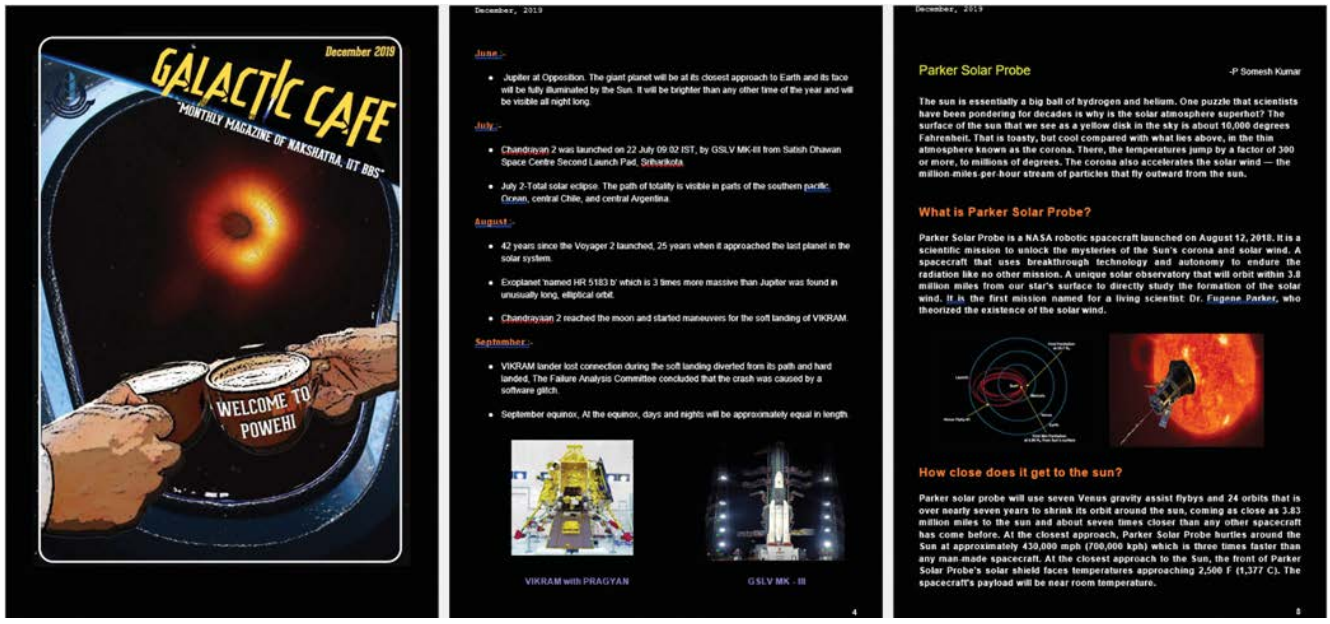
  Several teams from neuromancers are in constant touch with the members of coding clubs of 31 colleges across India including IITs, NITs, IIITs and private colleges like BITS, NSIT, NSEC, DTU, IGDTUW etc. Our aim is to study their coding culture and ideate good initiatives in IIT Bhubaneswar based on the inputs we get from this study. The society is in touch with Coding Clubs of IIT Patna, IIT Gandhinagar, KIIT, IIIT Bhubaneswar, IIT Dharwad and IIT Dhanbad to explore options of collaborating in the near future in terms of possible hackathons, coding contests and projects.

Nakshatra – Astronomical Society

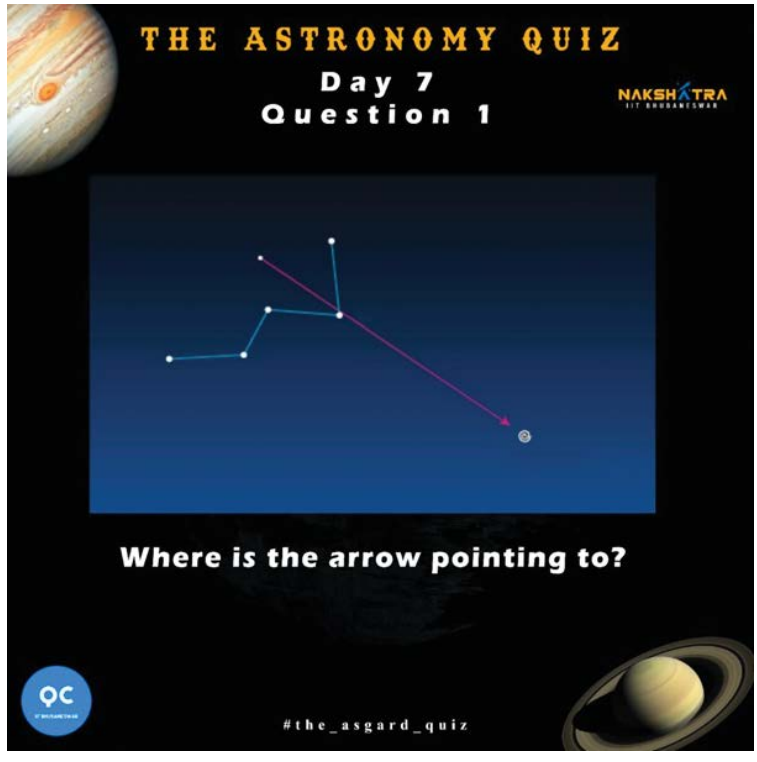
Activities

- Conducted an observation session for all the members in the campus by collaborating with NISER astronomy club on the event of ISS passing In front of Full moon.

- GALATIC CAFÉ the monthly newsletters which are being published and mailed every month; additionally, News column is added to the magazine.
- Inductions are taken on 19 October 2019 by conducting an online quiz and offline interview.
- Conducted Astro-presentation challenge for juniors in September.
- Regular Facebook and Instagram posts were being posted for astronomy updates.
- Participated in NSSC-19, IIT Kharagpur. (This we for the first time a team from first years got selected for NSSC.)
    i. Team consisting of 3 members cleared the first round of space quiz in top 8 position.
    ii. Team of 3 members got selected for final round of case study for which 24 teams got selected all over India.
    iii. Team of 2 people got selected for final round of paper presentation for which 21 teams got selected all over India.
- First internal workshop is held on 15-2-2020 how to handle the telescopes (both reflector and refractor).
- Second internal workshop and observation session is held on 9-3-2020 on the eve of “SUPER MOON”.
- Observation session is organized for faculty near faculty quarters in March 2020.



- Participating in COSNOVA-20 organized by NISER in Model making competition, Quiz and Extempore presentation.
- We are hoisting 4 events from Nakshatra in this year Innovation Challenge Case – Study Competition.
  I. Space Quiz.
  II. Observation Session on collaboration with NISER.
  III. Guest lecture.
- We hoisted "Asgard Quiz" online quiz competition by collaborating with QUIZ club of our Institute from 17-5-20 to 24-5-20. The top 3 were Haasika Raj, Omprakash Priyadarshi, Saipriya Agress.



RISC – Robotics and Intelligent Systems Club

Workshops

Arduino and Sensors Workshop

- The first workshop on Arduino and Sensors was conducted on 13th October 2019 to introduce the first years to the basic of Arduino programming and various sensors used with Arduino. The workshop was attended by 120 enthusiastic students who made it a great success.
- Students were introduced to the Arduino Uno microcontroller; various parts associated with it and their respective functions. Apart from the microcontroller, they were also introduced to two sensors: ultrasonic and IR; their working principles and how to write respective interfacing codes in the Arduino IDE. A brief introduction to motor driver module L298D, working of H-bridge circuit used in it and working of a servo motor was also given to the students. The corresponding Arduino code was shown parallelly while explaining each of the topics to the students through the GitHub platform.
- The students were made aware of the most commonly used functions in the Arduino IDE. Also, an additional library called NewPing was introduced to the students by which they can easily interface and use ultrasonic sensors for measuring distance.
- At the end of the workshop, students were asked to write code and make connections for dimming an LED proportional to the distance of the hand from the ultrasonic sensor as a part of the mini-project. An Arduino UNO and two sensors (IR and ultrasonic) including a breadboard were given to groups of three students for getting a hands-on experience of the same.

OPENCV Workshop

- A second workshop on - "OpenCV", which is an open source computer vision python library, was conducted on 9th February 2020 exclusively for the newly inducted first year members of RISC society.
- The workshop was primarily focused on teaching the basics of how to use OpenCV in python for image processing and manipulations. The participating members were first taught the basics of images - how to open images and display them, how image can be treated as a matrix and how to open the laptop camera in python and capture image from it.
- Then they were taught different operations which can be done on images - bitwise operations such as bitwise OR and bitwise AND on binary images, simple image thresholding, writing image kernel and morphological transformations which included erosion, dilation, opening and closing. The participating first year members did the coding in the Visual studio code IDE.

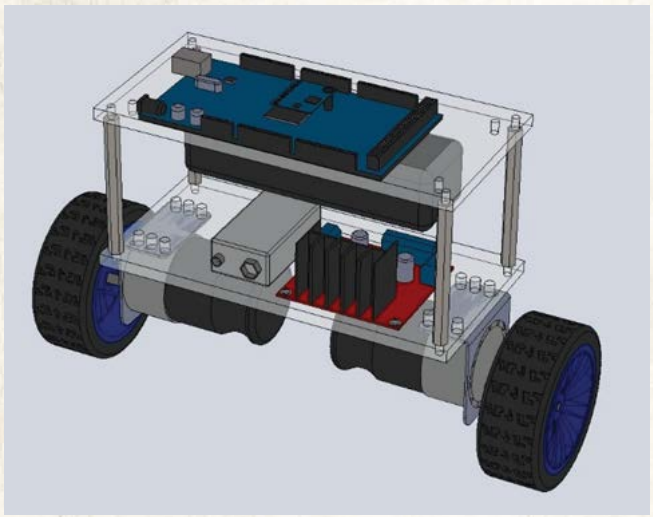
Semester Challenge

- A Semester Challenge named Box Maze was organised for the first-year undergraduate students to implement the knowledge they have learned from the 'Arduino and Sensors' workshop and also to explore more about Robotics.
- The challenge was to build an autonomous robot capable of getting out of a maze. It was a three-round competition among various teams formed by the enthusiastic 1st years out of which top two teams won the prizes. They explored new libraries used in Arduino and also sensors and motor drivers used with Arduino.
- The first round was pretty straight forward and the bot has to exit the arena having one exit point with a straight line-shaped wall in the middle of the arena which was completed by most of the teams. The second round was similar to the first round, the difference only being the shape of the wall which was T-shaped for the second round. For round 3 the bot was placed on the centre of the maze and it had to come out of it in minimum possible time. The participants used different approaches and developed creative ways to solve a maze. The teams who cleared all the rounds were asked to explain about the code and how they solved the problem. The top two teams were decided as the winners on the basis of time taken for each round, for teamwork and novelty of the bots.

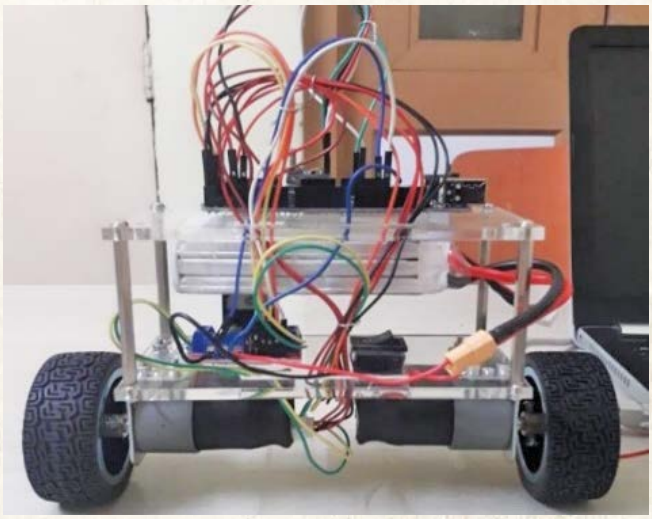
Projects

Self-balancing two-wheeled robot

- It is basically a bot capable of balancing on its own on two wheels and being maneuvered wirelessly through a remote control.
- The bot is equipped with an IMU sensor (MPU 6050) for sensing the tilt angle which will be used to calculate the required torque to be given to the motors. The raw data acquired from the accelerometer and gyroscope embedded in the sensor is first passed through a complementary filter and then used for further processing.
- Main components include Arduino Mega, two DC geared motors with incremental quadrature encoder, Motor driver, Xbee radio modules for wireless communication and MPU 6050. LQR controller is used for balancing the bot.
- The communication protocols used are I2C protocol for interfacing Mega with MPU 6050 sensor and UART protocol for establishing communication between the two Xbee modules (transmitter and receiver).



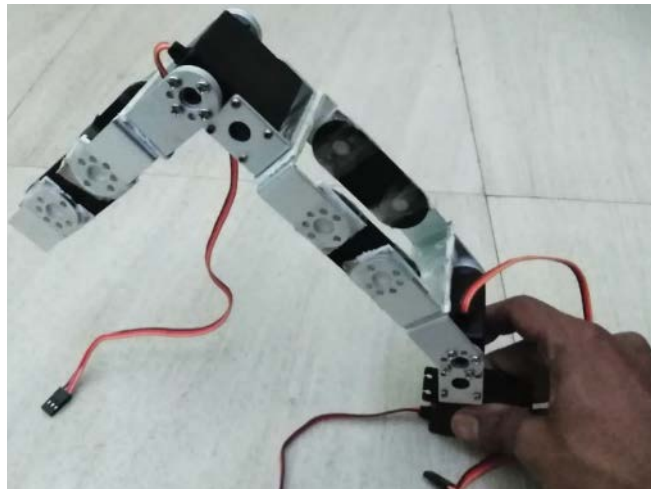
3d model of the bot



Actual bot under development

Virtual reality robotic arm

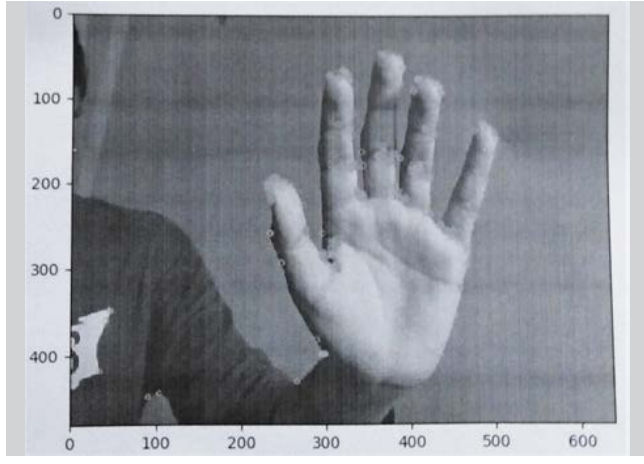
- A robotic arm is a type of mechanical arm, usually programmable, with similar functions to a human arm. The links of such a manipulator are connected by joints allowing either rotational motion or translational displacement.
- In this project we have tried to implement remote control in such a robotic arm. This will be achieved by using a Kinect sensor which will be used to produce a depth map of the user's hand. The sensor will send data pertaining to the tip of the user's hand to a virtual arm in Unity3d environment. It will communicate the coordinates of the tip of the arm to Arduino via serial communication.
- The microcontroller will then send this data to another microcontroller wirelessly which will move the real robotic arm in the same manner as that of virtual one via inverse kinematics code uploaded in the microcontroller.



Prototype model of the robotic arm

Voice-enabled wearable device for the mute

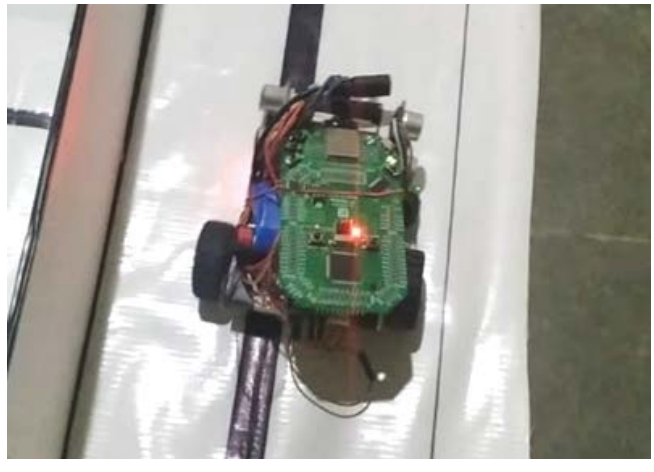
- The wearable device is capable of converting sign language used by mute people to text or voice by utilizing digital image processing techniques. The system consists of a webcam placed in front of the mute person; which will capture the gesture and map it to a previously stored word in the system. The mapped information is then translated to speech or displayed as a text as per user's choice.
- Main components used are camera sensor and a microcontroller. Feature extraction algorithms like canny, SIFT and grab cut algorithms are used for processing the captured image of the gesture.



Simulation results

Rapid rescue bot

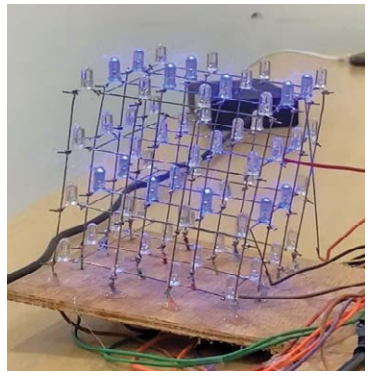
- Rapid rescue bot is a 3-wheeled bot which is modelled as a robot capable of rescuing people from a city in disaster such as flood or earthquake. The city in disaster is modelled as a line maze and the rescue zones are certain cells in the maze which are known beforehand. Shortest path algorithms and optimisation algorithms are implemented in the bot to rescue maximum number of people in minimum time. The bot is programmed using embedded C and is equipped with an IR sensor array for traversing the line maze.



Rapid rescue bot following the line pat

4x4x4 LED cube

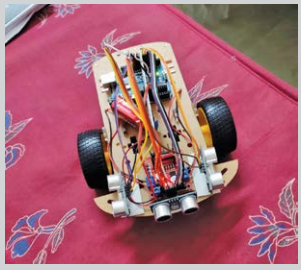
- LED cubes rely on an optical phenomenon called persistence of vision. If you flash an LED really fast, the image stays on your retina for a little while after the LED turns off. By flashing each layer of the cube one after another really fast, it gives the illusion of a 3D image; this is also called multiplexing.
- The LED cube has 64 LEDs with each LED dedicated to an IO port in a microcontroller. The cube is made up of 16 (anode) columns and 4 (cathode) layers; which are connected to the microcontroller (Arduino UNO) with a separate wire and can be controlled individually.



4x4x4 LED cube

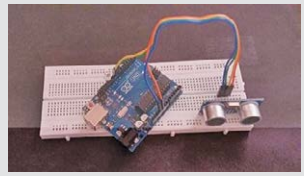
Wall follower robot

- A wall following robot is designed to move along a wall without hitting it. It has obstacle detection sensors mounted on the body which detects wall and drive DC motors attached to the wheels such that the robot keeps moving along the wall.



Motion detector

- It can detect any object which is moving within its range (here it is set to 50 cm). The LED will blink with constant brightness if any object comes in front of Ultrasonic sensor within the range.
- It can be used as security alert when combined with a siren.



About Open Day

Every year on **12th February**, Institute celebrates its Foundation day. To commemorate this special occasion, the idea of holding an **"Open Day"** within the Institute premise was first floated by the **Prof. R. V. Rajakumar**, Director IIT Bhubaneswar on the eve of **10th Foundation Day celebration** to inspire as well as to promote scientific talent among students at an early stage. Thus, Institute hosted its **first ever Open Day on 12th February 2018** and envisioned to continue this tradition every year as a part of **outreach activity**. Continuing

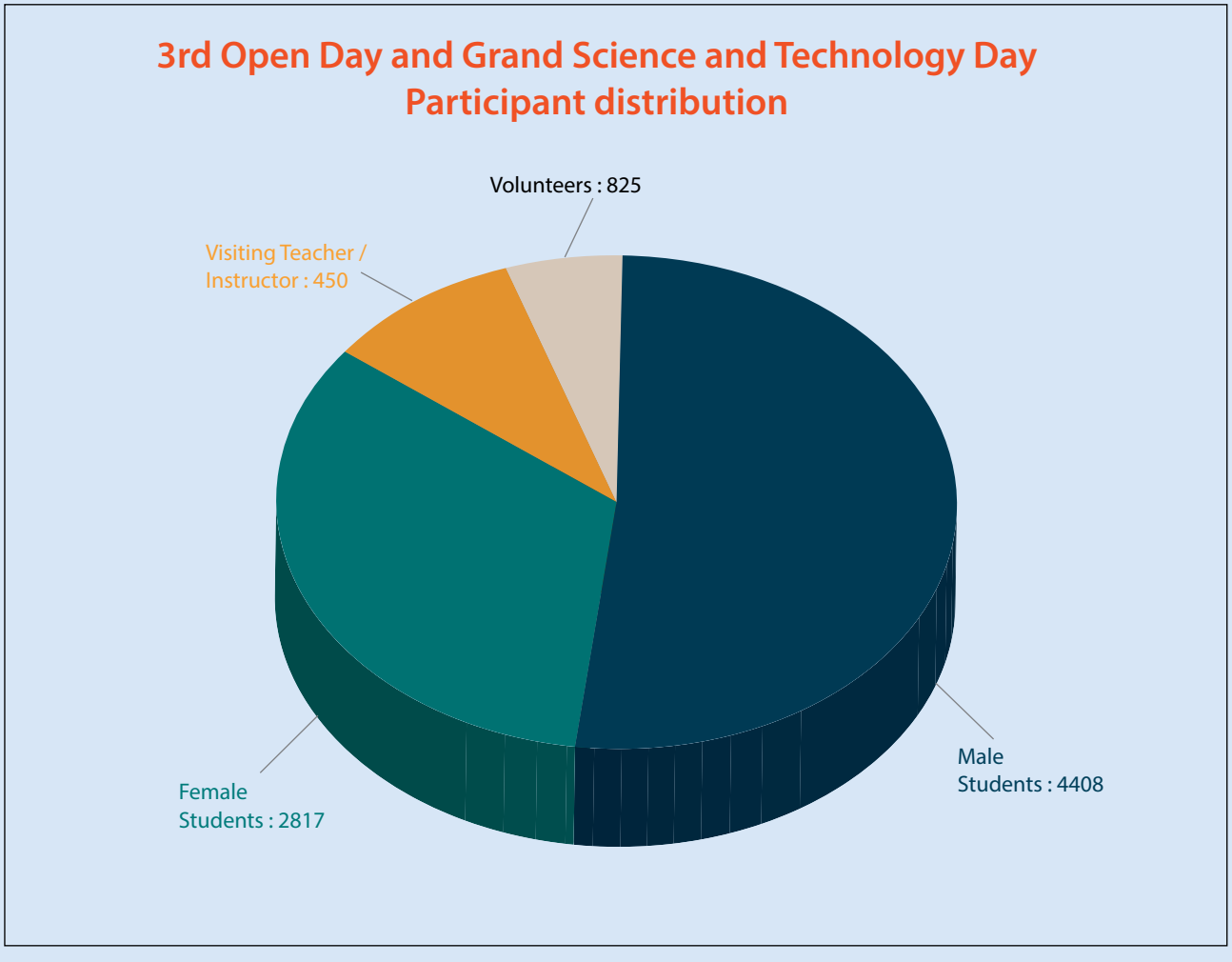
the tradition, the Institute is hosting its **3rd edition of Open Day** this year in a grand way, by inviting students of all school and colleges of **Science and Engineering** within the state of Odisha. This will be an **"Open for all"** platform, where Institute will showcase its latest science and technology prowess to the visiting students through easy to understand, and interactive sessions. Moreover, the visiting students will also gain unique perspective of science and technology by being inquisitive and voluntarily participating in the live experiments.

Open Day Grand Science and Technology Exhibition 2020

IIT Bhubaneswar organized the 3rd edition of Open Day and Grand Science and Technology Exhibition on 12th Feb 2020. A total of 8500 students from 167 Schools and colleges from across the different districts of Odisha have participated. The visiting students have interacted with a number of scholars, students and faculty members of IIT Bhubaneswar.

In this Grand exhibition, the Institute faculty and students showcased the science and technology initiatives undertaken in various areas, such as Energy, Materials, Healthcare, Engineering, Physics, Chemistry and Biosciences at IIT Bhubaneswar through simple, easy to understand 250+(232+20) live experiments and exhibits to the visiting students through easy to understand, and interactive sessions.

The motto was to promote and ignite the scientific learning curiosity among the students especially the girl child in particular, across all schools and colleges of Science and Engineering. It turned out to be an exciting and enriching experience for all the participating students. All the visiting students and volunteers were provided with hygienic lunch using contributions from several sponsors and Institute end. 8500 students from various schools and colleges participated in this programme. The visiting students gain unique experience of science and technology exhibition by voluntarily participating in the live experiment.



A detailed of the breakup of the participants is as follows:

4408 **Male Students**	2817 **Female Students**
450 **Visiting Teacher/Instructor**	825 **Volunteers**

8500 **Total**

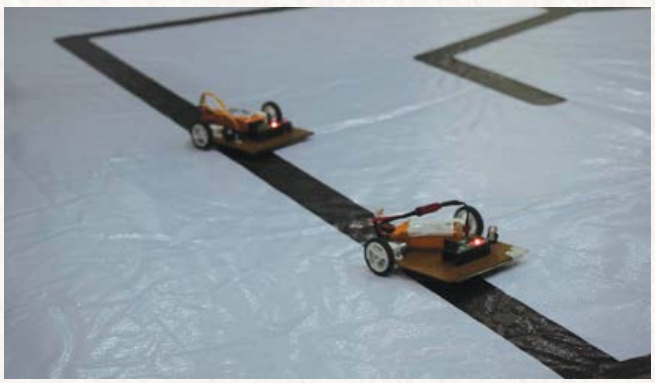
A total of **167 Schools/ colleges** have participated in **the Grand Science and Technology Exhibition** besides a number of students on individual capacity along with their parents/guardian.

Yanthrix Competitions

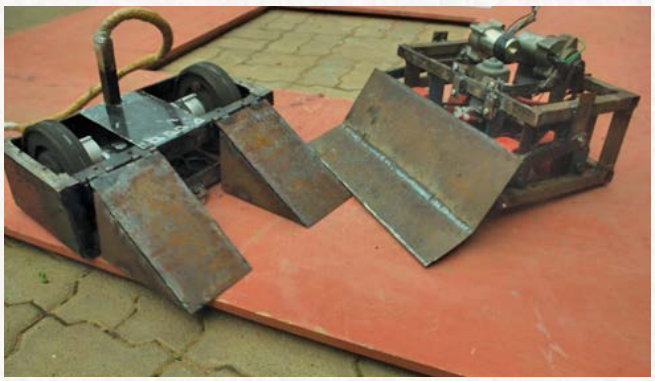
The society is responsible for conducting many technical competitions as a part of Wissenaire under the banner of Yanthrix. The competitions conducted by the society under Yanthrix are:

Trekkon: Trekkon is a bot challenge in which participants are supposed to make an all-terrain vehicle capable of taking sharp turns, climbing a hill, moving precisely in a straight line and jumping from a height. The main task of this competition is to transport objects in such a harsh and unfavorable environment. The task given to the teams was to transport an object from point A to point B traversing the arena with some ups and downs.

Maze Solver: Maze solver is an autonomous bot challenge. The event is all about developing an autonomous bot that can track path and challenge cutting edges with maximum precision and be able to run on a complex track with time constraints. The main task of this event was to build an autonomous bot that can follow a black line and keep track of the directions while going through the maze and should be able to return to the start in minimum time.

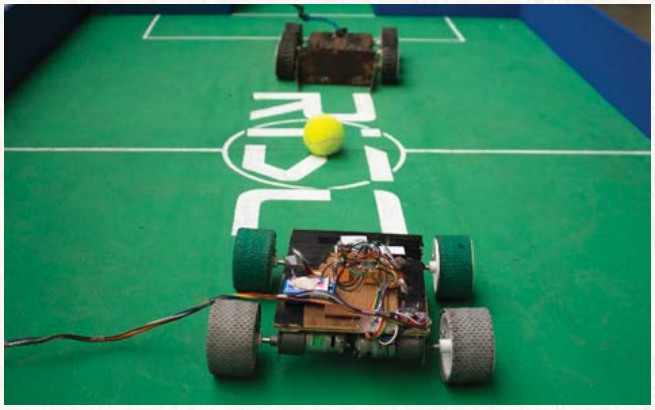


RoboWars: As the name suggests in this event participants have to make a manually controlled robot which will combat against the opponent robot and defeat it within a specified amount of time. The competition had three rounds - qualifiers, semifinals and finals. Each participating team had a maximum of five members.



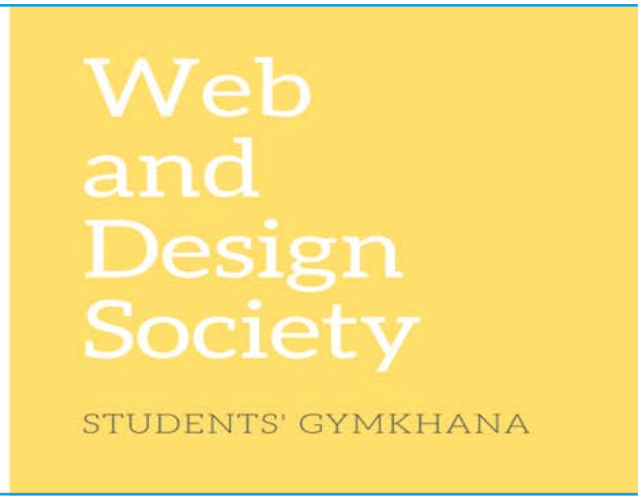
Drone Challenge: The drone challenge is the latest event to yanthrix which is added in wissenaire'20. This was the first edition of the drone challenge and the event was about creating a wireless drone that could carry and drop an object from one place to another through an obstacle course in minimum time without crashing. This competition tested the drone's speed, manoeuvrability, and weight.

Kick-off: Kick-off is a robot-soccer competition where contestants have to build a manually controlled bot which is capable of shooting goals and defending the ball from the opponents in a knockout match. The event had three rounds - qualifiers, knock out and finals. Each participating team had a maximum of five members.



- The robotics club holds it's inductions twice a year and is open to all students, irrespective of branch or year. It is a two-step process: An exam is conducted first on basic, relevant topics after which, a personal interview round is held along with senior society members. A second induction is held keeping in mind the time-tables of all students and the courses available to them.
- One student won 1st prize and two students won 2nd prize in RoboQuiz conducted by NIT Raipur.
- All the students of the society actively participated in E-Yantra Quiz Competition. 8 teams have qualified for the stage 1, each team has been assigned a project by E-Yantra. 3 teams qualified for stage 2 (provided with the full robotic kit from MOE) and reached the final stage of the competition.
- Due to exceptional situations caused by COVID-19, a robotics competition named MANOEUVRE in Techkriti 20 by IIT Kanpur got cancelled which was supposed to held in March. A team was ready with their project for the competition.
- Being one of the most technically advanced societies in the campus, with our members working on some really cool and disruptive projects, we are bound to have some valuable and useful information which we feel every student must have. The society achieves this through Facebook posts on its official page which share interesting facts, information and developments in the field of robotics. The society believes in the personal touch and every article is therefore written by society members itself so as to encourage a culture of authenticity and professional writing within the society too.

Webnd – Web and Design Society



Posters and Designs

- Designed Anti-ragging posters
- Designed Posters for Independence Day and Republic Day
- Supplied some design options For Inter IIT sports jersey
- Designed and supplied the Aswamedha logo, Innovation challenge logo and Neuromancers logo
- Supplied customised banner designs based on different schools for new institute website
- Designed posters for spic macay

Workshop

Organised a beginners' workshop for freshers to provide them with basic information about Web Development

Web Work

- Developed and maintained the website for Innovation Challenge 2020
- Formed an organisation on github for future collaboration among members on any web development project

Competitions Organised

- Organised an online poster making competition in association with 'Souls for Solace' about Spreading Covid 19 awareness among people using facebook handle

Miscellaneous

- Facebook page for the society was started to showcase and publish the works of fellow members

ONGOING WORK: Development of a Reseller website

8th Inter IIT Tech Meet Report:

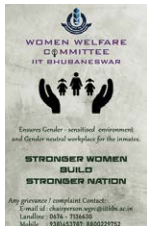
Overall Performance:

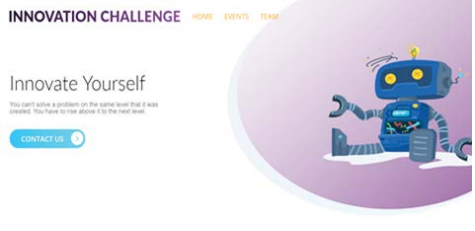
Summary of IIT Bhubaneswar in Inter IIT Tech Meet 8.0

- Overall Position: 13th
- Total Score: 1005
- Gold Medals: 01
- Silver Medals: 02
- Bronze Medals: 01

Individual Performance

- **BARC Outreach exercise for new Technology ideas in TV Audience Measurement :** Bronze medal
- **Coding Hackathon :** Silver Medal
- **BOSCH's Route Optimization Algorithm :** Silver medal
- **Ashoka's Tech for Change Challenge :** Gold Medal





CLIX – Photography Society

Improving the photography skills of the society members by covering events and by participating in competitions was our main motive.

- **Event Coverage**

  In the whole year there were many events covered by our members. All campus events were covered. This year we also covered events conducted by CDC (Career Development Cell) and meetings conducted by companies.

- **Participation in Competitions**

  This year our society members participated in various competitions conducted by different colleges like IITs, NITs, BITS etc.

- **Inter-IIT Coverage**

  This year for the first time our society covered an Inter-IIT competition. All the competitions which happened in IIT Bhubaneswar were covered by Clix.

- **Facebook Closed Group**

  The closed Facebook group of Clix is very much active this year. Not only fresher's, many seniors were also active this year.

- **Conducting Workshops**

  Two workshops were conducted for freshers in our society on DSLR Handling in 1st semester and on Editing in 2nd semester.

  These workshops were successful and helped new members to learn many things.

- **Competitions**

  Two online photography challenges which were open to all the students of IIT Bhubaneswar were organized.

  - Photowalk – Nandankanan Zoo- A photowalk was conducted to Nandankanan Zoo on 15th February to teach the freshers about different themes of photography.
  - Fortnight competitions- Fortnight competitions were conducted to the inducted members for improving their skills.

- **Winter Assignment**

  Freshers were given the winter assignment in December holidays. We gave a total of 5 themes as a part of assignment so that they can improve their skills by working on those themes

- **Fests Coverage**

  All the three fests of IIT Bhubaneswar were completely covered by CLIX.

Achievements

1. Won 1st Position in Anwesha 2019 Fest, Macro Photography competition of IIT Patna.
2. Fotomela 2020 ISM Dhanbad- Photo featured- Naresh Chowdary.
3. Won 2nd position in Siniti Photo contest conducted by VNR VJIET.
4. Clixathon IITBBS 2019- 1st position Harsha Vardhan – 2nd position Sravani.

Socio - Cultural Council

Kalakriti - Fine Arts Society

- Kalakriti released its e-magazine "ARTFOLIO" issue throughout the year, in every issue of ARTFOLIO we introduced to the student community a different form of art.
  - Artfolio issue 6: Soap carving was released on August 16th, 2019.
  - Artfolio issue 7: Water color was released on December 16th, 2019.
- An event "Inktober "was organized in the month of October for the Society members to improve their artworks with pen as medium.
- Kalakriti in association with the hostel council organized Ganesh Chaturthi in respective hostels.
- Various paintings and Sketching were done by the society members on the occasion of Gandhi jayanti.
- Kalakriti had its inductions on October 13th 2019, starting from 9AM, in LBC room no 102.
- Kalakriti organised competitions on Rashtriya Ekta Diwas which included sketching competition and painting competition.
- Kalakriti organized the Diwali celebrations in the Community Centre on 27th October.
- Kalakriti participated in spring fest, the cultural fest of IIT Kharagpur held from 24th to 26th of January, with a contingent size of 10 and ranked 1st in Finger painting, ranked in Top 10 in Sketching, Painting and Face painting.
- Kalakriti also actively participated in various fine arts events held during Alma Fiesta and secured 1st, 2nd and 3rd positions in Sketching competition, 2nd and 3rd positions in face painting competition.
- Kalakriti participated in a painting competition conducted on the day of Mathribasha diwas and secured 2nd and 3rd positions.
- Kalakriti participated in Heritage Fest competition conducted by Gauranga Seva Foundation and secured 1st, 2nd and 3rd positions in painting competition.
- Kalakriti secured 2nd and 3rd positions in a painting competition conducted by women welfare club on women's day.

- Kalakriti organized a workshop on charcoal and graphite sketching for the members of the society.
- Kalakriti in association with Souls for Solace society, had organized a competition "INKORONA "to raise the awareness regarding COVID 19 pandemic.
- Kalakriti in association with Wissenaire, organized a fundraising event "Do4nation ", to raise funds for PM CARES in order to fight the COVID 19 pandemic.

Achievements

SPRING FEST

- **1st position** in Finger Painting competition.
- **TOP 10 position** in Sketching competition.
- **TOP 10 position** in Painting competition.
- **TOP 10 position** in Face Painting competition.

ALMA FIESTA 2020

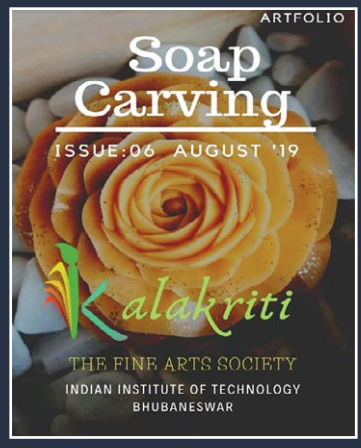
- **1st, 2nd and 3rd positions** in Shadez (Sketching competition).
- **2nd and 3rd positions** in face painting competition.

MATHRIBASHA DIWAS

- **2nd and 3rd** positions in painting competition.
- **HERITAGE FEST** (by Gauranga Seva Foundation)
- **1st, 2nd and 3rd** in painting competition.

WOMEN'S DAY

- **2nd and 3rd** positions in painting competition.



AAROH – Music Society

- With the starting of the autumn semester, the society performed the national anthem and the national song at the inauguration of the new hostels.
- On the occasion of Independence Day society members performed patriotic songs.
- One of the best performances of the society was given during the convocation ceremony, and was appreciated by both students and faculty members.
- The Society Introductions for the fresher's was organized on 19th October.
- The society gave a small performance at the TEDx event organized at the institute.
- All the society members from First Year participated in the band competition at Alma Fiesta.
- In this tenure we witnessed one of the biggest achievements by any society in our gymkhana history when the Music Society grabbed the 2nd prize in the classical band competition at Spring Fest, IIT Kharagpur.
- On the occasion of Foundation Day society members performed national anthem and the national song.
- A solo singing competition was organized on the occasion of Matribhasha Diwas.

In coming months, the society is looking forward to give a great performance in Spring Productions and to participate in various competitions in and around Bhubaneswar.

Achievements

1. 2nd prize in classical band competition at Spring Fest, IIT Kharagpur.
2. 3rd rank in acoustic band competition at Alma Fiesta.
3. 4th rank in solo singing competition at Alma Fiesta.

The Fourth Wall – Dramatics Society

- Dramatic society has participated in fests of various colleges this year.
- The society apart from fests have even participated in many online competitions.
- The members of the society have even collaborated with the Cinematic society of IIT Bhubaneswar to make the short film on the occasion of Women's day.
- The society has even actively participated in the Annual Cultural fest of IIT BBS (Alma Fiesta) in various competitions comprising Stage play events and monologues.
- The society has even collaborated with Real Me, India and have made 14 monologues, a short advertisement for the Real Me pro 7 phone and 14 unboxing videos.
- The society has even done 3 in campus productions and 1 production was scheduled in the month of April, which was unfortunately cancelled due to COVID 19 Pandemic.
- The society has actively participated in the EBSB programs performing monologues on the theme.
- The society even performed on the occasion of Women's Day.
- The society has performed on stage monologues on the occasion of Matribhasha Divas.
- The society apart from hindi plays has even done an English play for in campus production to involve more and more audience to enjoy the performance.
- The Society has even participated in the Spring Fest 2020 at IIT Kharagpur for monologues and stage play.
- The society has circulated various posters and trailers for some of the stage plays to attract more and more audience.
- The society has even collaborated with the Delhi University, which holds the group of likeminded students organizing the World's largest street play competitions to perform Nukkad in some malls in the city.
- The society has even started its own Instagram page to showcase the various activities undertaken by the society.
- The society has successfully procured many musical instruments for street play events.

Achievements

- The society stood 7th out of 35+ teams in the Stage play event at Spring Fest 2020 at IIT Kharagpur.
- The society won 2nd prize in the monologue competition organized by Alma Fiesta.
- The society won 3rd prize in the stage play event organized by Alma Fiesta.
- The society won the online recognition for participation in the Real Me competition.
- The society got a trophy from the honorable Director Sir for the stage play performance on the occasion of Foundation Day.
- One monologue on social distancing and stay home message procured 1st position in Bharuch district in competition organized by the government of Gujarat.

D-GANG – Dance Society

- The Introduction to the freshers was given which was one of the best intros by the society.
- After taking the inductions for the freshers, a workshop on the form "locking" was conducted by the seniors of the society.
- All the society members participated in the group dance competition at Alma Fiesta.
- For the first time in association with Wissenaire, a flash mob was performed at Esplanade which had a great response from the students and as well as the
- The dance society participated in almost all the local college fests and also participated in Spring Fest'20.

We worked really very hard for these competitions and our achievements were remarkable this year.

- On the occasion of Foundation Day, society members performed a sequence which was appreciated by the administration as well.
- A solo Dance competition was organized as a part of the quarantine with the title Quarantine Dance Challenge.

The society is looking forward to give a great performance in Spring Productions and to participate in various competitions in and around Bhubaneswar.

Achievements

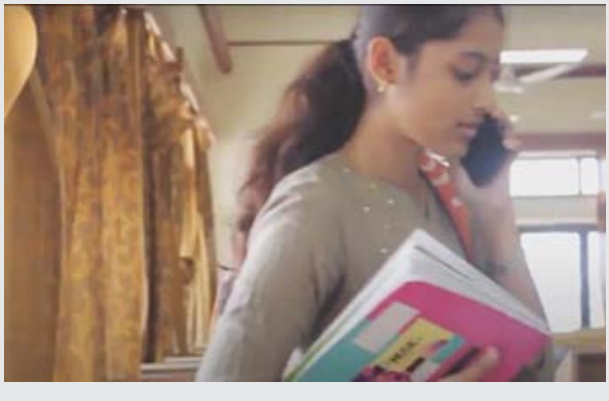
1. Winners in group dance competition at Xtacy, CET Bhubaneswar.
2. 1st Runner Up in group dance competition at Chiasma4.0, AIIMS Bhubaneswar.
3. 2nd Runner Up in group dance competition at Alma Fiesta
4. 3rd Runner Up in group dance competition at Advaita, IIIT Bhubaneswar.

CINEWAVE – Cinematics Society

- An introduction video was made with vfx for the freshers which attracted many people.
- We conducted workshops on editing software like premiere pro for all the freshers.
- All the event coverages were made by the society for ALMA FIESTA, WISSENAIRE and E-SUMMIT and also for institute events like UNITY RUN, RASHTRIYA EKTA DIWAS, and INDEPENDENCE DAY etc.
- All the inter IIT sports meet video coverage was taken care by cinewave and also made a video comprising all sports.
- Script writing competition was conducted for all to encourage creative ideas from them.
- We cooperated for the performing societies AAROH, D-GANG, THE FOURTH WALL for their videos to get posted in social media.
- We procured an audio recorder from Student's Gymkhana which helps in further improvement of the society and a camera has got approved.
- A workshop has been conducted for the newly inducted members of cinewave on camera handling.
- Cinewave participated in competitions like FMC WEEKEND, AAINA etc and has gained good positions in some of them.
- We made short films like THE FOREBODING, DOPEY DETECTIVE etc which are new kind of its genre and received an overwhelming response from the viewers.

Achievements

1. 2 films are selected for the national top 20 in AAINA film festival.
   - 1st position -WWC, IIT Bhubaneswar
   - 2nd position-WWC, IIT Bhubaneswar

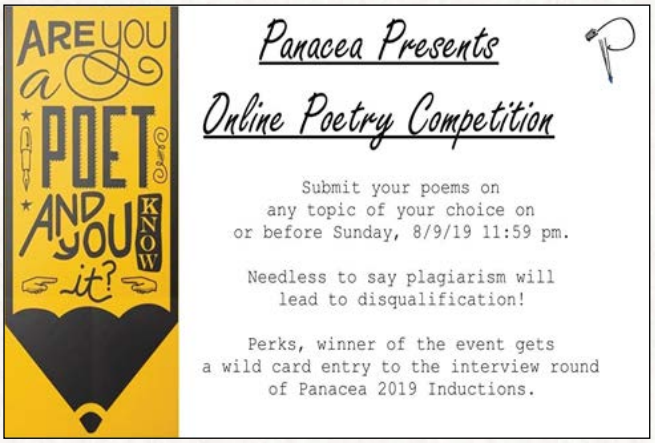


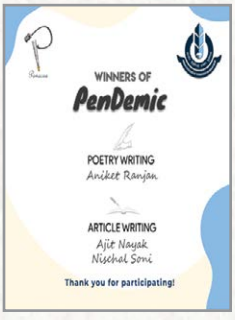
PANACEA – English Literary Society

Events / Workshops Conducted / Participated in

- Prior to inductions, Panacea held 3 online events: Nanotale writing, Poetry writing, historic re-writing, which saw good response amongst the 1st years.
- Panacea conducted its first edition of an annual intra college Parliamentary Debate workshop cum PD in October 2019 and Sourav Kumar secured the 2nd place
- Ritik Roy won the Best Delegate award at Bhawanipur Education Society College Model United Nations Kolkata.
- Panacea organized a debate on the occasion of MatraBhasha which saw positive responses from participation amongst PhD scholars as well. The 1st place was secured by Debadrita Das and the 2nd place was secured by G Chaithali.
- Panacea also covered the events of the 54th Inter IIT Sports Meet in its venue which was co-hosted by IIT Kharagpur and IIT Bhubaneswar.
- On the occasion of Women's Day, a debate was co organised by the Women Welfare committee and Panacea, the winners of which were Nischal Soni and Abhinav.
- Apart from this, a cultural general championship debate was organized as well.
- Panacea co-organized one of the biggest Model United Nations, IIT Bhubaneswar Model United Nations with Alma Fiesta. The event had close to 100 participants across the city of Bhubaneswar, Kolkata and Rourkela.
- Results of IIT Kharagpur Spring Fest 2020, January – Debadrita Das (Finalist: Slam Poetry), Dhruv Ray, Ganesh Ram Koushik (Top 10 in jumble the good word)
- Results of AIIMS Chiasma – Sourav Kumar (1st place: Devil's Advocate event)
- During the on-going COVID-19 Pandemic, Panacea organized a series on online events under "Pendemic", open to all its students. Ajit Nayak and Nishchal Soni secured the first and second places respectively in article writing. Aniket Ranjan secured the 1st place in poetry event.
- In Addition to this, Panacea has been actively writing articles on its blogs covering a wide range of socio-economic and political agendas, the likes of which have been lauded by the students. Few notable ones include, "Justice for Nirbhaya", "Political Fiasco in Maharashtra" and "Pyramid Scheme".
- Finally, Panacea has also contributed towards providing a platform for the people of IIT Bhubaneswar (staffs, workers, alumni, professors, etc) to voice out their opinions by collaborating with Clix on the Humans of IIT Bhubaneswar Facebook page.

Highlights of Events 2019-2020





Quiz Club

Conduction of Quiz Sessions

In addition to informal practice sessions hosted in campus, the following formal events were held:

- On the occasion of Ganesh Chaturthi, "Vyuha – The Ancient India and Mythology Quiz" was conducted on September 2nd, 2019 in GHR.
- "IGNITION – The General Quiz" was conducted on September 7th, 2019 and it saw a positive response, especially from the freshers.
- A General Quiz Session was held as a part of Inductions for the Freshers on October 19th, 2019.
- An India Quiz was conducted as a part of the Rashtriya Ekta Diwas celebrations on October 27th, 2019.
- In collaboration with Chai Pe Quiz - The Cochin Quiz Club, the Bhubaneswar chapter of "Chai Pe Challenge - 2020" was conducted on January 28th, 2020.
- An India Quiz, as a part of Ek Bharat Shrestha Bharat celebrations was conducted on February 8th, 2020.
- A Literature Quiz was conducted as a part of the Matribhasha Diwas celebrations on February 19th, 2020.
- In collaboration with the Women's Welfare Committee of IIT Bhubaneswar, a Quiz Competition (Theme: General, Women's History) was conducted as a part of the International Women's Day celebrations on March 3rd, 2020.
- A General Quiz was conducted in GHR on March 14th, 2020 as a part of GHR Hostel Day Celebrations.
- From 19th to 31st March 2020, "The #Bored_In_Quarantine Challenge", an Online Quiz Competition was run on Social Media, which saw excellent participation.
- Two other Online Quizzes were conducted – "The Epic Quiz – Ramayan" on April 3rd, 2020 and "The IPL Quiz" on April 13th, 2020.
- Quiz Club collaborated with Dare2Compete in organising "Twenty-in Quarantino – The General Quiz" as a part of "Online Quizzing Festival 2020" on April 23rd, 2020 on Dare2Compete. It saw more than 10,000 teams taking part.
- A Business Quiz was conducted by the Quiz Club during E-Summit 2020. The club actively participated in and volunteered during the Quizzes at Alma Fiesta 2020 and Wissenaire 2020 for their respective smooth conduction.

Participation in Competitions

- In the 2019 edition of the The World Quizzing Championships conducted by The International Quizzing Association, Sarthak Patnaik secured an International Quizzing Rank of 17 in the Under - 20 Category and 1718 in the Open Category.
- Orissa Post conducted Mettle Meet 2019, an All Odisha Quiz Competition on 3rd and 4th August 2019, in Bhubaneswar. The team consisting of Amal Mathew James, Pritom Sarma, Sarthak Patnaik and Rahul Rajeev came 3rd in the Prelims and 5th in the finals among all college teams in Odisha.
- In Spring Fest 2020 at IIT Kharagpur, the team of Amal Mathew James, Sarthak Patnaik, Lynette Dias and Pritom Sarma secured the 5th position in the Sports + Entertainment Quiz and 8th Position in the General Quiz, after qualifying the Prelims in both.
- Sarthak Patnaik and Pritom Sarma secured 2nd position in the Science and Technology Quiz conducted by Doordarshan. It was aired on television.
- Sarthak Patnaik secured the 3rd place in "Qurious – The Open General Quiz" during Perception 2020 at CET Bhubaneswar and 3rd place in the SciTechBiz Quiz during Chiasma 4.0 at AIIMS Bhubaneswar.
- The club also participated in Quizzicus Indica – The India Quiz conducted by Odisha Quizzing Association and XIM Bhubaneswar, UDGHOSH by KIIT University, Quiz Fest at Silicon Institute of Technology, Quizzes at Advaita (IIIT Bhubaneswar) among others.
- Pritom Sarma and Lynette Dias secured the 1st place in the DC-Marvel Quiz conducted during Alma Fiesta.
- Prakshal Jain, Satya Sangram Mishra and Nitish Kumar won the 2nd place in the SciTechBiz Quiz conducted by Q4Quizzing during Wissenaire 2020.

Highlights of Quiz Sessions

International Women's Day Quiz

Chai Pe Challenge - 2020

IGNITION - The General Quiz

India Quiz During Rashtriya Ekta Diwas

ABHIVYAKTI – Hindi Literary Society

Events / Workshops Conducted / Participated In

- Abhivyakti conducted its annual Hindi Pakhwada during September 2019 which saw good participation.
- Abhivyakti, co-organised the Hindi Poetry Slam event with Alma Fiesta, the annual cultural festival of IIT Bhubaneswar.
- Members of the society also participated in Spring Fest IIT Kharagpur.
- Abhivyakti also conducted an intra-college Hindi Debate Competition where participants actively took part in great numbers.
- Online article writing event was also conducted in addition to this.

- Apart from this, the Hindi literary society has also been active on its Facebook page and indulge in poetry and article writings.

Souls for Soulace: Social Welfare Society

Activities

- Souls for Solace, with NSS and team of Unnat Bharat Abhiyaan organised the Health & Hygiene camp in Haripur Panchayat office on 8th September.
- Two doctors of IIT Bhubaneswar completed the check-up of about 200+ villagers and they were supplied with the proper medication.

- A Cleanliness drive along with the awareness program was also conducted under Swachh Bharat campaign on 8th September.

- Souls for Solace Society, the social welfare society of Students Gymkhana, IIT Bhubaneswar organized UMEED-The Blood donation camp at its Community Centre located in its Campus on 26th October 2019. Also present at the event were Prof. V.R. Pedireddi, Dean Student Affairs and Dr. Sankarsan Mahapatro, President, Student Gymkhana, IIT Bhubaneswar.
- The drive saw close to 264 students, faculty and staff members coming together in large nos. to donate blood for a noble cause. Volunteers helped the people and gave moral support to the people donating blood. Donors were provided with a certificate and a complimentary healthy eatery basket. The samples were carefully sealed and transported to the Blood bank of Capital hospital. Khordha. This camp helped students in getting awareness about their social responsibilities and showed enthusiastic participation for the same.
- Souls for Solace, the welfare society of IIT Bhubaneswar has taken a step to collect clothes from the students, staff and faculty of IIT Bhubaneswar and donate it to the children in need at Kargil Basti. More than 1,000 clothes were donated successfully.

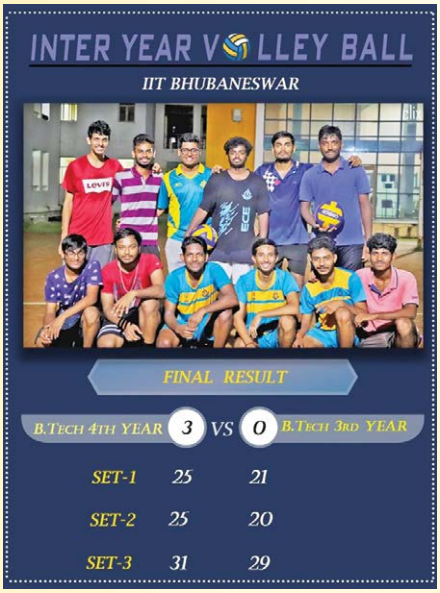
- Newspaper Collection and Recycling: Newspapers were collected from all the hostels, SQ and FQ and recycled.
- Souls for Solace organized one of the most important events of our society and our campus "Children's Fest". Our society invited four orphanages and organized a number of competitions and games including a Dance competition, Literary competition, Lemon spoon race, and furthermore. Lunch for our visitors was governed by our society. Our vision behind organizing this event was to offer these kids their rightful share of happiness and joy which they sincerely deserve because they are not lucky enough to spend their childhood with their parents. The festival was conducted very smoothly. We were victorious in spreading prosperity among them.

- The Food fest 2020 was organized on our campus which was deemed as a huge feat as it offered great fun and enthusiasm for everyone and made us admire the delicacies offered by our college mates. Souls for Solace decided to use the remaining food in the best way possible by donating it to the diligent laborers of our campus. The fundamental intent behind this donation was to ensure that no deprived individual of our campus is sleeping empty stomach as well as to prevent the wastage of food.

Sports Council

1. Inter-Year Tournament

- Inter-year tournament was conducted successfully in between August – October 2019.
- Volleyball and Cricket was conducted first in August. Football, Basketball and Table-Tennis was conducted in September. Badminton was conducted in October.



2. Inter-Hostel Tournament

Inter-Hostel tournament was conducted for the first time in the history of IIT Bhubaneswar in between August, 2019 – January, 2020. Chess was conducted first in August. Volleyball in September, Basketball and Cricket in October, Football and Table-Tennis in January 2020. Ex-inter IIT players weren't allowed to participate in this tournament. In this way, we drafted an opportunity for the Non-Inter-IIT students to get positively acquainted with the basic elements of this sport.

3. Inter-IIT Sports Board Meeting

54th Inter IIT Sports Meet was hosted by IIT Kharagpur and Co-hosted by IIT Bhubaneswar. In this regard, the Sports Board meeting was held at IIT Kharagpur on 10th August 2019 to discuss about the students' meet and on 11th August 2019 to discuss about the Staff' meet. The meeting was attended by President-Students' Gymkhana, OSD Sports and General Secretary Sports and Games. We requested the board to change our jersey colour from Cyan/ Golden yellow to Red/Black. It was approved and the jersey colour will stay Red/Black for coming 3 years. Many details regarding co-hosting of Inter-IIT Sports Meet was discussed and it was confirmed that IIT Bhubaneswar will conduct Badminton, Squash, Table Tennis and Volleyball in the 54th Inter IIT Sports Meet 2019-20.

4. Inter-IIT Sports Camp

This year Inter-IIT Sports Camp started from 26th November 2019. A special mess menu was made and arranged from 26th November for all the sports contingent students and staff. March past practice was also started from 26th November and weekends were given off.

Daily Practice Timing

Morning	6am to 9:30am
Evening	4:30pm to 8pm
March past	8:30pm to 9pm

New Tracksuit

New Jersey

5. Inter-IIT Sports Meet Co-hosting

IIT Bhubaneswar created history by becoming the first 2nd Generation IIT to Co-host Inter-IIT Sports Meet along with IIT Kharagpur. It was the 54th edition of Inter-IIT Sports Meet and IIT Bhubaneswar hosted 4 games:

i. Volleyball ii. Badminton iii. Squash iv. Table Tennis

6. Inter-IIT Sports Meet Performance

IIT Bhubaneswar participated in the 54th Inter-IIT Sports Meet with a contingent strength of 109 students led by Mr. Akarsh Balachandran (General Secretary Sports and Games 2019-20) and finished 11th among 23 IITs. We participated in 10 events. Following are the results:

Basketball

Vs Team (Boys)	Score	Vs Team (Girls)	Score
IIT Guwahati	18-60	Vs Jodhpur	22-24
IIT Madras	24-39	Vs Delhi	24-30
		Vs Kanpur	10-17

Football

Vs Team (Boys)	Score
IIT Madras	1-4
IIT Kanpur	2-6

Badminton

Vs Team (Boys)	Score	Vs Team (Girls)	Score
IIT BHU	3-0	IIT BHU	2-0
IIT Jammu	3-0	IIT Mandi	2-0
IIT Bhilai	3-0	IIT Kanpur	2-0
IIT Jodhpur	3-1		

Volleyball

Vs Team (Boys)		Score	Vs Team (Girls)		Score
League match	IIT Delhi	1-3	League match	IIT Hyderabad	0-3
Pre-Quarterfinal	IIT Kharagpur	0-3	League match	IIT Bombay	0-3
			League match	IIT Ropar	0-3

Cricket

Vs IIT Kharagpur (1st Match)	Score	Vs IIT Mandi (2nd Match)	Score
IIT Kharagpur (1st Innings)	147/9 20 overs	IIT Bhubaneswar (1st Innings)	56/10, 15.5overs
IIT Bhubaneswar (2nd innings)	57/1 11.3overs	IIT Mandi (2nd innings)	57/1, 11.3overs

Chess

Vs Team	Score	Vs Team	Score
IIT Bhilai	4-0	IIT Bombay	2-2
IIT Patna	3-1	IIT Roorkee	2.5-1.5
IIT Kharagpur	2.5-1.5	IIT Madras	2.5-1.5
		IIT Hyderabad	4-0

Finished 4th among 23 IITs.

March Past: 4th at Kharagpur and 5th Overall.

Athletics

ATHLETES	EVENTS	TIMINGS		
R.Rahul	100mt.	13.1 sec	200mt.	26.04 sec
Lalit kumar	800mt.	2:29.2 sec	400mt.	59.11 sec

ATHLETES	EVENTS	TIMINGS		
Tanmay khadsan	800mt.	2:16.5 sec	1500mt.	4:42.3 sec
	5000mt.	19:02.8 sec		
Paryul Singhai	1500mt.	5:16.4 sec	5000mt.	22:34.3 sec
Praveen	100mt.	12.13 sec	11.68 sec in Semi-Finals	
Praveen, Paryul Neeraj, R.Rahul	Relay 4*100mt.	50.38 sec		
Deepak mahalik	Discuss throw	26.52m. (Distance)		

Squash

MATCH / PLAYER NO.	TEAM / PLAYER NAME	SCORE
BOYS		
1st Match	vs IIT Kharagpur	KGP-BBS
Player 1	Sravanth	11-0 11-0 11-1
Player 2	Saharsh	11-1 11-5 11-6
Player 3	Mahendar	11-1 11-1 11-0
2nd Match	vs IIT Dhanbad	DHN-BBS
Player 1	Sravanth	11-0 11-1 11-1
Player 2	Saharsh	11-5 11-6 11-5
Player 3	Mahendar	11-5 11-4 11-2
GIRLS		
1st match	vs IIT kanpur	BBS-KNP
player 1	G.Bhavana	0-11 0-11
player 2	Siddharthanee Nayak	1-11 5-11
2nd match	vs IIT Madras	BBS- MAS
player 1	G.Bhavana	1-11 0-11
player 2	Siddharthanee Nayak	1-11 1-11
3rd match	vs IIT Roorkee	BBS-ROORKEE
player 1	G.Bhavana	2-11 1-11
player 2	Siddharthanee Nayak	2-11 3-11

Table Tennis

Vs Team (Boys)	Score	Vs Team (Girls)	Score
IIT Kharagpur	0-3	IIT Madras	1-2
IIT Hyderabad	0-3	IIT Dhanbad	2-0
IIT Delhi	1-3	IIT Kharagpur	2-0
IIT Guwahati	0-3	IIT Kanpur	0-2

7. National Sports Day Celebration

IIT Bhubaneswar celebrated National Sports Day on 29th August 2019, on the birth anniversary of hockey legend Major Dhyan Chand.

Events:

Exhibition Girls Cricket match

Basketball match: Students Vs Sports staff

Volleyball match: Girls team Vs Boys team

8. Local Tournaments

Basketball

Vs Team (Boys)	Score	Vs Team (Girls)	Score
BGU Tournament			
Vs BGU	27-47	Vs SOA	12-9
Vs CV Raman	20-28	Vs Silicon	15-13
		VS KIIT	13-27
Centurion Tournament			
Vs NISER	19-12	Vs NISER	8-9
Vs CUTM	38-36	Vs CUTM	9-1
Vs Ravenshaw	37-38	BJB	3-25

Football

Vs Team (Boys)	Score
RFYS Championship Cup	
NLU	1-1
BGU Tournament	
Vs GIET	1-0
Vs CET	1-0
Vs KIIT LAW	0-1

Cricket

BGU Tournament	Score	Vs Team	Score
1st Match: IIT BBS	158/5 – 15 Overs	BGU Alumni:	110/8 -15 Overs
Semi-final: IIT BBS:	132/7 -15 Overs	GITA	133/5 – 13.5 Overs
Third-place match: IIT BBS	120/10 – 14.4 Overs	BGU	104/10 – 14.1 Overs (IIT BBS WON)
Centurion:	**Score**	**Vs Team**	**Score**
1st Match: IIT BBS	142/4 -12 Overs	GIFT	65/9 – 12 Overs
2nd Match: IIT BBS	85/5 -12 Overs	GIFT	73/8 – 12 Overs
Semi-final: IIT BBS	110/9 -15 Overs	GIFT	111/7 – 14.3 Overs

Volleyball

BGU Tournament	Vs Team	Score
Group Stage		
IIT BBS	CV Raman	2-0
IIT BBS	GIFT	1-2
Quarter Final		
IIT BBS	TRIDENT	1-2
Centurion Tournament	**Vs Team**	**Score**
Quarter Final		
IIT BBS	XUV	2-0

Semi Final		
IIT BBS	Centurion	1-2
IMI Tournament	**Vs Team**	**Score**
Pre-quarter Final		
IIT BBS	IIIT BBSR	2-0
Quarter Final: IIT BBS won		2-0
Semi Final: IIT BBS	TRIDENT	2-0
Finals: IIT BBS lost – 1-2		
Trident Cup	**Vs Team**	**Score**
Group Stage: IIT BBS	Silicon	2-0
IIT BBS	CET	2-0
Semi Final : IIT BBS	TRIDENT	2-0
Final: IIT BBS	Centurion	0-2

Table Tennis

1. **Odisha state ranking tournament**
   Conducted by KDTTA in September-2019 in Bhubaneswar.
   Participants: Bhavya Sri, Shipra, Tanmay Mallick.

   Result:
   - Shipra lost in 1st round with 0-3.
   - Tanmay Mallick lost in 1st round with 1-3.
   - Bhavya Sri won in 1st round with 3-0 and lost in 2nd round with 0-3

2. **Odisha state ranking tournament**
   Conducted by BDTA in October-2019 in Bhubaneswar.
   Participants: Bhavya Sri, Shipra and Nishant Maurya.

   Result:
   - Shipra lost in 1st round with 0-3.
   - Nishant Maurya lost in 1st round with 0-3.
   - Bhavya Sri qualified for the 2nd round and lost in 2nd round with 0-3.

3. **Chiasma-Annual fest of AIIMS Bhubaneswar**
   Conducted in February-2020.
   Participants: Sangharsh and Ruthvik.

   Result:
   - Sangharsh lost in league stage and Ruthvik lost in semifinals with 1-3.

Badminton

- Chiasma – Annual fest of AIIMS Bhubaneswar
- CIPET Open Badminton Tournament

9. Mini-Marathon

On 26th January 2020, as part of the FIT INDIA MOVEMENT, a Mini-marathon was conducted successfully with a participation strength of 130 students and staff. Total distance was 6Kms for boys and 3Kms for girls and staff members.

10. Unity Run

On 2nd November 2019, Unity run was held to run along with everyone and spread the message of unity. It is dedicated to our first Deputy Prime Minister of India, Sardar Vallabhbhai Patel.




11. Inter-College Tournament

Inter-college tournament was conducted by the Sports Council of IIT Bhubaneswar on February 8th and 9th, 2020.

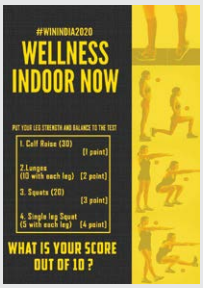
Basketball

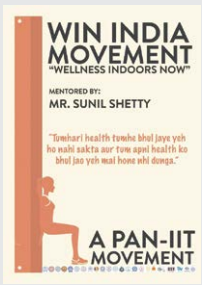
Vs Team (Boys)	Score	Vs Team (Girls)	Score
CV Raman	43-32	Silicon	26-20
NIST	37-35	CET	25-27
SSU	43-55		

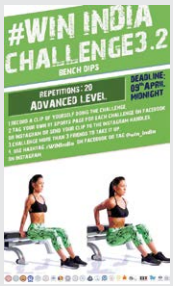
Futsal (7 a-side)

Vs Team (Boys)	Score
SIT	2-0

12. WIN India Fitness Campaign







WELLNESS INDOORS NOW | INDIA (WIN_INDIA Fitness Campaign) Mentored by Mr. Sunil Shetty

In the wake of the COVID-19 Pandemic, all the **23 IITs** along with **Mr. Sunil Shetty** took a joint initiative to promote fitness and mental health, to make it easier for students and fraternity of IITs to go through this together. With the country in lockdown, we had to take care of our wellness indoors, and that's where this campaign came in. Challenges were posted every 2-3 days, and on successful completion points were rewarded to the respective IIT.

13. Fitness Drive IIT Bhubaneswar

After the completion of WIN India campaign successfully, the sports council of IIT Bhubaneswar decided to start the IIT BBS Fitness Drive which started on 22nd May 2020.

This campaign is to imply the importance of fitness and to understand why each exercise is done and how it benefits us.

Co-hosting 54th Inter-IIT Sports Meet

IIT Bhubaneswar became the first amongst 2nd and 3rd gen IITs to co-host the 54th Edition of Inter-IIT sports meet alongside IIT Kharagpur.

The meet was held from 14th December to 22nd December, when the campus hosted more than 800 students alongside coaches, faculties and sports officers from all IITs who participated in the meet. The events were held in the sports complex of the permanent campus of IIT Bhubaneswar, and was a grand success. We hosted events across 4 sports categories in both the Men's and Women's division, which were- Badminton, Volley Ball, Table Tennis and Squash.

FEST

ALMA FIESTA -Annual Socio-Cultural Fest

The annual socio-cultural fest of IIT Bhubaneswar, Alma Fiesta hosted its 11th edition with the cultural theme "India's Cultural Melange: A Voyage to India's Heritage Roots" and social theme, "Jal Sanrakshit, Bhavishya Surakshit". This cultural extravaganza spanned over 3 days starting from 17th till 19th of January, 2020.

During this short amount of time, Alma Fiesta organised a variety of cultural and social events like MUN, Parliamentary Debate, Music and Dance competitions, Dramatics' events, Rock-band competition, Face Art competition and many more, including Technical workshops. While the day saw various competitions and events unfold and mesmerize people, the nights were even brighter.

The first night, Leela, our Inaugural Night, saw the esteemed Prof. Kshiti Bhusan Das, Pro-Vice-Chancellor, IGNOU and Chairman (Eastern Region), National Council for Teacher Education, bless us with his august presence. Leela, the first star night, was pumped with excitement as the famous Akasha Singh decorated the night with glamour and music. The final night, Headbang, saw an overwhelming excitement and enthusiasm as DJ Tejas electrified the stage. As Alma Fiesta 2020 saw a grand success, Team Alma knew that all their hard work had accrued well.

Wissenaire - Annual Techno-Management Fest

In its 10th iteration, Wissenaire '20, themed "Cosmic Expeditions: Astounding Odysseys Ensuring Humanity's Existence", was conducted with grandeur and grace. The following were the highlights.

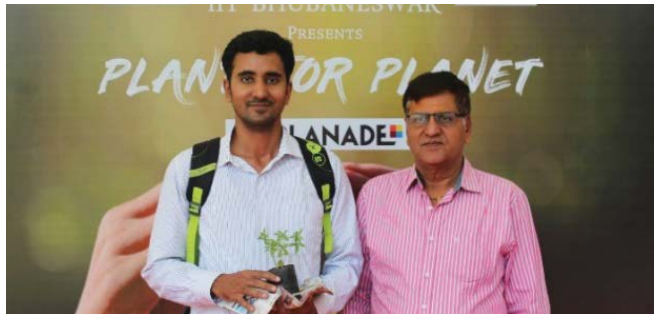
Preludes

UMEED – The Blood Donation Camp

Wissenaire, in association with Souls for Solace – The Social Welfare Society of IIT Bhubaneswar conducted "UMEED – The Blood Donation Camp" on 26th October, 2019. The drive saw 250+ students, staff and faculty come together for the cause. Donors were provided with certificates and a complimentary health eatery basket, in addition to a bottle as a token of appreciation. The samples were sealed and transported to the Blood Bank of Capital Hospital, Khordha.

Plant4Planet – The Environmental Drive

Wissenaire, in collaboration with Odisha Forest Development Corporation, conducted an environmental drive titled "Plant4Planet" in Bhubaneswar city on 1st December, 2019. The drive was inaugurated by MLA and former Mayor of Bhubaneswar, Mr. Anantanarayan Jena and Prof. R V Rajakumar, Director of IIT Bhubaneswar. It was held at 3 locations - Esplanade One, Pantaloons Mall and BMC Bhawani Mall. During the event, Wissenaire volunteers presented interested mall-goers with saplings and paper bags and interacted with them, spreading awareness on foremost environmental issues and what we, as citizens, can do for the planet. 400+ saplings were distributed for free.



TEDx IIT Bhubaneswar

On 5th January, 2020, Wissenaire oversaw the third edition of TEDx IIT Bhubaneswar, themed "From Passion to Purpose". The event was graced by:

- **Swayam Prakash Baral** (Entrepreneur and Social Worker)
- **Revant Himatsingka** (Bestselling Author)
- **Anwesha Mishra** (Robotics Champion and Founder of Rays of Smiles)
- **Ajar Kumar Reddy** (Captain, Indian National Blind Cricket Team)
- **Naveli Deshmukh** (Model, Miss Universe India 2nd Runner Up)

Q-Wissenaire

Q-Wissenaire is a National Level Competitive Exam for students of 6th to 12th to bring about a qualitative improvement in their problem-solving skills. Q-Wissenaire was conducted in December 2019 and January 2020 in the states of Andhra Pradesh, Telangana and Odisha. This year, the exam was conducted in online mode as well.

With a prize pool of INR 50000, the winners of Q-Wissenaire across categories were felicitated during the Inaugural Night of Wissenaire '20, and school toppers were given certificates and **medals**.

Training Programmes

Training programmes titled under "Sanchaar" were conducted on engineering topics of industrial demand, in Bhubaneswar and cities outside Odisha, which gave students outside of our sphere a chance to indulge themselves in productive learning. Two out-house workshops on Machine Learning were conducted in Madan Mohan Malviya University of Technology, Gorakhpur, Uttar Pradesh in September and a winter training program on Building Planning Design and Analysis was conducted in Bhubaneswar in January. Top performers were also offered internships.

Wissenaire '20 – January 31 to February 2

The following were the highlights of the 3 days of the 10th Edition of Wissenaire – The Annual Techno-Management Fest of IIT Bhubaneswar:

Inaugural Evening (January 31, 2020)

Wissenaire '20 was taken to new heights with **Dr. Manas Kumar Mandal**, Former Director General (Life Sciences) at DRDO, delivering the Chief Guest's lecture.

For his overall contribution to psychological sciences, he was elected as the Fellow of National Association of Psychology in India in 2012; and for his contribution to Military Psychology, he was given the 'Scientist of the Year' award by the Prime Minister of India in 2006 (DRDO).

TEKNITE (February 1, 2020)

The second night of Wissenaire, christened "TEKNITE" saw a series of Guest Lectures by eminent personalities sharing their industrial expertise with the students –

Mr. Gururaj Rao, Chief Systems Engineer at IBM and Stanford Alumni shared his experience in the industry and in the field of Enterprise Computing.

Mr. Abhinay Bhashin, Director Data Sciences, Dentsu Aegis Network - South Asia and a pioneer in Advertising, Marketing and Media shared his thought on economics and advertising. His vision has had him featured in the Forbes 30 under 30 List.

Yogesh Chabria - entrepreneur, #1 bestselling author, influential speaker and founder of The Happionaire Way, entertained the crowd with his thought provoking and motivational words.

TEKNITE concluded with the performance of Scientist-turned Stand-up Comedian Shashwat Maheswari.

MagnaVista (February 2, 2020)

MagnaVista 2020 was graced by Stand-up Comedian **Biswa Kalyan Rath.**

Exhibits

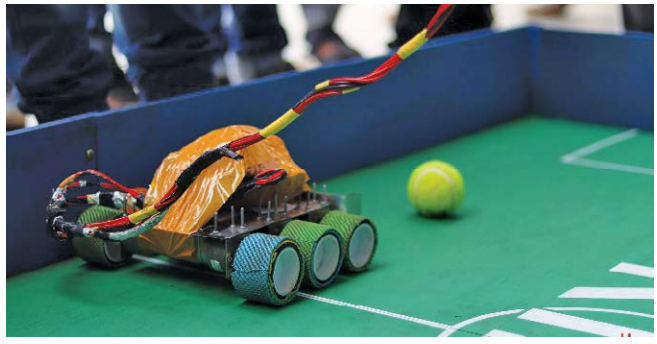
Wissenaire '20 also proudly hosted exhibits from ISRO, DRDO and the Indian Army, for the very first time at IIT Bhubaneswar. An exhibition of Scientific Astronomical Telescopes was also put under display.

The ISRO exhibits comprised of scaled down models of SLV3, ASLV, PSLVs and GSLVs, including the latest GSLV MKIII, showing the development of satellite launch technology in India over the years. It also contained scaled down models of Indian satellites, starting from Aryabhatta to the HySIS, RISIS, GSATs, Mangalyaan and Chandrayaan. In addition to models, banner-infographcs displaying information on the various devices developed by ISRO were also put up.

The DRDO Exhibit encompassed scaled down models of HAL Tejas (a multi-role light fighter jet), Lakshya (a remotely piloted high-speed target drone system), Pinaka (a multiple rocket launcher) and Prithvi Defence Vehicle - PDV (an exo-atmospheric interceptor missile), among others.

Events, Competitions and Workshops

The flagship event of Wissenaire, Yanthrix – The Robotics Competition was conducted in collaboration with RISC – The Robotics Society of IIT Bhubaneswar. It comprised of the following competitions: Maze Solver, TrekkOn, RoboWars, Drone Challenge and KickOff.



A nation-wide hackathon - "HACKBUZZ" was conducted in two rounds, which saw students solving real-world problems.

School Champ, a competition filled with puzzles and riddles exclusively for school children was also conducted during Wissenaire '20. School children were also encouraged to demonstrate their science and technology projects.

In addition to these, Colloquia (a Paper Presentation Competition on Electrical, Computer Science, Mechanical and Civil Engineering topics), branch specific competitions like Electrade and Electronix (Circuit Solving and Circuit Designing competitions), Blind Coding, Cyber Cypher, CAD-Ed (Computer-Aided Design Competition), Auction Wars, Mad-Ads (Ad-making Competition), Pioneer's Plan (B-Plan Competition), Smart City Challenge, Math Olympiad, Memory Challenge, Quizzaire (A SciTechBiz Quiz Competition) and LAN WARS (Gaming Event in COD4: Modern Warfare and CSGO) were successfully conducted, among others.

Workshops were conducted during Wissenaire '20, imparting knowledge to the ones seeking, on the following topics: AI and ML, Bridge Design, Big Data and Analytics, Web Development, Speaking and Presentation, Mercedes Engine Analysis, IoT with Google Assistant, Hexapod, Social Media Marketing and SEO and Scientific Innovation with Communication Skills. Top performers were also offered internships.

Informal events, like paintball, were brought in for the enjoyment of the public of IIT Bhubaneswar and participants during Wissenaire '20.

Wissenaire also commemorated Science and Technology with updated fun facts, news and buzz of advancements around the globe under "TEKWISSEN" through social media every Friday.

Indian Institute of Technology Bhubaneswar

Receipts and Payments for the Year ended 31.03.2020

(Amount in ₹)

Sl. No.	RECEIPTS	CURRENT YEAR 2019-20	PREVIOUS YEAR 2018-19	Sl. No.	PAYMENTS	CURRENT YEAR 2019-20	PREVIOUS YEAR 2018-19
I.	**Opening Balance**			**I.**	**EXPENSES**		
	a) Cash in Hand	-			a) Establishment Expenses	336,418,796.00	274,524,122.00
	b) Bank Balances				b) Academic Expenses	161,644,442.10	134,593,175.58
	i) In Current accounts				c) Administrative Expenses	44,302,972.55	47,186,757.52
	ii) In deposit accounts				d) Transportation Expenses	131,039.00	61,436.00
	iii) In Savings accounts	172,569,182.10	166,856,566.71		e) Repairs & Maintenance	311,520.00	668,407.00
					f) Prior Period Expenses	3,628,527.15	-66,742.52
					g) Finance Cost	334,200.68	221,235.59
					g) Gymkhana Expenses		4,742,127.90
II.	**Grants Received**			**II.**	**Payment against Earmarked/ Endowment Funds**	1,196,039.00	561,918.00
	a) From Govt. of India	644,600,000.00	1,309,780,000.00				
	b) From State Government						
	c) From Other Sources(Details)						
	(Grants from Capital and Revenue expenses to be Shown Separately)						
III.	**Academic Receipts**	261,709,907.12	198,454,825.00	**III.**	**Payment against Sponsored Projects/ Schemes**	248,292,838.96	271,492,622.15
IV.	**Receipts against Earmarked/ Endowment Funds :**			**IV.**	**Payment against Sponsored Fellowships/ Scholarships**		
	a) Earmarked/Endowment Fund						
	b) Own Funds (other Investment)						
V.	**Receipts against Sponsored Projects/ Schemes**	198,411,161.03	289,938,786.56	**V.**	**Investments and Deposits made**		
					a) Out of Earmarked/ Endowment funds	-	196,800,191.16
					b) Out of Own funds (Investments - other)		
VI.	**Receipts against Sponsored Fellowships and Scholarships**			**VI.**	**Term Deposits with Scheduled Banks**	1,004,004,780.00	1,412,816,000.00
VII.	**Income/ receipt on Investment**			**VII.**	**Expenditure on Fixed Assets and Capital Wrok-in-Progress**		
	a) Earmarked/ Endowment funds	11,053,399.15	2,691,294.83		a) Fixed Assets	5,654,856.23	51,335,432.78
	b) other Investments				b) Capital Works-in-Progress		6,214,180.00

Indian Institute of Technology Bhubaneswar

Receipts and Payments for the Year ended 31.03.2020

(Amount in ₹)

Sl. No.	RECEIPTS	CURRENT YEAR 2019-20	PREVIOUS YEAR 2018-19	Sl. No.	PAYMENTS	CURRENT YEAR 2019-20	PREVIOUS YEAR 2018-19
VIII.	**Intrest received on**			**VIII.**	**Other Payments including statutory payments**	592,396,784.32	1,229,736,594.25
	a) Bank deposits	2,765,427.08	39,560,440.14		Capital fund		
	b) Loans and Advances						
	c) Savings Bank Accounts	3,699,944.36	5,610,947.91				
IX.	**Investments encashed**			**IX.**	**Refunds of Grants**		
X.	**Term Deposits wih Scheduled Banks encashed**	1,055,641,865.85	1,608,345,358.41	**X.**	**Deposits and Advances**	72,993,559.20	31,472,796.61
XI.	**Other Income (including Prior Period Income)**	18,293,350.23	14,330,667.50	**XI.**	**Other Payments**		
					Hostel Payment	1,955,743.00	1,972,550.81
					Hostel Payment against Fixed Assets	730,690.00	350,955.00
					Hostel Payment against Current Liabilities	15,445,709.11	12,492,203.70
					CEP Payment	10,457,404.26	9,441,243.65
XII.	**Deposits and Advances**	9,887,106.00	13,319,241.73	**IX**	**Closing Balances**		
					a) Cash in Hand		
XIII.	**Miscellaneous Receipts including Statutory Receipts**	173,998,140.64	175,310,126.46		b) Bank Balances		
					i) In Current accounts		
XIV	**Any Other Receipts**				ii In deposit accounts		
	Hostel Income	2,188,216.13	2,273,810.46		iii) In Savings accounts	125,609,487.73	172,569,182.10
	Receipt against Hostel Current Assets	9,074,799.00	19,287,444.60				
	Gymkhana Receipt	12,178,326.09	4,723,991.58				
	CEP Receipt	49,438,564.51	8,702,887.39				
	TOTAL	**2,625,509,389.29**	**3,859,186,389.28**		**TOTAL**	**2,625,509,389.29**	**3,859,186,389.28**

Registrar
IIT Bhubaneswar

Director
IIT Bhubaneswar

Indian Institute of Technology Bhubaneswar

Research & Development

Receipt & Payments A/c for the Financial Year 2019-20

RECEIPT		In (Rs.)
Opening Balance		**597,731,974.58**
Add: Receipt during the year		
Consultancy Project		21,754,921.20
Sponsored Research Project	105,391,765.00	
Less : Refunded	52,621,688.54	52,770,076.46
Sponsored Fellowship		3,757,753.00
Seed Grant Project		50,455.00
Institute Overheads		16,107,664.00
Tax Deducted at Source (TDS)		4,116,135.00
Goods & Service Tax (GST)		5,128,925.00
GST TDS		519,758.00
Professional Tax		8,100.00
Earnest Money Deposit (EMD)		1,057,400.00
Performance Bank Gurantee (PBG)		203,128.00
Other Current Liability		731,030.00
Sundry Creditors		67,781,329.72
Liquidated Damages		434,284.00
Bank Interest		1,873,327.39
Interest on TDR		3,407,628.00
Interest on TDR Accrued		18,295,730.62
Stale Cheque		396,015.64
Tender fee		17,500.00
TOTAL RECEIPT		**796,143,135.61**
Less: Payment During The Year For Revenue Expenses		
Salary to JRF/SRF and project Assistant		26,561,205.00
Consumables		10,622,990.14

Indian Institute of Technology Bhubaneswar

Research & Development

Receipt & Payments A/c for the Financial Year 2019-20 *(...Contd.)*

RECEIPT		In (Rs.)
Contingencies		3,149,557.99
Recurring Expenses		5,497,130.00
Travel Expenses		2,963,585.00
Consultancy Fees & Honorarium		13,052,679.00
Meeting & Workshop Expenses		243,683.00
Institute Corpus Fund		10,946,690.18
Fellowship		3,423,110.00
Overhead Refunded		68,671.00
R&D Recurring Expenses		1,178,532.00
Fabrication & Other Cost		260,586.00
Startup & IPR Expenses		140,689.00
Duty & Taxes		6,919,154.00
Stale Cheque		168,361.00
Sundry Creditors		61,645,773.72
Other Current Liability		650,000.00
Faculty Development Fund		438,072.00
School Development Fund		253,707.00
Bank Interest		1,142,313.00
Research Grant		539,981.00
Earnest Money Deposit (EMD)		2,699,400.00
Performance Bank Gurantee (PBG)		468,450.98
Liquidated Damages		35,075.00
TOTAL PAYMENT		**153,069,396.01**
CLOSING BALANCE		**643,073,739.60**

INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR

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