

**ADDRESS BY THE CHIEF GUEST AT THE CONVOCATION CEREMONY
OF IIT BHUBANESWAR**

Bhubaneswar: 22.09.2018

Chairman of BoG, Shri Pankaj Ramanbhai Patel; Director, Prof. Ratnam V. Raja Kumar; Members of the BoG and Senate, Distinguished Guests; members of the Faculty and Staff of IIT Bhubaneswar; and most importantly, my dear Graduating Students and Parents, Ladies and Gentlemen:

Friends,

Let me begin by congratulating the graduating class. For this day, all the people associated with you have waited patiently. You make your institute, your professors, your parents, and indeed your country, immensely proud of you. Let's take a moment to appreciate their dedication, sincere efforts and contributions for making your dreams come true. Remember, if we do not know how to thank properly, our debts will remain forever! Some of you have received well-earned medals and prizes. But remember, no matter what your GPA or grades have been, ALL of you will contribute significantly to the profession, society and the nation. And no matter if you got a medal or not, you will always be the shining stars in the little corner of our hearts.

Today's ceremony is also often called 'Commencement.' It should refer to commencing of our true education and learning! Remember, learning neither begins nor ends in class-rooms; it is a life-long love affair.

Friends,

I am pleased to be in your campus, which looks like a modern-day ashram amidst its grand greenery, the iconic main-building and the scenic hillock. And this charming campus is dotted with the best and brightest of mind, some of who are baptised by the fire-ceremony of today! The pledge that you have taken today ought to establish you in a higher geosynchronous orbit. Now, you have to perform many complex responsibilities and add good value to yourself, your family and friends, and

foremost, to the society. While negotiating the challenges of your new life, you cannot allow yourselves the luxury of feeling defeated. Neither failure, nor success is permanent! What is of paramount importance is to retain our energies and intelligence in the seesaws of little joys and sorrows.

Friends,

We need to work tirelessly and with purpose to regain our past glory. This is possible only by technological and educational interventions that reach to our society. These interventions need to be knowledge driven, research-driven, innovation-driven, team-driven, and above all, people-centric. Our challenges and opportunities are clear and present. No time for sloth or being contented. Here is a light hearted but rather accurate saying: If you want to change the world, do it while you are single, once married, you can't even change the TV Channel!

Friends,

I understand that IIT Bhubaneswar is growing fast in terms of innovative teaching-learning pedagogy, global-class R&D activities, and unique faculty-recruitment initiative, including recruitment of the international faculty members. In its 10th year of existence, the Institute has touched the milestone of 100+ sponsored and consultancy projects. Similarly, it's great to know that IIT Bhubaneswar has been able to admit 354 B.Tech. students this year, which is highly commendable for a young institution like this. It is truly impressive that more than 80% of the graduating class has secured jobs in Core-Sector companies where you will contribute through your deep science and engineering education. Thinking of the Institute's 10th year, we may recall that the number 10 through its numeral zero is an extraordinary gift of ancient India to the mankind. I expect no less transformational contributions of the modern India, symbolized today, here, by each one of you.

A transformational aspect of the contemporary education is pursuit of relevant R&D. I understand that this Institute has number of unique Centres of Excellence which are carrying out high-quality research in areas of topical interest. Notable among these are:

- Bay of Bengal Coastal Observatory (BoBCO) – an international-class research centre, which is being set up at a 40-acre campus near the sea-coast, and is focussing on all major areas related to climate change and its impact along the Bay of Bengal coast line and the habitat nearby.
- Virtual and Augmented Reality Centre (VARCO) – which is working in the area of next generation virtual and augmented technology.
- Design Innovation Centre (DIC) –in which school and college students are trained in the design and development of products.
- S. K. Dash Centre of Excellence in Bio-Engineering & Technology (SKBET)– in which Biomolecular Technology is applied to produce probiotics.
- Centre of Excellence for Novel Energy Materials (CENEMA) – which is developing advanced functional materials for strategic applications.

Friends,

I note with delight that the young faculty members have been awarded with a number of prestigious international fellowships and associateships. It is also heartening that the researchers at IIT Bhubaneswar during the last 3 years have contributed more than 1000 research articles in journals of international repute.

When a new Institute adopts Innovation as one of its major themes, technology development and start-up activities are the obvious outcome. In our formative years, we imbibe transmitted knowledge; even produce some of it. The stage is now set for you to consume this knowledge, transmute this knowledge into new socio-economic opportunities. I noted with delight that the Institute has filed 30 patents. The products and processes developed here address a plethora of challenges in environment, health, smart cities, renewable energy, etc. Let me recount some of these notable innovations, which include, **High-strength Composites** based on Fly Ash and Red Mud; **Wearable Cardiac Health Monitoring Devices**; an **Integrated multistage Bio-reactor** for the treatment of waste-water; a **Vehicular traffic counter** for smart-cities; a **Solar Powered DC System with smart grid**; a **Solar powered water-pump**; and **Nano-composites based tapes** for instant repair of oil and gas pipelines.

There are many more that leverage the best of science and technology for addressing important problems.

Friends,

I congratulate the students and the mentors for sowing the seeds of innovative ideas in these fresh, young and fertile minds. This is the clear evidences of IIT Bhubaneswar's commitment to the cutting-edge engineering education and research. I expect IIT Bhubaneswar to grow at an unprecedented rate, while at the same time preserving the quality of education and research. I wish you all great successes ahead in becoming an institute of truly global standing.

I am certain that the graduating class of this institute will become the agents of change and societal leaders. IIT graduates have increasingly turned from being the job seekers to job creators. IIT graduates have made extraordinary contributions from atoms to astrophysics, software to e-commerce, telecom to electronics, administration to academia and politics to civil society.

However, a nation of over one billion citizens should have even higher expectations from you-- the cream of the nation. Today, there are unprecedented global stresses and challenges in sustainable economic growth and job creation, but there are also huge opportunities for technology led transformative changes in the sectors such as energy, water, environment, transport, climate, manufacturing, cyber-physical systems, and hygiene and health.

Friends,

Any society justifiably calls its best and brightest to lead the charge for the big transformative changes. The time for incremental fixes is now well past us. The window for the effective action will not remain open forever. The relentless forces of globalization coupled with the rise of technologies such as Big Data Analytics, IoT, Artificial Intelligence, Deep-Learning, Robotics, information channels and other Cyber-Physical systems can all turn our demographic dividend into a demographic

liability some decades from now if we do not master and channelize the winds of change.

I am confident that many of the young minds graduating today have the belief, zeal, intent and capacity to successfully address these and many more of such relevant technological questions.

Dear Students,

Excellence begets excellence. Excellence is built not only on intelligence, but also on commitment. If we are committed, the community around us will also excel and prosper. While I am happy to note that you have adopted 6-villages, I urge you to ensure significant change in the quality of life of these village folks – be it the children, the youth, or the elders. You will smile with your whole heart seeing the smiles on the faces of your less privileged neighbours and friends.

I urge upon the faculty members of this Institute to impart the young minds with not only the technical education, but also the value added skills which would help them in learning to respect and negotiate the fabric of our multicultural society.

As you undertake your journey to the world outside, let me remind you in the words of Swami Vivekanda: “Never mind failures; they are quite natural, they are the beauty of life. What would life be without them? It would not be worth living if it were not for struggles. Where would be the poetry of life? Never mind the struggles, (and) the mistakes.....So never mind these failures, these little backslidings; hold the ideal a thousand times, and if you fail a thousand times, make the attempt once more.” He also said, “in a day when you don’t come across any problems—you can be sure that you are traveling in the wrong path.”

Dear Students,

Here are a few things I have learnt in my life the hard way. If you should, do become a techno-entrepreneur earlier rather than later; when you have more energy, ideas and less social responsibilities. Lose the energy vampires; friends and

associates who suck the energy out by their negativity and dooms day scenarios. Connect with the best of people who believe in 'we can.'

Another thing, while your successes, thus, far in life, have rested on your individual initiative and brilliance, a strong team work is the key to the solutions of the real interdisciplinary problems. The emphasis in the rest of your life will now be on synthesis and integration, rather than on analysis. If you master these changes, the rest will be easy!

Learning is all about progressing from mere data to information, from analysis to understanding, from knowledge to action, and from wisdom to compassion; it's this holistic approach which alone integrates the right thinking with right actions.

Be curious. Feed well not only the body, but the mind and the heart too, every single day.

Don't confuse success with excellence. I repeat, both successes and failures are transitory. It is our sensitivity to the little joys and sorrows of the world around us that makes our journey have any meaning at all.

Friends, we are at the end of our short journey together. Many thanks for the privilege I received to be your co-walker on this beautiful day full of positivity and meaningful memories. I am confident that you will bring glory not only to IIT Bhubaneswar, but to the entire IIT fraternity.

I wish each one of the graduating students all the very best again in whatever endeavours you may embark up on. May this day in your life be a special one, a significant one, and the beginning of something beautiful!

Friends, I wish you a path with a heart for the journey that you start now. Live long and prosper!!

Thank you!

Jai Hind!

Ashutosh Sharma