

13th National Frontiers of Engineering Symposium (13NatFoE) hosted at IIT Bhubaneswar in association with INAE

June 1, 2019



New Delhi: 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) organized 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

Prof. R.V. Rajakumar, Director, IIT Bhubaneswar emphasized the need for cross-disciplinary research and development to fulfil the needs of Industry, touched upon the grand Science and Technology challenges facing the nation and the world at large and talked about the importance of the thematic areas of Augmented Reality (AR) and Virtual Reality (VR), Artificial Intelligence (AI), Smart Grid, Next-Gen Grid, Micro & Additive Manufacturing, IOT and 5G communication for serving the needs of the modern society. He also briefed about the research activity taking place in the Institute in these areas. He strongly advised for coming up with energy efficient systems helping to reduce the carbon footprint paving the way for environment restoration and energy saving. He shared with the audience about how the Institute had accurately estimated the pressure and wind-speed in collaboration with IMD before the arrival of the extremely severe cyclone, "FANI". He also complimented INAE for allowing to host the 13thNatFoE symposium at IIT Bhubaneswar and the resilience shown by the Institute by hosting the event despite significant damage to infrastructure owing to severe cyclone, "FANI".

The speakers in their inaugural talks brought out very interesting points in their respective topics for meeting the pressing needs of the society. Dr. Sanak Mishra, President, INAE delivered an interesting speech with emphasis on research and development and role of INAE in the nation building; which was very well received by the audience. He also ascertained that themes of the Symposium were well chosen as they are in line with NITI Aayog's current projection of areas of national interest.

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.