



MIND'SPARK

News Letter

Department of Mechanical Engineering

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Sir Jagadish Chandra Bose CSI CIE FRS IPA:

30 November 1858 – 23 November 1937)

He was a biologist, physicist, botanist and an early writer of science fiction. He pioneered the investigation of radio and microwave optics, made significant contributions to plant science, and laid the foundations of experimental science in the Indian subcontinent. IEEE named him one of the fathers of radio science. Bose is considered the father of Bengali science fiction, and also invented the crescograph, a device for measuring the growth of plants. A crater on the moon has been named in his honour. He founded Bose Institute, a premier research institute of India and also one of its oldest. Established in 1917, the institute was the first interdisciplinary research centre in Asia. He served as the Director of Bose Institute until his death.

Born in Munshiganj, Bengal Presidency, during British governance of India (now in Bangladesh), Bose graduated from St. Xavier's College, Calcutta (now Kolkata, West Bengal, India). He went to the University of London, England to study medicine, but could not pursue studies in medicine because of health problems. Instead, he conducted his research with the Nobel Laureate Lord Rayleigh at Cambridge and returned to India. He joined the Presidency College of the University of Calcutta as a professor of physics. There, despite racial discrimination and a lack of funding and equipment, Bose carried on his scientific research. He made remarkable progress in his research of remote wireless signalling and was the first to use semiconductor junctions to detect radio signals. However, instead of trying to gain commercial benefit from this invention, Bose made his inventions public in order to allow others to further develop his research.

Bose subsequently made a number of pioneering discoveries in plant physiology. He used his own invention, the Crescograph, to measure plant response to various stimuli, and thereby scientifically proved parallelism between animal and plant tissues. Although Bose filed for a patent for one of his inventions because of peer pressure, his objection to any form of patenting was well known. To facilitate his research, he constructed automatic recorders capable of registering extremely slight movements; these instruments produced some striking results, such as quivering of injured plants, which Bose interpreted as a power of feeling in plants. His books include *Response in the Living and Nonliving* (1902) and *The Nervous Mechanism of Plants* (1926). In a 2004 BBC poll, Bose was voted seventh Greatest Bengali of all time.

Mr. Y M M Reddy attended three webinars in 2020. The first webinar, held on 8th July 2020, was on the topic of "Friction Based Solid State Additive Manufacturing Techniques." The second webinar, held on 15th July 2020, focused on "Artificial Neural Networks for Mechanical Properties Prediction." The third and final webinar, held on 16th August 2020, covered "Revised Bloom's Taxonomy."

FDP'S attended

Mr. Y M M Reddy participated in two Faculty Development Programs (FDP) in 2020. The first FDP was on "Research Methodologies in Mechanical Engineering," which was organised by Narsimha Reddy Engineering College in Hyderabad. It was held from 30th July 2020 to 04th August 2020 and lasted for 1 week. The second FDP was on "Outcome Based Education," organised by KITS in Guntur, from 08-07-2020 to 10-07-2020.

Department of Mechanical Engineering

VISION

To be a reputed centre of excellence in the field of Mechanical Engineering by synergizing innovative technologies and research for the progress of society.

MISSION

- M1:** To impart quality education by means of state-of-the-art infrastructure.
- M2:** To involve in training and activities on leadership qualities and social responsibilities.
- M3:** To inculcate the habit of lifelong learning, practice professional ethics and serve the society.
- M4:** To establish industry- institute interaction for stakeholder development