

Abstract : Expository Talk during ICPE-2025 , IIT Ropar, December 16-20, 2025

The initiation of teaching of science and the spread of research in Physics in India since circa 1850 : A comprehension

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I shall present a personal account of teaching and research in physics in institutions all across India from the creation of the three affiliating universities by the East India Company (EIC) in the mid-nineteenth century to the establishment of University Grants Commission (UGC) in independent India in 1953.

The British teachers appointed to teach science in the colleges forming the nuclei of first three universities did not engage native students in any research activity until the enactment of common Indian Universities Act (1904) for the then five Universities of India. The said Act enjoined every university to appoint teachers and create faculties in different subjects, however, no additional support was provided to do so by the colonial government. Each university followed a different path, and it took nearly two decades to yield noticeable research output by the native teachers and their research students.

The Indian Association of Cultivation of Science (IACS) had been set up by the medical doctor Dr. Mahendra Lal Sirkar in 1876 in association with Father Eugene Lafont of St Xavier's College, who had the distinction of setting up first teaching laboratory in Physics in colonial India. Dr. J C Bose, who had once studied at St. Xavier's College, was the first native scientist to set up physics research laboratory in Presidency College Calcutta in 1894. The research activity in IACS got commenced only in 1908 by C V Raman after the passing away of both M L Sirkar and Lafont. The School of Physical Sciences in Calcutta got going with the innovative moves of the legendary Vice Chancellor Justice Asutosh Mukherjee.

The Indian Institute of Science (IISc.) at Bangalore had been established in 1909, however, its Department of Physics came into being after C V Raman became its Director in 1934. Meghnad Saha and S N Bose had commenced nurturing research students at Allahabad and Dacca, respectively from mid-1920s. Saha's students P K Kichlu and D S Kothari were inducted as faculty members in the universities at Lahore and Delhi, respectively.

Two colleges in Madras had initiated three years BA (Honours) in Physics for highly motivated students in 1911. C V Raman was one amongst them. The Physics Honours School of Panjab University Lahore got going in 1934. BHU, AMU and Andhra University had also independently established research oriented Physics Departments by 1940. The MSc. classes in Physics in Delhi University were commenced by D S Kothari in 1942.

CSIR came into being in 1942 with S S Bhatnagar as its first Director. He proposed the establishment of National Physical Laboratory (NPL) in New Delhi. Homi Bhabha's Tata Institute of Fundamental Research commenced operation in Bombay in December 1945, Saha's Institute of Nuclear Physics at Calcutta was eventually established by him in 1949, and Vikram Sarabhai's Physical Research Laboratory (PRL) at Ahmedabad had come into being in November, 1947, all the three institutions had received financial support from CSIR in their initial phases.

UGC Chairman S S Bhatnagar and Lok Sabha Member Meghnad Saha passed away in 1955 and 1956, respectively, and it dawned on Homi Bhabha as the Chairman Atomic Energy Commission (AEC) and D S Kothari as the Chairman UGC to expand and strengthen the research in Physics in the institutions and the universities of independent India.

End of write-up.

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