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Late B.P. Poddar
(1920-1981)
Founder
B.P. Poddar Group

Remembering Homi J. Bhabha - The father of Indian nuclear programme



The man who pioneered the Indian nuclear research programme, Homi J. Bhabha was a nuclear physicist who laid the foundation for nuclear research in India. Often hailed as the "father of Indian nuclear programme", Bhabha was not only a scientist, but also a visionary and an institution builder. He was born on 30 October 1909 into the home of a well known Parsi lawyer Jehangir Hormusji Bhabha and his wife Meheren. From childhood, he was an intelligent and hard working student and his parents dreamed of him becoming a mechanical engineer. However, young Bhabha's interest laid in studying physics and not in becoming an engineer. Yet he honored his parents' wish and completed his degree in mechanical engineering.

Starting his scientific career in nuclear physics from Great Britain, Bhabha returned to India prior to start of the World War II in September 1939, prompting Bhabha to remain in India, and accepted a post of reader in physics at the Indian Institute of Science in Bengaluru, headed by Prof. C.V. Raman. During this time, Bhabha played a key role in convincing Jawaharlal Nehru, to start the ambitious nuclear programme. As part of this vision, Bhabha established the Cosmic Ray Research Unit at the institute, began to work on the theory of the movement of point particles, while independently conduct research on nuclear weapons in 1944. In 1945, he established the Tata Institute of Fundamental Research in

Mumbai and the Atomic Energy Commission in 1948, serving its first chairman. In 1948, Nehru led the appointment of Bhabha as the director of the nuclear programme and tasked Bhabha to develop the nuclear weapons soon after. In the 1950s, Bhabha represented India in IAEA conferences, and served as President of the United Nations Conference on the Peaceful Uses of Atomic Energy in Geneva, Switzerland in 1955.

Bhabha gained international prominence after deriving a correct expression for the probability of scattering positrons by electrons, a process now known as Bhabha scattering. His major contribution included his work on Compton scattering, R-process, and furthermore the advancement of nuclear physics. He was awarded Padma Bhushan by Government of India in 1954. He later served as the member of the Indian Cabinet's Scientific Advisory Committee and provided the pivotal role to Vikram Sarabhai to set up the Indian National Committee for Space Research. The great scientist's brilliant career was cut short by a plane crash which claimed his life in January 1966, near Mont Blanc, while heading to Vienna, Austria to attend a meeting of the International Atomic Energy Agency's Scientific Advisory Committee.

ACADEMIC NEWS:

Publications:

Books:

Pramathes Das, "A Text Book on Basic Electrical Engineering", J.B.B.L, ISBN: 978-93-83010-20-2.

Journals:

Arijit Saha, Sonali Chakraborty, Kallol Bhattacharya, "Achromatic half-wave combination of birefringent plates", *Optik* **125** (16), 4534-4537 (August 2014), Impact factor: 0.769, ISSN: 0030-4026.

Kakali Bhattacharyya, "Manju Kapur's Search for Somewhere Else in The Immigrant", **2** (3), 246-256 (September 2014), Impact Factor. 0.793 (IIFS), ISSN: 2320-6101.

Sutapa Mukherjee, "CIE standard general Sky type identification for Delhi during winter and summer", *Journal of Optics* **43** (3), 247-256 (July-September 2014), ISSN: 0972-8821 (without impact factor).

Conferences:

Mousam Chatterjee, Arnab Nandi, Banani Basu, "Performance of Incremental Redundancy Based Data Transmission in Randomly Deployed Wireless Sensor Network", 1st International Doctoral Symposium on Applied Computation and Security Systems, **1**, Chapter 325983_1_En/12 (July 2014), ISBN: 978-81-322-1984-2.

Dolon Champa Das, "Games & Activities: Techniques for Teaching English in a Fun-filled Environment", International Conference on English from Classes to Masses, 21-23 August 2014.

Pritam Bhattacharya, **Arijit Dey**, **Kunal Das**, Debashis De, Mallika De, "Characterization of Ternary Quantum Dot Cellular Automata for III-V Materials", National Conference on Nanoscience & Nanotechnology, 18-19 September 2014.

Bikromaditya Mondal, SusantaChakraborty, "A Novel Fault Diagnosis in Reversible Logic Circuit", in proceedings



of the 11th IEEE International Conference on Embedded Software and Systems (ICISS - 2014), Paris, France, pp. 717-720, August 20-22, 2014.

Palash Das, **Bikromaditya Mondal**, "Signature Analysis for Synthesis of Reversible Circuit", in proceedings of 18th IEEE VLSI Design and Test Symposium (VDAT), Coimbatore, India, pp. 1-2, July 16-18, 2014.



Invited Lecture

Prof. Dr. B. N. Chatterji, Dean Academics, was the Keynote speaker of the workshop on Engineering education at Camellia Institute of Technology, Kolkata, organized by BIT Mesra (Kolkata Centre) on August 23, 2014. The title of the talk was *Academic research at institution of higher learning – An academician's point of view*.

Completion of Doctorate Degree:

Kunal Das, Assistant Professor, Department of IT has been awarded Ph.D. from Kalyani University on 17 July 2014.

Ivy Majumdar, Associate Professor, Department of ECE has been awarded Ph.D. from Jadavpur University on 16 September 2014.

Participation

Dr. Esa Bose, Assistant Professor, Dept. of Engineering Physics and Ms. Debjani Chakraborty, Assistant Professor, Dept. of Humanities attended one-day workshop by NEN at IEM, Saltlake on 17 July 2014.

Ms. Gitosree Khan, Assistant Professor, Department of IT and Ms. Anindita Roy Chowdhury, Assistant Professor, Department of CA attended FDP for Entrepreneurship at IIT KGP during 22-31 August 2014.

Mr. Soumita Singh, STA ECE Dept. attended a seminar titled Design and Analysis of Systems using MATLAB & Simulink organized by MathWorks Inc. on 24th July 2014.

INSTITUTIONAL NEWS:

Prosaron

Anindita Ray Chowdhury, Assistant Professor, Dept of CA delivered a talk on "Energy efficient cluster head selection in wireless sensor network" on 8th August 2014 and on "Level wise initial energy assignment in wireless sensor network for better network lifetime" in the Institutional Faculty Seminar Programme, on 26th September 2014..

