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Remembering Raj Chandra Bose



Raj Chandra Bose was born on June 19, 1901, at Hosangabad in Madhya Pradesh and grew up at Rohtak, where his father was doctor. R. C. Bose was a mathematician and statistician best known for his work in design theory, finite geometry and the theory of error-correcting codes in which the class of BCH codes is partly named after him. He also invented the notions of partial geometry, strongly regular graph, and started a systematic study of difference sets to construct symmetric block designs.

Pure mathematics had fascinated Bose from childhood. In 1925 no course in pure mathematics was available at Hindu College in Delhi. So he went to Calcutta. Bose continued to study securing first class in the M.A. examinations in pure mathematics at the University of Calcutta. His research was performed under the supervision of the geometry Professor Syamadas Mukhopadhyaya from Calcutta. Bose worked as a lecturer at Asutosh College, Calcutta. He published his work on the differential geometry of convex curves.

In 1932 came the turning point. His research in geometry came to the notice of P. C. Mahalanobis, who wanted a geometry scholar for the Indian Statistical Institute. Bose was reluctant to join the institute because he knew hardly anything about statistics. From 1935 he had a full-time position at the Indian Statistical Institute. In 1940 he joined the University of Calcutta. In 1945 Bose became Head of the Department of Statistics. He submitted his published

papers on multivariate analysis and the design of experiments and was awarded the D. Litt. in 1947.

In 1947 Bose went to the United States as a visiting professor at Columbia University and the University of North Carolina at Chapel Hill. It was not money that tempted him to leave his homeland. It was only because he was offered a job which enabled him to devote all his time to mathematics. Later he became Professor of Mathematics and Statistics at Colorado University. In the years at Chapel Hill, two of Bose's discoveries won him much fame. Working with one of his students, he proved that a famous mathematical conjecture of the eighteenth century Swiss mathematician, Leonard Euler, was incorrect. Then, in collaboration with another student, D.K. Ray-Chaudhuri, he discovered new codes for telecommunication, which is partly named after him as BCH code. In 1971, he retired at the age of 70. He then accepted a chair at Colorado State University of Fort Collins from which he retired in 1980. Bose died in Colorado, aged 86, in 1987. Many honours were bestowed on Bose both from his native country of India and from the United States. He received honorary degrees from the Indian Statistical Institute in 1974 and from Visva-Bharati University in Bolpur, West Bengal, India in 1979. In 1976 America's highest honour to a scientist came to Bose. He was elected Fellow of the US Academy of Sciences.

ACADEMIC NEWS:

Publications:

Books:

Pramathes Das, "Electrical & Electronic Measurement and Instrumentation", Publisher: J B Books and Learning, Kolkata, ISBN: 978-93-83010-06-6, April 2016.

Journals:

Arijit Saha, Kallol Bhattacharya, Ajoy Kumar Chakraborty, "Depolarization of polarized polychromatic beam during propagation in a birefringent medium", *Optik* **127** (15), pp. 5882-5886 (2016), ISSN: 0030-4026, Impact factor: 0.769 (indexed in both SCI, and Scopus).

Debashis De, **Anindita Ray**, Suchismita Mukherjee, Ananga



Mohan Sen, "Performance Analysis of Different Tree Structures in Heterogeneous Wireless Sensor Network", *IETE Journal of Research*, ISSN: 0377-2063 (Print), 0974-780X (Online), pp. 9, Impact Factor 0.284, April 2016.

Journals (online):

Dolon Champa Das, "Listen well to speak well: Strategies and solutions to overcome hindrances to listening", *International Journal of Innovation Sciences and Research*, **5**(6), pp. 791-794, ISSN: 2319-9369, Impact Factor 1.255, 30th June 2016.



Conferences:

Bikromaditya Mondal, Kushal Dey, Susanta Chakraborty, "An Efficient Reversible Cryptographic Circuit Design", Proc. 20th VLSI Design and Test Symposium (VDAT-2016), IIT Guwahati, India, 24th-27th May 2016, pp. 234-239.

INSTITUTIONAL NEWS:

Patent received

Dr. Sandip Ghosh, Registrar & Associate Professor, Dept. of Chemistry has been granted a patent for an invention entitled "*Process for preparation of pH indicator solution and Test Kit to detect pH at low variation*". The invention describes a method of preparation of pH indicator solution for rapid and easy determination of pH in wide area of chemical and biochemical reactions in aqueous medium including Aquaculture and Effluent management. The specific composition with weight percentages of ingredients as defined are coherently capable of identifying pH of solutions in the entire range of pH 5.5 and 10.6 by virtue of colour difference and the said composition can indicate variations in pH as low as 0.30pH of solutions, by virtue of such colour difference which is the crux of the invention.

Students Publications

Sanjay Nag, **Satabdi Bhattacharya**, **Ranita Banerjee**, **Indra Kanta Maitra**, Samir Kumar Bandyopadhyay, "Pseudo-Grayscale technique: A pre-processing step towards pathological slide analysis", *European Journal of Biomedical and Pharmaceutical sciences*, **3**(5), pp. 385-390, 3rd May 2016, ISSN: 2349-8870, SJIF Impact Factor: 3.881 (online). Satabdi Bhattacharya and Ranita Banerjee are students of Dept. of Electronics & Communication Engineering.

Sanjay Nag, **Roshni Dasgupta**, **Sayan Dutta**, **Indra Kanta Maitra**, Samir Kumar Bandyopadhyay, "Edge detection of digitised histopathological slide images using dynamic thresholding", *European Journal of Pharmaceutical and Medical Research*, **3**(6), pp. 532 - 537, 30th May 2016, ISSN: 2394-3211, SJIF Impact Factor: 3.628 (online). Roshni Dasgupta and Sayan Dutta are students of Dept. of Electronics & Communication Engineering.

Participation:

Dr. Arijit Saha, Associate Professor, ECE Dept, **Ms. Madhumita Sarkar**, Assistant Professor, ECE Dept., **Dr. Soumya Paul**, Associate Professor and Head, Dept. of Computer Application, and **Ms. Inadyuti Dutt**, Assistant Professor, Dept. of Computer Application had attended and participated in the FDP on "Data Science" conducted by Cognizant Technology Solutions at Cognizant Technology Solutions Campus on 30.06.2016.

Prosaron

Mr. Arijit Dey, Assistant Professor, Dept. of Computer Application delivered talk on "Fan-out constraints in quantum dot cellular automata circuit design" on 22nd April 2016.

Dr. Esa Bose, Assistant Professor, Dept. of Basic Science delivered talk on "Transport and magnetic properties of low doped La_{0.875}Y_xCa_{0.125}MnO₃ manganite series" on 22nd April 2016.

