



# THE BPPIMT - NEWSLETTER

A Quarterly In-House Magazine

of

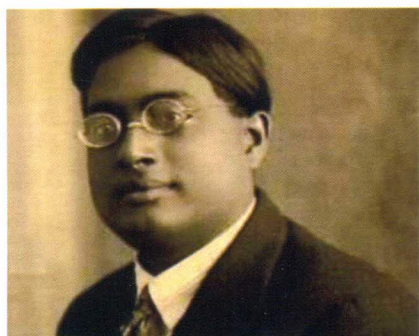
**B.P. Poddar Institute of Management and Technology**

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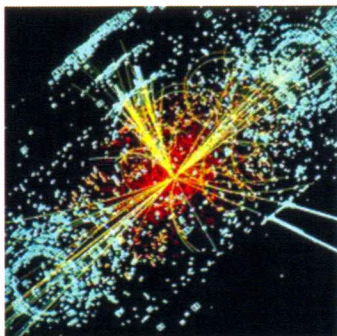
Issue - XVI, JULY 2012 Chief Advisors: Prof (Dr.) Sutapa Mukherjee Editor in Chief: Prof Emeritus (Dr.) S.C.Chakravartty  
Prof (Dr.) B.N. Chatterji



## Satyendra Nath Bose: The neglected namesake of God Particle



Prof. S N Bose



Possible signature of a Higgs boson



Prof. P W Higgs

CERN announced on 4<sup>th</sup> July 2012 that they had experimentally established the existence of a Higgs-like boson or God Particle. The announcement marked a milestone in the history of Quantum Physics – God Particle, had been discovered. The particle shares its name with Satyendra Nath Bose and Peter Ware Higgs. Higgs is a British theoretical physicist and emeritus professor at the University of Edinburgh. He is best known for his proposal of broken symmetry in electroweak theory, explaining the origin of mass of elementary particles in general and of the W and Z bosons in particular. This so-called Higgs mechanism, which was proposed by several physicists besides Higgs at about the same time, predicts the existence of a new particle, the Higgs boson (which was often described as "the most sought-after particle in modern physics", and popularly known as "God Particle").

While Peter Higgs' list of awards don't find an end, the other scientist whose namesake is a part of this God Particle, has been brutally glossed over. His contributions never found the international acknowledgement of a Nobel Prize, and the irony is even more glaring in the fact that several researches but the foundational one on the 'Boson' particle have been honored with that ultimate recognition. Satyendra Nath Bose undoubtedly deserved a Nobel.

The God Particle, which has created such a deafening brouhaha in the last few days, wasn't one that just came into being. The Higgs boson particle, based on the Bose-Einstein Statistics, was one that had its hypothesis in place – thanks to the work of S N Bose and Einstein. With its existence now on its way to embrace the pedestal of the truth, one might be forced to wonder why was it that while on the one hand Physics is replete with mentions of Einstein, on the other, Bose is a man who is hardly in the radar of recognition. The name of S N Bose, despite being the name behind the naming of the particle that has shot to prominence yet again, doesn't appear the way it deserves to.

Satyendra Nath Bose, in early 20th century, along with Albert Einstein, engendered the basic tenets of the particles called bosons. And what followed thereafter is a saga of friendship, symbiosis and a relationship that transcended the mortal realms well into the immortal. Bose-Einstein Statistics, the Bose-Einstein Condensate and work on bosons are glowing reminders of that phenomenal relationship – which gave rise to several foundational elements of advanced physics.

With the Higgs-Boson particle on the threshold of solid discovery, S N Bose might have been happy with his work being the fulcrum of it all. Pride is not the only emotion that an Indian would feel at Bose's name being a part of that which is supposed to be the crux of all matter. The feeling is an amalgam of an inarticulate rush of emotions. A thousand Nobel Prizes couldn't have done what the God Particle has done to the Indian scientist. Almost four decades since his demise, the man has been re-instated as an immortal – and this time, the entire world has been jolted out of a stupor. Satyendra Nath Bose isn't a man who can be forgotten in the blink of an eye.



## ACADEMIC NEWS:

### Publications:

#### Journals:

**Madhumita Sarkar**, Shovan Nandi and Aniruddha Ghosal published their paper titled, "I-V and conductance characteristics of nano-scale 1D GaAs FETs", in the Journal of electron devices, ISSN: 1682-3427, Vol. 13, pp. 957-959 (March, 2012).

**Inadyuti Dutt, Soumya Paul** and Dipayan Bandyopadhyaya published their paper titled, "Security in All-Optical Network using Artificial Neural Network", in the International Journal in Advanced Research in Computer Science, ISSN: 0976-5697, Vol. 3, No. 2, pp. 333-340 (March-April, 2012).

**Anindita Ray** and Debashis De published their paper titled, "Data Aggregation Techniques in Wireless Sensor Network: A Survey" in the International Journal of Engineering Innovation & Research (IJEIR), ISSN: 2277 – 5668, Vol. 1, No.2, pp. 20 – 31 (March-April, 2012).

**Arijit Saha**, Kallol Bhattacharya and Ajoy Kumar Chakraborty published their paper titled, "Achromatic quarter-wave plate using crystalline quartz", in the International Journal Applied Optics, ISSN: 2155-3165, Vol. 51, No. 12, pp. 1976-1980 (April 2012).

**Inadyuti Dutt, Soumya Paul** and Rahul Das published their paper titled, "Security in AON using Artificial Neural Network" published in the International Journal in Engineering Science and Advanced Technology, ISSN: 2250-3676, Vol. 2, Issue 3, pp. 396-400 (April 2012).

**Bikromaditya Mondal, Sarit Chakraborty** and Sharmistha Bhattacharjee published their paper titled, "Quasi-Dynamic Scheduling in Wireless Broadcast Networks", in the International Journal of Computer Applications, ISSN: 0975-8887, 43(9), pp. 13-17 (April 2012).

**Amlan Raychaudhuri** and Jayanta Dutta published their paper titled, "Binarization Using Multi-Layer Perceptron: A Semi-Supervised Approach", in the International Journal of Engineering Innovations and Research (IJEIR), ISSN: 2277-5668, Vol.1, No. 2, pp. 64 – 69 (March – April 2012).

**Sarit Chakraborty** and **Bikromaditya Mondal** published their paper titled, "Spam Mail Filtering Technique using Different Decision Tree Classifiers through Data Mining Approach - A Comparative Performance Analysis" in the International Journal of Computer Applications, ISSN: 0975-8887, 47(16), pp.26-31 (June 2012).

**Anindita Ray** and Debashis De published their paper titled, "P-EECHS: Parametric Energy Efficient Cluster Head Selection protocol for Wireless Sensor Network" in the International Journal of Advanced Computer Engineering and Architecture (IJACEA), ISSN: 2248-9452, Vol. 2, No. 2, pp. 239-245 (June 2012).

### Conference:

**Tista Banerjee**, Jinia Datta, Ayindrila Roy, Sumana Chowdhury and Jitendra Nath Bera published their paper titled, "Development of



Remote Speed Control System for Induction Motor", in the Proceedings of CSTS-2012, pp. B24-B30, BPPIMT, Kolkata on April 28, 2012.

**H. S. Dalal** published the paper titled, "HVAC control system", in the Proceedings of CSTS-2012, pp. B31-B39, BPPIMT, Kolkata on April 28, 2012.

**Rahul Kumar, Shovon Das, Krishna Kant, Mr Ankit Kumar** and **Ravi Kiran** published their paper titled, "On synchronization of Van der Pol oscillators" in the Proceedings of CSTS-2012, pp. B40-B46, BPPIMT, Kolkata on April 28, 2012.

**Pramathes Das** and **Mithu Mukherjee** published their paper titled, "Development of pressure sensors with remotely mounted electronics for use in radioactive zones", in the Proceedings of CSTS-2012, pp. C1-C4, BPPIMT, Kolkata on April 28, 2012.

**Sagarika Das, Rashmita Mishra** and **Susmita Biswas** published their paper titled, "Study and measurement of different human body parameters affected by stress using stress meter", in the Proceedings of CSTS-2012, pp. C5-C11, BPPIMT, Kolkata on April 28, 2012.

**Chandrani Das** and **Pramathes Das** published their paper titled, "Human fetal blood flow measurement by ultrasonic transducer", in the Proceedings of CSTS-2012, pp. C12-C17, BPPIMT, Kolkata on April 28, 2012.



**Madhumita Kundu (Mondal), Sujata Saha** and **Pramathes Das** published their paper titled, "Machinery vibration analysis with the help of piezoelectric transducers", in the Proceedings of CSTS-2012, pp. C25-C31, BPPIMT, Kolkata on April 28, 2012.

**Sutapa Mukherjee** published the paper titled, "A simple procedure to define luminance distribution for different sky conditions using cie general standard sky model", in the Proceedings of CSTS-2012, pp. D1-D8, BPPIMT, Kolkata on April 28, 2012.

**Subhadip Nandi, Harshit Kumar, Kabita Paul, Sarfaraz Sultan** and **Arijit Saha** published their paper titled, "A novel birefringent filter for wavelength division multiplexing", in the Proceedings of CSTS-2012, pp. D19-D23, BPPIMT, Kolkata on April 28, 2012.

**Surajit Mandal** published the paper titled, "The frequency response characteristics of a birefringent lens in the infrared region", in the Proceedings of CSTS-2012, pp. D29-D34, BPPIMT, Kolkata on April 28, 2012.

### Invited Talk:

**Soumya Paul**, Associate Professor and Head, Computer Application was invited by Dean, Physical Science, Assam University, Silchar, acted as resource person and given a talk on "Application of Mathematics in IT" on 18<sup>th</sup> May, 2012 and it was published in their local newspaper.

### Recognition:

**Soumya Paul**, Associate Professor & Head, Dept. of Computer Application has been appointed as a member of the Board of Studies of BCA, MCA, West Bengal University Of Technology by the Honb'l, Vice-Chancellor.

## INSTITUTIONAL NEWS:

### Ex-Student's Achievement

**Mr. Soumik Podder**, ex-student of ECE department of our college has completed his M.Tech degree in *Nanoscience & Technology* from Jadavpur University, Kolkata in 2012. He stood 1<sup>st</sup> Class 1<sup>st</sup> and is awarded with gold medal. We are proud of him and wish him success in future endeavors.



### Pre-placement Activity

An interactive orientation session was organized by Infosys Technologies Ltd. on 18<sup>th</sup> April 2012 for the current 3<sup>rd</sup> year students.

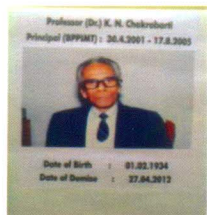
### Student Welfare Cell

Mr. Subhasish Pradhan, Assistant Professor of Engineering Physics department is nominated as In-charge of Student Welfare cell of our institute from April 2012.

### Seminar

A seminar was organized by BPPIMT in association with United States-India Educational Foundation (USIEF), Kolkata on the prospects of higher education and financial assistance in USA on 20<sup>th</sup> April 2012. It was very informative for the students who highly appreciated the event.

### Condolence Message for our ex-Principal



We express our most heartfelt grief on the loss of our former Principal Prof. (Dr.) Krishnanath Chakrabarti on 27<sup>th</sup> April 2012. He was an academician of repute. He completed his Ph.D from Jadavpur University, Kolkata and joined the same University in 1960 as a lecturer. He served the University for 29 years and retired from there in 1999 as Professor. He has several publications to his credit. He joined our institution and took the charge as Principal of the institute in April 2001 and acted in the capacity till August 2005. We are grateful to him for his contributions during the early stage of the Institute. His memory will remain deep in our heart forever. May his soul rest in peace!

### Condolence Message for our Student

We deeply express our sympathy on the sad demise of our beloved student Mr. Anwar Hossain, a student of ECE for the session 2010-2011. He passed away on 21<sup>st</sup> April 2012. May his soul rest in peace.

### Faculty Seminar Program "PROSARON"

Ms. Somali Sikder, Assistant Professor of ECE Dept. has delivered a seminar talk on "Study of bipolar Walsh coding in optical code division multiple access system" on 16<sup>th</sup> May 2012 in the Institute Seminar hall. The seminar was attended by almost all the faculty members of the institute.

### Departmental Magazine



Department of Computer Application published its 3<sup>rd</sup> edition Wall Magazine in April, 2012 under the editorship of Ms. Inadyuti Dutt, Assistant Professor.

Department of Computer Application published first printed Magazine, 'Tavish' in Department of Computer Application, under the guidance of Mr. Soumya Paul and Ms. Inadyuti Dutt as Advisors and Mr. Arijit Dey as Financial Advisor in May, 2012. The magazine was inaugurated by the gracious presence of Principal, Prof. (Dr.) Sutapa Mukherjee and Prof. Emeritus S.C. Chakraborty.

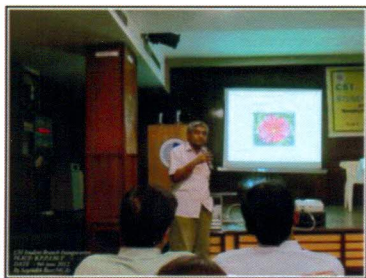
### Short Term Training Program

Mr. Panthadeb Saha, Assistant Professor, ECE Department, Mr. Somnath RoyChowdhury, Assistant Professor and Head, CSE Department and Mr. Amlan RoyChowdhury, Assistant Professor, CSE Department attended a two-week short term training program on "Exposure in MATLAB" organized by NITTTR (Science department), Kolkata which started on 4<sup>th</sup> June 2012.

### Student Branch of CSI



Inauguration



Prof. D P Mukherjee delivering lecture

Computer Society of India, Student Branch, in B. P. Poddar Institute of Management & Technology (BPPIMT), Kolkata was inaugurated on 9<sup>th</sup> June 2012 in the kind presence of CSI Regional Vice President (Region II), Prof. Dipti Prasad Mukherjee; CSI Kolkata Chapter Chairman, Dr. Debasish Jana; Regional Student Coordinator, Prof. (Dr.) Phalguni Mukherjee; State Student Coordinator, Mr. Prashant Verma; Principal, BPPIMT, Prof. (Dr.) Sutapa Mukherjee; Head, Department of Computer Application, Mr. Soumya Paul and other dignitaries. The inaugural ceremony was organized by the Department of Computer Application under able leadership of its Head and Chairman, CSI Student Branch Mr. Soumya Paul, Secretary and

Student Branch Coordinator, Ms. Inadyuti Dutt, Treasurer, Mr. Subhasish Mullick and 77 student members. CSI, an organization of repute, imparts IT education to professionals both in academia and industry. Its variety of events, seminars, conferences and courses provide growth and in depth knowledge to the young professionals.

The ceremony was followed by a Technical Seminar on "Emerging Areas of Computer Application". The technical session was graced by Immediate-Past Chairman, CSI Kolkata, Mr. Sushanta Sinha. Mr. Sinha, who is also one of top personnel from TCS, shared his experiences as an industry insider. His captivating views captured the student members. Regional Vice-President, Region II and eminent Professor of Indian Statistical Institute, Kolkata, Prof. (Dr.) Dipti Prasad Mukherjee, flooded the audiences with his lecture on Image Processing. The students found their lectures to be very interactive and informative.



Delegates at the seminar

### Semester Exams

The Institutional exam committee consisting of Prof. (Dr.) Shila Ghosh as the Officer-in-charge, Mr. Surajit Mandal and Mr. Subhasish Pradhan as supervisors conducted the semester exams as per the guidelines from WBUT. With support from all members of the Institute, the exam was a



success and was highly praised by the University Station Supervisors stationed in our Institute. Mrs. Ivy Majumdar, Associate Professor, ECE Dept. and Mr. Kunal Das, Assistant Professor, IT Dept. were appointed by COE, WBUT as University Station Supervisor for the even semester examination, 2012.

### Faculty Development Programme

Mr. Arindrajit Chaudhury, Assistant Professor ECE Department and Mr. Shibashish Senapati, Assistant Professor CSE Department attended a faculty development programme on Behavioral Skill at CTS, Kolkata on 21<sup>st</sup> June 2012.

### Industrial Training

A summer industrial training program has been organized by BPPIMT in association with PurpleLeap for the 2015 pass-out batch. The program started on 22<sup>nd</sup> June 2012.

## NATIONAL CONFERENCE ON CONTROL, SENSOR, TRANSDUCER AND SIGNAL CONDITIONING (CSTS 2012)

A one day National Conference was organized by the Department of Electrical Engineering, B. P. Poddar Institute of Management & Technology, Kolkata on "Control, Sensor, Transducer and Signal Conditioning, CSTS 2012", on 28th April, 2012 in collaboration with IET, The Institution of Engineering and Technology, Kolkata Network, YP Section.



Chief-Guest lighting the lamp



Inauguration of proceedings

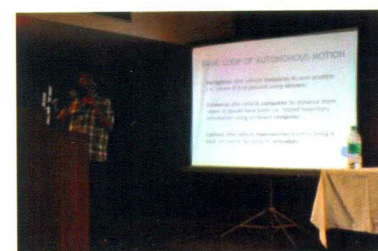
The key note address by Prof. T.K. Ghoshal was an educative experience which offered the audience a rare opportunity to get a glimpse through the technical intricacies of the world of missiles, the principles of operation and execution. Prof. Amitava Chatterjee, Associate Professor, Department of Electrical Engineering, JU, enthralled the audience by throwing light on different complex areas of image processing and robot navigation.



Prof. Amit Konar delivering his talk

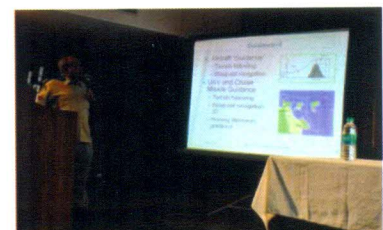
After Lunch break, Prof. Abhik Mukherjee of the Department of Computer Science & Technology, BESUS, delivered an engrossing talk on Control and Guidance trading through the fundamental areas and then delving into the nuances of operation of unmanned vehicles and satellite communication. His lecture was followed by a talk by eminent Prof. Amit Konar, Professor, Department of Electronics & Telecommunication Engineering, Jadavpur University who mesmerized the audience with his incredible knowledge and profound understanding of Brain-Computer Interfacing. He explored the possibilities of using artificial limbs, their operation and working of associated circuitry. The last talk in the plenary Session was delivered by Prof. Mainak Sengupta, Professor, Department of Electrical Engineering, BESUS who threw light on advancements in Power Electronics and Drives.

The Conference received a huge response in the form of paper submission. Some of the papers reflected brilliant ideas and efforts and after review seventeen papers were selected for publication and presentation. The parallel technical sessions were chaired by Prof. Pramathes Das, Conference Coordinator.



Prof. A. Mukherjee delivering his talk

The programme was wound up with a Vote of Thanks delivered by the Convener, Prof. Sudipta Chakraborty who expressed her heartiest thanks and sincere gratitude to the esteemed delegates, faculty, staff members, students and IET, Kolkata network for making the Conference a grand success.



Prof. T. K. Ghoshal delivering his talk



Prof. A. Chatterjee delivering his talk

- **Editorial Committee:** The Editorial Committee consists of a team of Faculty Members headed by Prof (Dr) N. K. Datta, with Prof. Emeritus Dr S.C. Chakravarty as Chief Editor, Prof (Dr.) Sutapa Mukherjee, Principal and Prof (Dr.) B.N. Chatterji, Dean as the Chief Advisors and Mr. Arijit Saha Associate Professor as Editor of the Newsletter.
- **Call for Contributions:** Contribution for the Newsletter on the global and national news related to technical, economical, philosophical and general science etc. is solicited from all the members of the BPPIMT family and the students. The prospective contributors are requested to send their writings in about 200 words electronically to the mail address: newsletter@bppimt.ac.in. Publication in the Newsletter is at the full discretion of the Editorial Committee.