Conference Report

Report of The Seminar On "Indian Contributions in Mathematical Sciences"

The Institute of Science, Education and Culture (ISEC), Kolkata in collaboration with the Birla Industrial and Technological Museum (BITM), Kolkata organized an one-day seminar on "Indian Contributions in Mathematical Sciences" (ICMS) on Saturday, the 25th February, 2017 at the premises of the Birla Industrial and Technological Museum at 19 A, Gurusaday Road, Kolkata 700 019. The seminar was formally dedicated to the memory of Late Professor Syamadas Mukhopadhyay, an eminent Professor and an internationally famous geometer of Calcutta University, as a tribute to him on the occasion of his 150th Birth Anniversary.

The Inaugural Session of the seminar started at 11.00 A. M. The Inaugural Address was delivered by Professor Anil Kumar Ghosh, President, ISEC. In his brief speech he described the history of ISEC and its aims and targets. He also gave an account of India's scientific contributions starting from the ancient times. Dr. Swapna Mukherjee, Coordinator, ISEC Seminar Sub-Committee extended a warm welcome to all those present in a focussed and professional fashion. Dr. E. Islam, Director, BITM, Kolkata in his Introductory Speech highlighted the necessity to know about the research activities in mathematics carried out in India, not only during the ancient times but in the recent times as well. He also beautifully outlined some of his own plans for making

mathematics attractive and approachable to the student community. The last presentation of the session was a tribute paid to Late Professor Syamadas Mukhopadhyay by Dr. (Ms.) Purabi Mukherji on the occasion of the great geometer's 150th Birth Anniversary. Dr. Mukherji briefly described Professor Mukhopadhyay's teaching and research activities highlighting his notable contributions in various branches of Geometry. She also presented a compilation of comments reflecting the opinions of famous mathematicians on Syamadas Mukhopadhyay's research work. The Inaugural Session ended at 11-30 A. M.

After a short Tea Break, the Technical Session I commenced at 11-45 A. M. The session was chaired by the well-known historian of mathematics, Professor Pradip Majumdar of the Department of Mathematics, Rabindra Bharati University. In this session, the Keynote Address was delivered by Professor Atri Mukhopadhyay, a renowned author of popular science and a physicist still active with research in the Saha Institute of Nuclear Physics (SINP). Professor Mukhopadhyay gave a very lucid account of several issues addressed in Hindu Mathematics, mostly during the Vedic period. He discussed the genesis of irrational numbers like π and $2^{\frac{1}{2}}$. In his talk, he also emphasized the point that though mathematics grew out of necessity, it soon developed into a mature self-styled discipline. He also pointed out the reasons

that prompted the Western world by and large to refuse the Hindu findings as original.

The next speaker in the session was Professor Uday Chand De, a renowned Professor of the Department of Pure Mathematics, University of Calcutta. Professor De is a well-known geometer, his area of research being Differential Geometry. He is also an elected Fellow of the West Bengal Academy of Science and Technology (WAST). Professor De in his informative talk titled 'Development of Geometry in India from Ancient to Modern Times', presented a comprehensive picture of the development of geometrical research in India starting from the ancient times to the end of the twentieth century. He divided the developments that took place in India into four distinct periods namely,

- The pre-Aryan Period which includes the excavated civilizations of Harappa, Mohenjo-Daro and other places in the Indus Valley,

- The Vedic Period with special emphasis on S'ulba Sutras,

- The post Christian Period up to the first half of the nineteenth century,

- Modern period starting from the second half of the nineteenth century to the end of the twentieth century.

The next and last speaker in the Technical Session I was Professor Subenoy Chakraborty, of the Department of Mathematics, Jadavpur University. He himself is a noted mathematical-physicist. In his talk entitled 'Development of Mathematical Physics in India', Professor Chakraborty discussed the development of mathematical physics in India giving special emphasis to the development in the areas of quantum mechanics and relativity. In his systematic and analytic presentation, he highlighted the notable contributions of such stalwarts as Professor S. N. Bose, Professor V. V. Narlikar, Professor J. V. Narlikar, Professor

A. K. Raychaudhuri, Professor P. C. Vaidya and the modern generation, internationally reputed scientists like Professor A. Sen and Professor T. Padmanabhan. His talk unfolded the gradual developments of research in the fields mentioned earlier in the Indian perspective.

The chairperson Professor Pradip Majumder summed up with new inputs and interesting observations.

The Technical Session I ended at 2 P.M. After a brief Lunch Break, the Technical Session II commenced at 2-30 P. M. The session was chaired by Professor Sudip Kumar Acharyya of the Department of Pure Mathematics, University of Calcutta. Professor Acharyya is a reputed teacher with specialization in Differential Equations and Topology. The first speaker in this session was Professor Koushik Ghosh of the Department of Mathematics, University Institute of Technology, University of Burdwan. He delivered a talk titled 'Development of Astronomical Research in India'. He gave a detailed account of the development of Astronomy in India starting from the pre-historic to the modern times. His talk was very well-researched and informative. He discussed the contributions of Aryabhatta, Aitareya Brahmana, Yagnavalkya, Varahamihira, Brahmagupta and Bhaskara in the ancient India. He also brought to the fore the works of modern astronomers like M. K. V. Bappu and Amil Kumar Das. He also discussed the setting up of different astronomical observatories in modern India.

The last speaker of this session was Professor Parthasarathi Mukhopadhyay, the famed translator of Rober Kanigel's famous book The Man Who Knew Infinity into Bengali. He spoke on 'Srinivasa Ramanujan' (Transcending Kanigel's Canvas). Professor Mukhopadhyay a brilliant scholar and a popular teacher of the Department of Mathematics, Ramkrishna

Mission Residential College, Narendrapur held the audience spell-bound with his mesmerizing presentation. He spoke about different aspects of Ramanujan's life and works and also mentioned some interesting anecdotes from the genius's life.

Professor Mukhopadhyay's presentation was followed by a two-part film shown on 'Srinivasa Ramanujan'. The film was produced by the BBC. Professor Parthasarathi Mukhopadhyay had arranged for the film show and he deserves sincere thanks and praise for his efforts.

Professor Acharyya nicely summed up the proceedings of the Technical Session II.

At the end of the second session, Professor Santanu Das, Secretary, ISEC proposed a Vote of Thanks.

The seminar was a great success with a full house from the beginning to the end. The audience took part in the discussions with the distinguished speakers and made their own comments as well. On the whole it was a very lively, vibrant and interactive academic venture and drew much applause from the august gathering.

(A few photographs are on inside back cover)

Reported by
Purabi Mukherji, ISEC
Convener of the Seminar

Report of One-day State-level Seminar on 'Introduction to Dynamical Systems'

The Department of Mathematics, Vidyasagar Evening College in collaboration with the Indian Society of Nonlinear Analysts (ISNA), Kolkata organized an one-day state level seminar on 'Introduction to Dynamical Systems' on the 8th February, 2017 in the Seminar Hall at the Ground Floor of the New Building of the said college. The seminar was well-focused and was meant essentially for the under-graduate students. There were two invited speakers namely, Dr. Swarup Poria of the Department of Applied Mathematics, Calcutta University and Professor Tapan Kumar Kar of the Department of Mathematics, Indian Institute of Science, Engineering and Technology (IISET), Sibpur.

The 'Inaugural Session' commenced at 11-00 A. M. Various dignitaries including the noted mathematical physicist Professor Abhijit

Mookerjee were present on the dais and spoke in the session. The Seminar was formally dedicated to the renowned mathematician late Professor Jyoti Das. Dr. Sarbari Ghosh of the Department of Mathematics, Vidyasagar Evening College was the Convenor of the Seminar.

The 'Technical Session I' was from 11-30 A. M. to 1-00 P. M. Dr. Swarup Poria delivered a lucid talk on 'Basics of Dynamical Systems'. He explained very clearly and gave examples to clarify the concepts. His talk generated a lot of interest among the students and the 'Interactive Session' after the lecture was quite vibrant. Many students participated in the discussions.

After the lunch break, the 'Technical Session II' started at 2-15 P.M., and continued till 3-45 P.M. followed by an 'Interactive Session'. In the