BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
YELAHANKA, BENGALURU-64
DEPARTMENT OF MATHEMATICS

Report
on

Five Days Faculty Development Program held on "Applied Mathematics in Engineering" from 29th July – 2nd August, 2019

The Five days Faculty Development Program "Applied Mathematics in Engineering" organized by the Department of Mathematics was held during 29th July – 2nd August, 2019. 32 participants belonging to various organizations participated in the FDP.
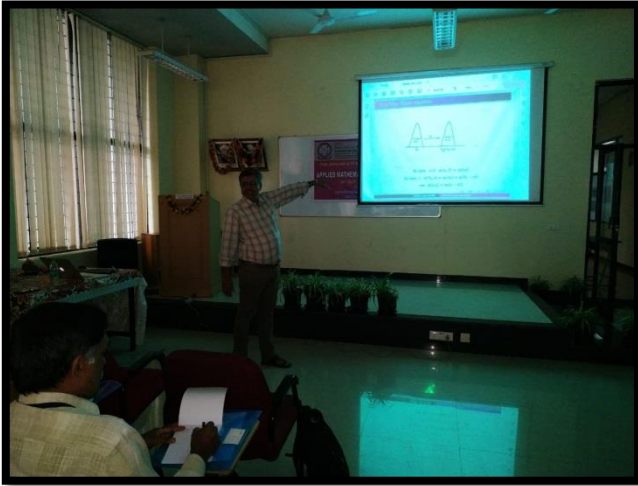

The FDP started with the invocation song by Ms. Yaksha, V Semester student from Dept. of Civil Engineering. Dr. Chethan A S, HOD, Mathematics proposed the welcome address during the inaugural function. Prof. Kallur K Vijaykumar gave an overview of the FDP and Dr. Jojy Joseph Idicula proposed the vote of thanks.

Dr. N Balakrishnan, Professor, Department of Aerospace Engineering, Indian Institute of Science, Bengaluru delivered keynote address on "Large scale CFD: Present and Future" and some of its applications. In the afternoon session, Dr. Shanthi Natarajan delivered a talk on Empowering Science with Interdisciplinary research. She discussed about genome and how that research involves all other disciplines such as Mathematics, Computer science, Medical field etc.

The morning sessions on the second day was handled by Dr. G D Veerappa Gowda, Dean and Professor, Centre for Applicable Mathematics, TIFR. He delivered lectures on Applications of Conservation Laws & Hamilton-Jacobi Equations. He explained the applications of one dimensional wave equation and Hamilton Jacobi equation in image processing and PDE in oil extraction from pores. The sessions were very lively. He also gave information about the admission procedure in TIFR. Prof. Ganapathi Hebbar, TCE department, BMSIT & M discussed about Telephone Traffic Model in the afternoon session. He gave an insight on telephone traffic with some definitions and examples. He also discussed about how distributions are used in traffic model and explained the optimization of telephone calls.

On the third day, Dr. M. Sreenivasa Reddy, Principal, RLJIT delivered lectures on Role of Optimization techniques in Engineering. His lectures included preview of Operation Research, Linear Programming, Transporation, Assignment and Traveling salesman problems and Game Theory with illustrative examples.

On the fourth day, Dr. Shyam Sunder Ghoshal, Faculty, Centre for Applicable Mathematics, TIFR, delivered lectures on Ordinary Differential Equations & its Applications. He discussed about uniqueness of solution of Ordinary Differential Equations, necessary and sufficient conditions for exactness and testing the nature of series using various techniques such as Ratio & p-series test. Prof. Saneesh Cleatus T. delivered a talk on Visualizing vectors in the afternoon session. He gave insight on geometrical interpretation of Scalar & Vector products and Cartesian, Cylindrical & Spherical polar coordinate system using geo-gebra tools.

On the last day, the participants of the FDP were able to visit Centre for Applicable Mathematics, TIFR, Bengaluru. An interesting talk was delivered by Dr. Venky Krishnan, faculty of the Centre for Applicable Mathematics, TIFR on Applications of PDE and Surface Integrals in Tensor Tomography, Doppler Imaging Technique, Image in painting, etc. The participants also got an opportunity to visit the Library and access Journals & Books. The FDP was concluded with the distribution of Certificates to the participants by Dr. Venky Krishnan.

All the sessions were very informative and interesting. Feedback about the FDP was taken by the participants.