A REPORT ON THE NATIONAL CONFERENCE ON

MATHEMATICAL MODELING: A SOCIO-SCIENTIFIC APPROACH

Organized by Karnataka State Higher Education Council and Centre for Industrial and Applied Mathematics, Tumkur University
30th November 2011, Conference Hall, Karnataka State Higher Education Council Bangalore

Karnataka State Higher Education Council and Centre for Industrial and Applied Mathematics, Tumkur University jointly organized a one-day conference on 'Mathematical Modeling: A Socio-Scientific Approach' 30th November 2011 at Karnataka State Higher Education Council Conference Hall. The Conference was inaugurated by Dr. Prashant Goswami, Chief Scientist, C-MMACS, National Aerospace Laboratories. The Vice-Chairman of the Council Prof. S C Sharma welcomed the Chief Guest Dr. Prashant Goswami and the participants. Dr. Goswami inaugurated the event by lighting the lamp and releasing the proceedings of the conference. Executive Director of the council Prof. Kaveriappa gave the vote of thanks.

Prof. S C Sharma, Dr. Prashant Goswami and Prof. K M Kaveriappa releasing the Conference Proceedings

There were 5 Lead Lectures including keynote address and 5 oral presentations.

In the keynote address, Dr. Prashant Goswami, Chief Scientist, C-MMACS, NAL, gave a fascinating insight into the interconnection of the three worlds-the material world, the social world and the personal world. While talking about the challenges of modeling the social processes, he said that a significant difference between modeling a physical process and a social process is the lack of generic principle in the latter. He suggested the need for combination between formal models, computational tests and empirical foundations. Furthermore, he talked about the rise of multi-scale and soft modeling.

Dr. Rajesh Kasturirangan from National Institute of Advanced Studies, Bangalore, talked about cognition and knowledge. He talked about transforming mystery into problems with the help of the precision of mathematics, the conceptual insight of philosophy, the empirical accuracy of science and the empathy of genuine humaneness.

Dr. A S Vasudeva Murthy from TIFR-Centre for Applied Mathematics, discussed about the inverse reactor kinetics problem using Picard iteration. Dr. P G Siddeshwar from Dept. of Mathematics, Bangalore University delivered a wonderful talk on a mathematical model of enhanced heat transfer in a Newtonian liquid due to nano-sized suspended particles. Dr. R. Rangarajan from Dept. of Mathematics, University of Mysore, discussed about the mathematical modeling and computational aspects of nonlinear heat transfer problems.

Apart from the core mathematical issues, papers were also presented on the burning issues like global economy analysis, commodity prices and inflation rate analysis.

It was, by all accounts, a successful conference with a diverse programme reflecting the variety of applications of scientific and mathematical techniques within social sciences.