

Report  
**2<sup>nd</sup> One Week Self-Sponsored STC on Process Modeling, Simulation, Control and Optimization (PMSCO-2023)**  
**March 23-27, 2023: Online**

The One Week Self-Sponsored Short Term Course on “Process Modeling, Simulation, Control and Optimization (PMSCO-2023)” inaugurated on March 23, 2023. The STC was jointly organized by Department of Chemical Engineering, Department of Instrumentation and Control Engineering, and Department of Electrical Engineering, Dr. B R Ambedkar National Institute of Technology Jalandhar, Punjab (India).

Hon’ble Director Prof. Binod Kumar Kanaujia, NIT Jalandhar blessed the online STC and congratulated the team of PMSCO-2023 for conducting the course.

Dr. Poonam Gera, Head of Chemical Engineering Department, Dr Sharvan Kumar Pahuja Head Electrical Engineering, Er Narinder Singh Bhargal, Head Department of Instrumentation and Control Engineering was highlighted the achievements of Department and welcome the audience.

The course was coordinated by Dr. Deepak Sahu, Dr. Om Prakash Verma, Dr. Vivek Sharma.

Dr. Deepak Sahu was highlighted the course objective and importance to the participants. This course was particularly designed in the fashion of the growing demands for increase of process operation efficiency and safety that encourage the development and implementation of operation and control procedures based on mathematical models, soft-sensors, and data-driven techniques.

The total 140 participants from different premier institutes participated in this course.

The expert from different institute Prof. P. V. Suresh, Director of School of Computers and Information Sciences, Indira Gandhi National Open University (IGNOU) New Delhi; Dr. G. Loyd Raja, Electrical Engineering, NIT Patna; Dr. Soumitra Maiti, Senior Scientist, CBRI, Roorkee; Dr. Suryakant, Research Scientist, Inserm, France; Dr. Gaurav Manik, IIT Roorkee; Ms. Drishti Yadav Technische Universität Wien, Austria; Dr. Rajesh Singla, NIT Jalandhar. Dr. Nikhil Pachauri, Manipal Institute of Technology, Prof. Rajesh Kumar, Hemvati Nandan Bahuguna Garhwal, University, UK, India ; Dr. Tarun Kumar Sharma from Shobhit university India were delivered the expert talks on different aspect of " Process Modeling, Simulation, Control and Optimization " during March 23-27, 2023.

In the opening day of the STC, expert talk was delivered by Prof. P. V. Suresh, Director of School of Computers and Information Sciences, Indira Gandhi National Open University (IGNOU), New Delhi, India on “application of Artificial Intelligence”.

Dr. G. Loyd Raja from NIT Patna continues the next session on “Model based Control Strategies for Industrial processes-Introduction, Design, Challenges and Recent Trends”. Dr.

Soumitra Maiti, Senior Scientist, CBRI, Roorkee, India delivered the talk on “Optimization of Heavy Metal Removal from Waste Water by using Fly Ash”. The Dr. Suryakant, Research Scientist, Inserm, France delivered the talk on “Clustering techniques for recommender system”

The session continues with Dr. Gaurav Manik, IIT Roorkee and he delivered the talk on “Modeling, Simulation, Optimization of Solar Concentration Process and Integration with Industrial Process another Steps towards Sustainability”.

The next session with Drishti Yadav, Technische Universität Wien, Austria and she delivered the talk on “Fault Diagnostic for Safety Critical Cyber-Physical System”. The session of the next day delivered by Dr. Rajesh Singla, NIT Jalandhar on “Recent on Advances in Brain Computing Interface”

Dr. Nikhil Pachauri from Manipal Institute of Technology delivered the talk on “Inferential Control Design for Industrial Bioreactor”. On the last day Prof. Rajesh Kumar, Hemvati Nandan Bahuguna Garhwal, University, U.K., India delivered the talk on “Model based control design: Robust control technique” and Dr. Tarun Kumar Sharma from Shobhit university delivered talk on “Theory and Application of Butterfly Optmization”

Dr. Deepak Sahu, Dr. Om Parkash Verma and Dr. Vivek Sharma presented vote of thanks at the end of the course.

