A
Five Day Short Term Course (Hybrid mode)

On

Soft Computing Machine Learning and Optimization Techniques
18–22 March 2024

Organized by

Department of Chemical Engineering Malaviya National Institute of Technology Jaipur – 302017 India

In Association with

Diamond Jubilee Celebration MNIT Jaipur

IIChE Jaipur Regional Center

PATRON
Prof. N. P. Padhy
Director, MNIT Jaipur

CHAIRMAN
Dr. Sushant Upadhaya
HoD Chemical Engg.

COORDINATORS
Dr. Neetu Kumari, Assistant Professor
Dr. Hrushikesh Gade, Assistant Professor
Dr. Rajeev Dohare, Associate Professor
Dr. Madhu Agarwal, Professor

IMPORTANT NOTE
The number of participants for the workshop is limited. Therefore, the registration is based on a first come first basis. Last date of registration is 13th March 2024.

ABOUT THE DEPARTMENT
The Department of Chemical Engineering commenced in 1988 with 30 undergraduate students in the B. Tech. Chemical Engineering program and has been doing its best to bring about excellence in academics achieved in the last 35 years. PG Programs of M. Tech. in Chemical Engineering and Ph.D. were started in 2006 and 2004, respectively. The current sanctioned strength of the B. Tech. Chemical Engineering Program and M. Tech Chemical Engineering Program are 116 and 15, respectively, for Full-time Courses.

ABOUT MNIT JAIPUR
The Institute was jointly established in 1963 as Malaviya Regional Engineering College Jaipur by the Government of India and the Government of Rajasthan. Subsequently, on 26 June 2002, the college was given the status of National Institute of Technology. On 15 August 2007, it was recognized as the Institute of National Importance through an Act of Parliament. The Institute is fully funded by the Ministry of Education (Shiksha Mantralaya), Government of India.

ABOUT THE PROGRAM

The main objective of this short-term course is to provide a forum in which the participants obtain information about recent advances in optimization techniques. The course offers a common discussion ground for the theoretical and practical aspects of modern optimization techniques. The proposed course presents all traditional and advanced methods of optimization of relevance to applications in engineering sciences. It also highlights successful applications of optimization in various areas and contains sessions for the participants to introduce them to several modern optimization methodologies and their application/case studies from a wide variety of real-world interdisciplinary engineering problems.

Topics to be covered:

- Problem formulation for optimization
- Constrained and unconstrained deterministic linear and nonlinear programming methods for multivariable problems.
- Genetic Algorithm (GA), Swarm Intelligence, Ant Colony Optimization (ACO), Directed Bee Colony (DBC), Harmony Search (HS), Teaching-Learning-Based Optimization (TLBO) algorithm, Differential Evolution (DE), Biogeography-Based Optimization (BBO), Game Theory, Portfolio Optimization, Markov Models, Multi Agent System (MAS) etc.
- Neural network based and fuzzy based optimization.
- Nature inspired optimization algorithm
  - Guidelines on publishing research papers.
  - Hands-on training using MATLAB and other Software Tools Python, Java etc.
- Introduction of operation research (OR) models, scope and limitation of OR, sensitivity analysis, multi-objective programming, application of OR to transportation problem, dynamic programming, and case studies.

RESOURCE PERSONS

The lectures will be delivered by faculty members from IITs/NITs, and reputed Institutions.

REGISTRATION FEES

Participant Type	Registration Fees (Offline/Online)
UG /PG Students & Research Scholars	Rs.2500/1000
MNIT UG/PG students, & Research Scholars	Rs.1500/1000
Faculty Members	Rs.3500/2000
Industry Persons	Rs.5000/2500

MODE OF PAYMENT

NEFT/IMPS:
Name: Registrar (Sponsored Research) MNIT
Account No.:676801700388
IFSC CODE: ICIC0006768 (ICICI BANK, MNIT)

REGISTRATION FORM

After fee submission, the applicant must register themselves by submitting details on Google form link below:

https://forms.gle/Jd6aqFuhK3kDnAkf9

For any query, the applicant may contact on

ADDRESS FOR COMMUNICATION

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