

A
Five Day Short Term Course

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 to 40. Therefore, the registration is based on first come first basis. Last date of registration is 11th March 2024.

ADDRESS FOR COMMUNICATION

Coordinators:

M:9549650416, 9549654168

Email: neetu.chem@mnit.ac.in

rkdohare.chem@mnit.ac.in

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 a number of 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 non-linear programming methods for multivariable problem.
- 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 (Inclusive of GST)

| Participant Type | Registration Fees |
|--|--------------------------|
| UG /PG Students & Research Scholars | Rs.2500 |
| MNIT UG/PG students, & Research Scholars | Rs.1500 |
| Faculty Members | Rs.3500 |
| Industry Persons | Rs.5000 |

MODE OF PAYMENT

All Payments should be made by demand draft in favour of "Registrar MNIT Jaipur" payable at Jaipur. The registration fee will be nonrefundable.

REGISTRATION FORM

A Five-day Workshop

On

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

Name: _____

Designation: _____

Organization: _____

Telephone: _____

Email: _____

Registration Fee Details:

Amount: _____

Transaction ID: _____

Bank Name: _____

Date

Signature

I hereby forward and recommend the above applicant for attending the workshop on "Soft Computing Machine Learning and Optimization Techniques, 18-22 March 2024".

Signature of Head of the Institution with seal