Coordinators :

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Organizing Committee :

- Dr. Navneet Khanna
- Dr. Ajit Parwani
- Dr. Pl. Ramkumar
- Dr. Pramod Bhingole
- Dr. Saurabh Kumar Yadav

Student Managing Committee :

- Manjulata Pal
- Pulkit Choudhary
- Dinbandhu
- Vishal Prajapati

Eligibility for Participation

All practicing engineers working in private, public, government organizations/industries, faculties, research scholars and students from engineering institutions.

Registration fees (including GST)/participant:

Industrial Professionals	:	5000
Faculty	:	3000
Research Scholars/Students	:	2000
Last date for Registration	:	25/05/2019

For query :

87636 55384,97857 12695 moomesa.iitram@gmail.com

Registration link:

http://iitram.in/workshop/index30/index30.php

Venue: IITRAM, Ahmedabad



2nd SHORT TERM TRAINING PROGRAMME ON

Multi-Objective Optimization Methods for Engineering and Scientific Applications (MOOMESA-2019)

(3 - 8 June, 2019)



Organized by Department of Mechanical Engineering



Institute of Infrastructure Technology Research and Management (IITRAM)

(An Autonomous University established by Government of Gujarat) Near Khokhra Circle, Maninagar (East), Ahmedabad, Gujarat, India - 380026 Phone: 079-67775488 / 67775499 Fax: 079 6777 5475

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About IITRAM:

Institute of Infrastructure Technology Research and Management (IITRAM) has been established by the Government of Gujarat as an Autonomous University and mandated to bring about significant change in Engineering Education with respect to Technical and Managerial knowledge in the domain of Infrastructure. This institute is to serve as a center of excellence in research and teaching in the areas pertaining to infrastructure. The Institute has vision of acquiring a status of National importance in Infrastructure and related areas.

About Department:

The Department of Mechanical Engineering at IITRAM, Ahmedabad started in 2014. The department has highly qualified, experienced and dedicated faculty members with state of arts infrastructures. At present, the Department offers UG program in Mechanical Engineering, PG and a Research program leading to Ph.D. degree.

Course Content :

- Overview of basic statistical concepts, Basic principles of Design of Experiments (DOE)
- Multi-attribute decision making methods such as Desirability function approach, Utility theory, TOPSIS, AHP, PROMETHEE, SAW, WPM, MOORA, Grey Relation Analysis etc.
- Constrained and Unconstrained deterministic linear and nonlinear programming methods.
- Genetic algorithm (GA), Particle Swarm Optimization, Harmony search, Teaching-learning-based optimization (TLBO), Jaya algorithm.
- Engineering case study related to aforementioned topics.

Theme of the conference :

In today's world, manufacturers find competitive advantage through better design, improved customer satisfaction, quick response, faster new product introduction, and other goals overshadowed in the past by the sole pursuit of cost reduction. The new engineering challenges require systematic and integrated planning and optimization approaches in the manufacturing environment. In this context, the aim of a manufacturing system is to achieve overall performance, utilizing resources in development, design, production, delivery and support of products.

Moreover, performance or efficiency of any process is assessed in terms of different objective functions or process output responses. Therefore, determining the best optimal parameter combination can lead towards improvement of the overall process efficiency. The performance of the process can be enhanced by applying optimization to the simulation model with respect to its process control parameters. However, Single objective optimization method often creates conflict, when more than one response variables need to be optimized simultaneously. Hence, to minimize cost and to maximize production rate simultaneously; multi-objective optimization approach should be explored.

This course is designed to highlight the application of multiobjective optimization methods manufacturing environment for quality improvement and offline quality control any process or product.

Objective:

The objective of this course is to explore the multi-objective optimization and their applications in various industries for quality improvement and offline quality control of any product or process. The main focus the course will be on the Infrastructure includes manufacturing, HVAC, transportation etc. This course will also discuss theoretical and practical aspects, which are of interest for practicing engineers, research scholar and students. The participants will be exposed to application of MATLAB in optimization.

Speakers:

Faculties from IITRAM Ahmedabad, NITs and IITs

Patrons:

- Dr. Shiva Prasad, Director General, IITRAM
- Dr. A. U. Digraskar, Director, IITRAM
- Dr. N. N. Bhuptani, Registrar, IITRAM