Nowadays, engineering researchers, post graduates, academicians, and field engineers are very often use optimization techniques in order to achieve desirable outcomes. Ideation, modelling, analysis, decision making and optimization certainly play important roles in process design, process synthesis & analysis, transportation, logistics, production scheduling, telecommunications network, complex reactor networks, separation sequence synthesis, finding of an optimal trajectory for a robot arm, the optimal thickness of steel in pressure vessels, the optimal set of parameters for controllers, or optimal relations or fuzzy sets in fuzzy models, optimal network in energy integration, automated design of heat exchangers, mass exchanger networks, etc. The rapid advancement and growth in computing performances enable optimization techniques to become increasingly important and popular in almost all engineering applications for system identification, modelling, controls and data mining etc. This STTP is planned to provide a common platform to all faculty members of technical institutions to gain theoretical fundamentals coupled with practical knowledge of analytical and numerical methods to solve various engineering problems of real life applications.

## COURSE CONTENTS

- Fundamentals of optimization.
- Mathematical modelling and optimization techniques.
- Design for optimization.
- Fuzzy optimization.
- Decision making and optimization.
- Meta-Heuristic and Multi-Objective optimization.
- Al based optimization.
- Application and case studies.

## **RESOURCE PERSONS**

Eminent speakers from IITs, NITs, Jadavpur University and other reputed universities along with the industries will conduct and deliver the lectures in different sessions of this programme.

## **CHIEF PATRON**

Mr. Kishan Kumar Kejriwal (Chairman, MCKV Group)

## **PATRONS**

Prof. Buddhadeb Chattopadhyay (Principal, MCKVIE) Prof. Parthasarathi Chakraborthy (CEO, MCKV Group) Mr. Abhay Kejriwal (Trustee Member, MCKV Group)

## **COORDINATOR**

Dr. Ranjib Biswas (Dean- Academic and Professor, Dept. of Mech. Engg., MCKVIE)

## **CO-COORDINATOR**

Dr. Prasenjit Chatterjee (Associate Professor and HOD, Dept. of Mech. Engg., MCKVIE)

## **CONVENORS**

Dr. Jaideep Dutta (Assistant Professor, Dept. of Mech. Engg., MCKVIE) Mr. Abhijit Dutta (Assistant Professor, Dept. of Mech. Engg., MCKVIE) Mr. Nabankur Mandal (Assistant Professor, Dept. of Mech. Engg., MCKVIE)

## **ORGANIZING COMMITTEE MEMBERS**

Mr. Soutrik Bose (Assistant Professor, Dept. of Mech. Engg., MCKVIE)
Mr. Biswajit Gayen (Assistant Professor, Dept. of Mech. Engg., MCKVIE)
Mr. Chaitanya Nandi (Assistant Professor, Dept. of Mech. Engg., MCKVIE)
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Dr. Manik Chandra Das, (Associate Professor, Dept. of Auto. Engg., MCKVIE)





# AICTE SPONSORED

SIX DAYS

## **ONLINE SHORT TERM TRAINING PROGRAMME**

ON

# Optimization Techniques: Recent Trends & Applications in Engineering

# 5<sup>th</sup> - 10<sup>th</sup> October, 2020



Organized by

Department of Mechanical Engineering (NBA Accredited) MCKV Institute of Engineering (An Autonomous Institute under UGC Act. 1956, NAAC Accredited 'A' grade institute, Approved by AICTE, Affiliated to MAKAUT, WB) 243, G. T. Road (N), Liluah – 711204, Howrah West Bengal, India

#### **ABOUT THE INSTITUTION**

MCKV Institute of Engineering is one of the top engineering colleges in West Bengal established almost two decades ago with a vision to foster the spirit of technological learning and its application through creating the right kind of opportunity and ambience for educating young minds in the digital era. The Institute has been accredited by NAAC with an 'A' Grade, and it is an Autonomous Institute (under the Act. of UGC, 1956) affiliated to MAKAUT, WB and approved by AICTE. It offers NBA accredited programmes in the field of Engineering like: Mechanical Engineering, Electrical Engineering, Computer Science Engineering, Electronics Communication Engineering, Information and Technology and last but not the least a very niche stream that is Automobile Engineering. The Institute is committed to provide quality education to cater to the diversified needs of the industry as well as the society at large. Its state-of-the-art infrastructure, industryacademia collaborations, experienced senior faculty and rigorous hands-on training sessions, transform students into industry-ready professionals.

#### **ABOUT THE DEPARTMENT**

Mechanical Engineering continues to be one of the most pioneering branches of core engineering studies in the world. Over the years, it has strengthened itself with the study and use of latest technologies and innovations. It has always been an evergreen branch of engineering, one which offers numerous job opportunities to students in all the industrial segments which are considered to be the most stable job-generators in the corporate world.

Mechanical Engineering Department (NBA Accredited) was established in the year 2008 at MCKV Institute of Engineering. Our faculty members are intellectual leaders in their respective fields of research, and we offer our students the opportunity to work one-to-one with the faculty in advancing the frontiers of knowledge.

#### **REGISTRATION DETAILS**

#### No Registration fee.

♣ E-certificates will be awarded at the end of the STTP after successful submission of the feedback.

#### ELIGILIBILITY

This short term training programme is open to Faculty members and Research scholars of AICTE approved Engineering and Polytechnic colleges.

#### IMPORTANT INSTRUCTIONS FOR THE PARTICIPANTS

♣ STTP sessions timing has been categorized in two segments:

1<sup>st</sup> Session: 10:00 AM – 12:00 NOON 2<sup>nd</sup> Session: 02:00 PM – 03:00 PM (However this timing is subjected to the availability of the speakers and any changes in the schedule will be meticulously informed to the participants)

★ The Participants are instructed to register **compulsorily** with the mobile number (in the Google form during online registration) linked to **'WhatsApp'** account for smooth communication.

◆ E-certificates will be awarded to those participants who successfully will attend all the sessions of the STTP with **75% overall attendance.** 

Submission of the feedback form is mandatory after each session for receiving certificate.

★ The certificate will be issued on successful completion of evaluation (quiz) at the end of the STTP with 50% scoring marks.

✤ Participants should have good internet bandwidth for live streaming of STTP sessions.

✤ The information about the online platform will be conveyed later to the registered candidates.

There is only 'online' mode of registration via 'google form'. Other mode will not be accepted.

#### **IMPORTANT DATES**

# Last date of online registration: 30.09.2020 Intimation of acceptance: 03.10.2020

#### LINK FOR ONLINE REGISTRATION



### CLICK THE LINK BELOW FOR ONLINE REGISTRATION

## https://forms.gle/PCJA2UffGvmQkTgKA



#### ADDRESS FOR COMMUNICATION

**Dr. Ranjib Biswas** 

Professor (Dean of Academics) Department of Mechanical Engineering MCKV Institute of Engineering 243, G. T. Road (N), Liluah – 711204, Howrah West Bengal, India Contact no: +91 8910011752, 9830086991 Email id: mckviemedepartment@gmail.com