

**ONE DAY WORKSHOP ON
DESIGN OF EXPERIMENTS (DoE)**

24th February, 2020

REGISTRATION FORM

Name: Mr/Ms/Mrs/Dr: _____

Academic Qualification: _____

Designation: _____

Organization: _____

Institution Address: _____

Mobile: _____

E - Mail: _____

Registration Fee Details:

D.D. No.: _____

Bank Name: _____

Date: _____ Signature

The above information along with D.D may be sent to the coordinators on or before **Feb 14, 2020**

RESOURCE PERSONS / SPEAKERS

The resource persons for this course are from reputed institutes having rich experience in design of experiments techniques.

REGISTRATION FEE

Academic / Industry Participants: Rs.500/-

(Includes participation certificate, course material, workshop kit, lunch, tea & snacks)

Please fill the Registration form and send it before the due date with the DD in favour of "Mechanical Engineering Association" payable at Chennai.

The fee can also be paid online to the below account:

Account name: Mechanical Engineering Association

Account number: 459777734

Bank name : Indian Bank

IFSC code : IDIB000S181

MCIR No : 600019171



Registration Online:

<https://forms.gle/yeEd2kJqSaBXZ1Vv8>

Last date for Registration: Feb 14, 2020

CONTACT

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**3rd International Conference on
Advances in Mechanical Engineering - ICAME 2020**

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24th February, 2020



SRM

INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

**Organized by
DEPARTMENT OF MECHANICAL ENGINEERING
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

Convener

Dr. S. PRABHU

Professor and Head

Department of Mechanical Engineering

Co-Ordinators

Mr. D. SELWYN JEBADURAI

Mr. I. AATTHISUGAN

Assistant Professor

**Department of Mechanical Engineering
SRM Institute of Science & Technology
Kattankulathur - 603203. Chengalpattu (DT), Tamilnadu.
<http://www.srmist.edu.in/icame-2020>**

ABOUT THE INSTITUTE

SRM Institute of Science and Technology (formerly known as SRM University) is one of the top-ranking Universities and most premier engineering destinations in India, which was established in 1985 by the Founder Chancellor, Dr. T.R. Paarivendhar. Now it is functioning in four campuses located at Kattankulathur, Vadapalani, and Ramapuram in Tamilnadu and Modi Nagar in Ghaziabad with over 55,000 students and 3000 faculty members. It offers a wide range of programs to students applying for undergraduate, post-graduate and doctoral programs in Engineering, Management, Medicine & Health Sciences, Law and Science & Humanities.

The Institution has moved up through international alliances and collaborative initiatives to achieve global excellence. SRMIST International Advisory Board (IAB) is actively involved in building a stronger international dimension in research and teaching methodology, which creates avenues for research and successful careers. The SRMIST also collaborates with foreign Universities like MIT, Carnegie Mellon University (CMU), Pittsburg University, etc..

Over 150 students sponsored to 35 foreign Universities like MIT, Carnegie Mellon, UC Davis, Warwick, and Western Australia. SRMIST has been categorized as grade A University by the Ministry of Human Resources Development (MHRD), Government of India. SRMIST is accredited by NAAC with A++ Grade and placed in top positions in ARIIA and NIRF Ranking in the academic year 2018-19. Our University hosted 98th Indian Science Congress in 2011.

Recently, our SRMIST bagged the following awards: QS-STARs 4-star rating award, The most prestigious National Intellectual Property award, STEM impact award, Green metric award, AICTE-CII INDPACT award, university of the year award 2019 by FICCI and three SWACHHATA awards.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering is one of the pioneering department of SRM Institute of Science and Technology. The present faculty strength is 130. About

600 research papers have been published in international journals and about 800 papers in international / national conferences. The department is functionally divided into three broad areas of specialization: (i) Design (ii) Manufacturing and (iii) Materials and (iv) Thermal Engineering. The National Board of Accreditation had accredited the Mechanical Engineering program in 1997. The B.Tech- Mechanical Engineering program at Kattankulathur campus is accredited by ABET, USA.

The department also offers Doctoral programs in these Four areas of specializations. The department periodically organises technical talks, workshops, FDPs and national and international conferences. Some of the important events organised are : International Conference on Advances in Mechanical Engineering 2006 and 2018, National Workshop on fuel cell technology 2008, 10th Asian symposium of visualization 2010, Short Course on Mechanics of Composite Materials and Structures 2015, Workshop on Development, Manufacturing and Analysis of Advanced Composites 2015, Short term Course on FEM2015, NCAME 2016, Research perspectives on 2016 and IPR & Innovations on 2017. Various Research facilities available in the department are 5 axis CNC Machine, IRB1410 ABB industrial robot, IRB360 Flex Picker Vision ABB robot, wear and friction monitor Apparatus, thyristor controlled 64 – segment program electric furnaces, 7 Mill volt He - Ne with spatiallter, vision systems, computerized surface roughness tester, Fazo portable CMM, Carlzess size CMM, six axes spine simulator, Differential scanning calorimetry, computerized CRDI VCR IC engine test Rig, gas analyzer, steam power plant, Kistler Impact hammer, RPT, solar steam cooking plant and FMS systems.

ABOUT THE WORKSHOP

The statistical principles underlying design of experiments were largely developed by R. A. Fisher during the 1920s and 1930s. Over the past 15 years, there has been a tremendous increase in the application of experimental design techniques in almost all types of industries. The work of G. Taguchi on robust design for variation reduction had revolutionary impact on Japanese industry. Today industries all over the world use design of experiments for problem solving and robust product development. The

academic community use design of experiments extensively to prove or validate their research findings.

Design of Experiments is the most powerful statistical tool that will provide the most significant information possible with the least amount of work. DOE has gained common acceptance among the researchers of various disciplines. Its cost effectiveness, greater speed and its ability to reveal design limitations not apparent with the traditional experimental methods make DOE approach more vital in research field.

The objective of this course is to provide faculty members and students a theoretical and practical knowledge on the Design of Experiments and the skill required to analyze engineering problems with a commercially available software package. This course is designed in such a way that, in addition to the fundamental topics, advance topics have been included inline with the current research scenario which will be covered through expert lectures and hands on training.

COURSE CONTENTS

The workshop will cover the different aspects of recent trends in Design of Experiments, which include

- **TAGUCHI-GREY RELATIONAL APPROACH**
- **FACTORIAL, ANOVA ANALYSIS**
- **MULTI-OBJECTIVE OPTIMIZATION**
- **HANDS ON TRAINING USING SOFTWARE**

OBJECTIVES OF THE WORKSHOP

- To bring together people (students / researchers / industries) from across India, who are working on experimental design for a better interaction.
- To impart basic knowledge about the various avenues for active research in recent trends in Design of Experiments.
- To expose the participants to the current scenario in Design of Experiment techniques.