ABOUT IIT MADRAS

The Indian Institute of Technology Madras, established by the Government of India in 1959, is among the foremost of Institutes in India and abroad in higher technical education with fundamental and applied research. It has been ranked the top engineering institute in India for the last three years (2016-2018) in a row with NIRF rank 1 by Ministry of Human Resources Development, India. The Institute is located in a lush green forest covered land of about 250 hectares in South Chennai. The presence of leading automobile manufacturing and allied industries proves to be conducive to its research atmosphere. It has about 565 faculties, 8300 students, and 700 administrative and supporting staffs working in various departments and centres.

ABOUT THE DEPARTMENT

The Manufacturing Engineering Section (MES) started its journey in 1965 under the Department of Mechanical Engineering. It is now equipped with state-of-the-art facilities for teaching, training, research and development, and industrial consultancy in various aspects of manufacturing. The facilities available in the section encompass conventional, unconventional and advanced manufacturing technologies. These are grouped under Machine Tool Laboratory, Computer Aided Design (CAD) Laboratory, Computer Aided Manufacturing (CAM) Laboratory, Robotics, CIM Laboratory, Micro Machining and Metrology Laboratory. Since its inception, emphasis has been on practical and industrially relevant developmental activities. The facilities in the section have been augmented with support from Ministry of HRD, Government of India, Indo-German Projects, and Sponsored Projects from various Governmental Agencies and Industries.

Important Dates:

- Last Date of Receipt of **Duly Signed** Registration Form: **12th December, 2018 (soft copy by email, or hard copy through registered post mail)**
- Intimation of Selection (by email): **17th December, 2018**
- Participation Confirmation of (by email): **1st January, 2019**

Duly filled application forms should be sent to:

Dr. Amitava Ghosh
(Corresponding Co-ordinator)
Associate Professor
Manufacturing Engineering Section
Department of Mechanical Engineering
Indian Institute of Technology Madras
Chennai-600036
Phone: 044-2257 4724/4726/4699
Fax: +91-44-22574652

Email: hsm@wmail.iitm.ac.in

Route Map:

1. Gajendra Circle Bus Stop
2. STC Venue (IC & SR)
3. Manufacturing Engineering Section (MES)

A Short Term Course
on

RECENT ADVANCEMENTS IN HIGH SPEED MACHINING TECHNOLOGY AND PART INSPECTION

March 04 - 09, 2019

Sponsored by
All India Council for Technical Education
(under the scheme of AICTE-STC)

Coordinators

Dr. Amitava Ghosh
Dr. Anil Meena
Dr. G.L. Samuel

Manufacturing Engineering Section
Department of Mechanical Engineering
Indian Institute of Technology Madras
Chennai – 600036
India

Theme of the STC:

Industries continuously strive for all possible avenues to reduce cost per piece of the parts and machining industries, including automobile sector, are no exception. High speed machining has a profound impact on the economy of production. It usually means to remove material by machining at high cutting speeds and feeds, which dramatically increase the material removal rate. Thus, it is required to have an in-depth fundamental know-how of the high speed machining science and also the associated technological challenges. Recent years have witnessed a plethora of technological advancements which widened the horizon of the scope of high speed machining. These include the advancement in the cutting tool and machine tool technology. It is also beneficial for the ongoing developments in the field of micro and nano technology. Finally, the whole high speed machining approach does demand the application of modern online and offline measurement technologies for producing a part of high quality. The current programme is aimed at presenting a collage of those recent technological advancements through the distinguished experts from academia and industries.

Objectives:

To unveil the science of high speed machining and technological requirements arising thereof through a series of lectures containing a nice blend of knowledge on theory and current industrial practices.

The participants will receive a comprehensive understanding on the emerging and advanced developments in the field of high speed machining.

To offer hands-on experiences and demonstrate few strategic technological approaches in high speed machining operations and state-of-the-art inspection technologies.

This workshop will act as a platform for exchanging views and sharing knowledge with the experts from both academia and industries.

Course Contents:

Broad topics to be addressed through expert lectures:

- High speed machining: fundamentals and challenges
- High speed machining of advanced materials
- Management of machining temperature
- Development of advanced cutting tools for high speed machining.
- Modern machine tools for high speed machining
- Diagnostic tools and prognostic approaches for enhancement of productivity
- On-line / Off-line measurement of parts
- Product quality in high speed machining and recent advances in metrology for part inspection
- Sustainability aspects
- High speed machining of micro-components

Speakers:

The speakers are distinguished faculties from IIT Madras and experienced R&D personalities from industries and other research/academic organisations.

Eligibility:

Faculty members from centrally funded institutes and AICTE accredited Engineering Colleges. Preference will be given to the faculties from Mechanical Engg, Production Engg, Aerospace Engg, Automobile Engg and Metallurgical Engg or similar departments.

Boarding and Lodging:

In-campus accommodation will be provided to the participants in Taramani guest house at IIT, Madras, **based on the requirements**. Boarding and lodging (twin sharing basis) will be provided to selected candidates.

Registration:

No registration fee will be charged to the teachers of AICTE recognized technical institutions / Engineering Colleges / Universities. A caution deposit of Rs.1000/- (refundable) is to be paid by **the selected applicants. The amount should be transferred through online banking. The details will be intimated to the applicants after the selection process.**

The participants will be paid to and fro 3-tier AC train fare by the shortest route on production of tickets.

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(March 04 - 09, 2019)

Registration Form

Name (Mr/Ms/Dr/Prof):

Designation :

Office Address :

Tel.: (Office) (Residence)

Fax: E-mail:

Age : ____ Years

Sex : Male / Female

Highest Acad. Qualification :

Professional Experience :

Research Experience :

Accommodation : Required/Not Required

I agree to abide by the rules of AICTE-STC courses. If selected, I shall attend the course for the entire duration.

Date:
Place: Signature of Applicant

Certificate

Certified hereby that Mr/Ms/Dr/Prof _____ _____ will be permitted to attend the above course to be held at Indian Institute of Technology Madras during March 04 - 09, 2019

Date:
Place:

Signature of Competent Authority with seal