About the Workshop

Machining is a common manufacturing process used to finish products to the final dimension, form and surface finish requirements. Machining difficult to machine materials like Ti alloys, Ni alloys, Stainless Steel, etc. poses challenges to the manufacturing community and improving the productivity when machining such materials through tool geometry variation, cutting tool coatings, novel lubrication techniques, structuring cutting tools, etc. is an active area of research today. Similarly, such difficult to cut materials are also processed through unconventional machining routes like laser micromachining, EDM, etc. for aerospace and biomedical applications.

Objective of the Workshop

The objective of the workshop is to provide PG students who aspire to carryout research after their studies, Ph.D scholars who are currently pursuing research in the field of machining and faculty members from AICTE approved institutions a solid foundation of the skills and knowledge required for research in this area. It is proposed to provide a comprehensive idea of the various aspects of machining like selection of the correct cutting tool and process parameters, process forces, machining temperature, and tool wear along with the techniques to analyse them is required to do high quality research in machining of difficult to cut materials.

For any queries contact: Mr. G.J. Bain (8825792156)

Main Topics to be covered

1. Importance of research in machining
2. Force measurement and analysis in machining in machining research
3. Selection of the correct cutting tool and process parameters in machining
4. Tool wear mechanisms & measurement techniques
5. Sustainable machining - MQL
6. Unconventional machining - EDM, ECM and Laser machining
7. Microstructure based fundamentals to understand machining of materials
8. Surface roughness analysis

Classes will be handled by experts from IIT Madras, Anna University, VIT, and Industries.

Registration Information

- No registration fee
- Maximum no. of participants is limited to 50.
- Eligible participants - Faculty members / Ph.D. scholars / PG students.
- External participants [traveling more than 20 km (one way) to attend the FDP] who attend at least 90% of the sessions shall be reimbursed with the cost of traveling, subject to a maximum of Rs. 2000/- at the end of the FDP.
- Boarding & lodging expenses have to be borne by the participants. Refreshment & lunch would be provided for free.

Contact : manufacturingmetrology@gmail.com

AICTE SPONSORED
FACULTY DEVELOPMENT PROGRAM ON
PRECISION AND SUSTAINABLE
MACHINING OF DIFFICULT TO CUT MATERIALS
11 to 16 DECEMBER 2023

Coordinator
Dr. D. Samuel Raj, Associate Professor

Co-Coordinator
Dr. K. Thirumavalavan, Associate Professor

Organized by
Central Workshop Division
Department of Mechanical Engineering
CEG, Anna University, Chennai -25.
About the University

Anna University was established on September 4, 1978 as a unitary type of University. It offers higher education in Engineering, Technology and allied Sciences relevant to the current and projected needs of the society. Besides promoting research and disseminating knowledge gained therefrom, it fosters cooperation between the academic and industrial communities. Situated in the southern part of the city of Madras (Chennai), the main Campus of the University extends over 100 hectares next to the Adyar River on the north and Raj Bhavan on the south.

About the Department

The Department of Mechanical Engineering of CEG, was established in the year 1894 and is one of the oldest and most renowned departments. Embarking on a remarkable journey through its history, the department takes pride in offering the first Mechanical Engineering degree course in India. The department provides opportunities for undergraduate education in the field of Mechanical Engineering and Materials Science & Engineering. The department also offers several postgraduate degree programs. The Central Workshop Division of the Department is actively involved in carrying out research in cutting edge areas of manufacturing including precision machining and has state-of-the-art machining facilities and measurement facilities to cater to the needs of students and research scholars.

About ATAL FDP

The objective of AICTE's Training and Learning (ATAL) is to impart quality training through Faculty Development Programmes (FDPs) for Postgraduate students, Research scholars and Faculty members so that:

The faculty:
- have a sound domain knowledge and associated skills set to apply in real life with industry connect.
- are equipped with Institutional Leadership skills for academic leadership.
- are understanding their roles in community well being, national building and also their own career development.
- made ready with pedagogy-requisite teaching skills for instructional delivery.
- can effectively communicate knowledge and skill sets to the students in an efficient manner and their teaching-learning effectiveness is assessed.

The students:
- are motivated and fascinated to acquire knowledge and life skills.
- understand their roles in community well being, national building and also their own career development.

Important Dates

- Last Date for registration: 30-11-2023
- Intimation of selection: 04-12-2023
- FDP duration: 11-12-2023 to 16-12-2023

Venue

Henry Maudslay Hall, Dept. of Mechanical Engineering, CEG, Anna University,

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PROCEDURE FOR REGISTRATION

- Registration should be done only through AICTE - ATAL website (https://www.aicte-india.org/atal).
- Participants should register in the AICTE-ATAL website as a "participant" after which they can apply for attending this FDP.
- Participants must upload their Identity Card and NOC in the format available in AICTE - ATAL website from their approving authority to register for the FDP. If you need the NOC format, kindly contact the organizers at manufacturingmetrology@gmail.com.
- The application no. for this ATAL - FDP is 1691601425.

Accommodation can be provided for the participants in the University hostel at a concessional tariff on first come first served basis based on availability. The expenses have to be borne by the participants.

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