## WHO CAN ATTEND?

Researchers working in the field of Laser Machining & Material processing, Laser assisted Additive Manufacturing, Laser Surface Engineering and Laser Micro-machining.

The workshop is open for

- ✓ Faculty from Engineering colleges and other institutions.
- ✓ Research Scholars
- ✓ PG and UG Students

## DATE & TIME

27th January, 2024, 09:00 am to 4:30 pm

## IMPORTANT DATES:

| | |
|---|---|
| Submission of Application: | 05.01.2024 |
| Intimation of Selection: | 08.01.2024 |
| Confirmation by Participants: | 10.01.2024 |

## CONTACT DETAILS

Dr.V.Ezhilmaran, Assistant Professor
Department of Manufacturing Engineering,
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Chennai.
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## REGISTRATION

- The interested participants can register using the following Google Form: https://forms.gle/WTuSMuyBCdxafFvCA
- Confirm your registration on or before 10.01.2024
- The attended participants will receive a certificate of participation.

## THEME OF THE COURSE

Laser-assisted manufacturing is a rapidly growing field that utilizes lasers to perform a variety of machining operations, including cutting, drilling, and engraving, etc. It offers several advantages over traditional machining methods, such as high precision, minimal heat-affected zones, and the ability to machine complex geometries.

The following disruptive technologies will be covered in the workshop

- ***Fundamentals of lasers:*** Laser working principle, types of lasers and applications
- ***Lasers in machining industry:*** Mechanism of laser material removal, laser-based drilling, cutting, milling, etc.
- ***Lasers in surface Engineering:*** surface texturing, surface polishing and deposition.
- ***Lasers in additive manufacturing and welding:*** Challenges in laser additive manufacturing, welding and future scope.

# *One day workshop on "Advanced Laser Applications in Manufacturing and Material Processing"*

## *27th January, 2024*

***Organized by***
***Department of Manufacturing Engineering, College of Engineering Guindy***
***Anna University, Chennai-600025***

ANNA UNIVERSITY
PROGRESS THROUGH KNOWLEDGE

## COORDINATORS

**Dr.V.Ezhilmaran, Assistant Professor**
**Dr.S.Suthagar, Associate Professor**
**Department of Manufacturing Engineering,**
**College of Engineering Guindy,**
**Anna University, Chennai-600025**

## RESOURCE PERSONS

**Dr. Nilesh J. Vasa**
Professor, Department of Engineering design, IIT Madras. Chennai.

**Dr. Srinivasa Rakesh**
Engineer, R & D
Caterpillar Inc. Chennai.

**Dr. Srinagalakshmi Nammi**
Assistant Professor
Department of Mechanical Engineering
National Institute of Technology, Warangal

**Dr. V. Ezhilmaran**
Assistant professor
Department of Manufacturing Engineering,
College of Engineering Guindy

## OBJECTIVES

- To give in-depth knowledge on laser working principle and its fundamentals.
- To train the students on the basics of applications of lasers.
- To inculcate the recent developments in laser technologies such as Laser machining, laser surface texturing, lasers surface polishing, laser additive manufacturing and laser applications in metrology, etc.
- To give an overview of the current research development and in the immediate future.

## ABOUT THE WORKSHOP

The workshop "***Advanced Laser Applications in Manufacturing and Material Processing***" aims to create awareness about laser applications in Manufacturing industries and the future research scope to young researchers and students. Technologies associated with laser manufacturing are laser drilling, laser assisted texturing, laser-material interaction modelling, laser additive manufacturing and recent advances in laser based manufacturing methods, etc.

The workshop also aims to give a substantial space to various laser assisted manufacturing techniques aiming to bridge the gap between industrial needs and current research perspectives.

## ABOUT THE INSTITUTION

Anna University was established on 4 th September, 1978 as a unitary type of University. It is Asia's oldest technical institution and also the oldest technical institution to be established outside Europe. College of Engineering, Guindy is one of the first institutes in India to offer degrees in Mechanical Engineering, Electrical Engineering, Telecommunication, Highway Engineering and Printing Technology and Materials Science and Engineering. Besides promoting research and disseminating knowledge gained therefrom, it fosters cooperation between the academic and industrial communities.

## ABOUT THE DEPARTMENT

The Department of Manufacturing Engineering was established in the year 2002, and offers B.E., Manufacturing Engineering, M.E., Computer Integrated Manufacturing, M.S., by Research & Ph.D programme. DoME is actively involved in research in the field of Metal Cutting, Traditional & Non-traditional Machining, Computer Aided Design (CAD) / Computer Aided Manufacturing (CAM) / Computer Integrated Manufacturing (CIM) / ROBOTICS, Micromachining, Electronics Manufacturing, Rapid Prototyping, Composite Materials, Resource Scheduling and SCM.