

RESOURCE PERSON

Resource Person from reputed Industries and Academic Institutions will deliver lectures on 3D Printing and Design in various field of application.

REGISTRATION

- Interested Participants are requested to register through AICTE ATAL portal.

<https://atalacademy.aicte-india.org/login>

- Last date of registration on or before 30.06.2021
- Confirmation of participation will be informed on 02.07.2021 through registered mail.

INFORMATION TO THE PARTICIPANTS

- Faculty members, Ph.D. Scholars, PG Students of AICTE affiliated educational institutions are eligible to participate.
- The FDP will be conducted through online mode only.
- The platform and details for attending the session will be informed in due course.
- Maximum of 200 participants are allowed for registration based on First come First serve basis.
- There is no registration fee for the course.
- Registration, Feedback, Certificate issue will be managed through AICTE ATAL Portal.
- On successful completion of the course with minimum 80% of attendance and score in the final assessment, a digital participation certificate will be awarded by the ATAL Academy.

ORGANIZING COMMITTEE

Chief Patron:

Dr. M. Manickam,
Chairman, MCET.

Patron:

Shri. M. Hari Hara Sudhan,
Correspondent, MCET.

Deputy Patron:

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Coordinator:

Dr. I. Rajendran,
Professor & Head– Mechanical.

Organizing Secretary:

Dr. K. Hariharan,
Assistant Professor (SS) —Mechanical.

Organizing Members:

Dr.Rama Thirumurugan,
Professor—Mechanical.

Mr. M. Gideon Ganesh,
Assistant Professor —Mechanical.

ADDRESS FOR COMMUNICATION

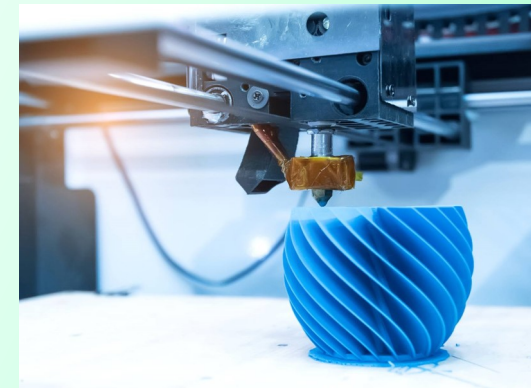
Dr. K. Hariharan
Assistant Professor (SS), Department of Mechanical Engg.
Dr.Mahalingam College of Engineering and Technology,
Pollachi-642003 Coimbatore District, Tamil Nadu
hariharan.k@mcet.in +91-9791029149

AICTE Training and Learning (ATAL) Academy

Five Days FDP on

“3D PRINTING AND DESIGN”

06th to 10th July 2021



Coordinator

Dr. I. Rajendran

Professor & Head

Department of Mechanical Engineering

**DR.MAHALINGAM COLLEGE OF ENGINEERING AND
TECHNOLOGY**

(An Autonomous Institution)

(Accredited by NBA, NAAC with 'A++' Grade)

Pollachi-642003 Coimbatore (Dt), Tamil Nadu

Phone: +91-4259-236030/40/50 www.mcet.in

ABOUT THE COLLEGE

Dr. Mahalingam College of Engineering and Technology (MCET) was established in 1998 by Dr. M. MANICKAM with a view to commemorate the 75th birth year of his beloved father Arutchelvar Dr. N. MAHALINGAM with a mission to impart high quality competency based education in Engineering & Technology to the younger generation to acquire the required skills and abilities to face the challenging needs of the industry around the globe. MCET is a self-financing, co-educational Autonomous Engineering College and it is approved by All India Council for Technical Education (AICTE), New Delhi & affiliated to Anna University, Chennai. The Institution has been accredited by NAAC with A++ and 7 UG Programmes (CSE, EEE, EIE, ECE, CIVIL, Mechanical, Automobile) are accredited with Tier I by National Board of Accreditation (NBA). MCET currently offers 9 UG 6 PG and 5 doctoral Programmes in Engineering, Technology and Science.

ATAL ACADEMY

AICTE Training and Learning (ATAL) Academy is established with the vision "To empower faculty to achieve goals of Higher Education such as access, equity and quality". AICTE is committed for development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development.

ABOUT THE DEPARTMENT

The department of Mechanical Engineering was established in the year 1998 and accredited by National Board of Accreditation. The

department offers 4 years of Bachelor of Engineering, with an annual intake of 120 Students and Master of CAD/CAM with an annual intake of 18 students. The department has well qualified and committed research oriented faculty members.

The department is recognized as research center for offering Ph.D/ M.S (by research) programmes and focuses on research activities in the areas of 3D Printing, Composite materials, CFD. The department has state-of-the-art laboratories & Center of Excellence with Centre for design and analysis and testing (C-DAT), TUV Rheinland Centre for Advanced Training (Welding and NDT), BOSCH REX-TROTH Regional center of Competence, ALTAIR Centre of Excellence, SIEMENS Centre for Digital Manufacturing, JANATICS Centre of Excellence for Mechatronics and Automation, Advanced manufacturing and Robotics.

ABOUT THE PROGRAMME

Additive manufacturing (AM), broadly known as 3D printing, is transforming how products are designed, produced, and serviced. AM enables on-demand production without dedicated equipment or tooling, unlocks digital design tools, and offers breakthrough performance and unparalleled flexibility across industries. But, knowledge remains one of the greatest barriers to AM's wider adoption.

The creation of a 3D printed object is achieved using additive processes. In an additive process an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced cross-section of the object. 3D printing is the opposite of subtractive manufacturing which is cutting out / hollowing out a piece of metal or plastic with for instance a milling machine. 3D printing enables you to produce

complex shapes using less material than traditional manufacturing methods.

This programme provides an opportunity to perform research in the area of 3D printing for various applications. The programme also tends to provide a forum for academic experts industry experts and research scholars to exchange and share their experiences and innovations about all aspects of 3D Printing. This workshop paves a path to understand the principle of Additive Manufacturing in a real-time scenario.

COURSE CONTENTS

- **Introduction to 3D Printing & Additive Manufacturing**
- **Surface Development using Laser Scanner**
- **Bio Additive Manufacturing**
- **Design & Analysis of Cellular structure of customized bone scaffolds.**
- **Application of Additive Manufacturing in Today's Medical-world with image processing & Bio- CAD Modeling**
- **CAD and Data Preparation for Additive Manufacturing**
- **Metal Arc Additive Welding**
- **Process optimization of Metal Additive Manufacturing**
- **Metallurgical Analysis of Metal Additive Manufacturing**
- **IIOT in Additive Manufacturing**
- **Additive Manufacturing farms**
- **Customized split insole for the diabetic patients**
- **In vitro Analysis on Additive Manufacturing Components.**
- **Make your own 3D printer**