

**Newsletter for July 2026
Department of Mechanical Engineering
Dayananda Sagar University
Bengaluru-562112**

Three-day workshop on Additive Manufacturing from 13–15 July 2026 in association with Wipro 3D Printing



Dr. Rajesh Ranjan Ravi



Dr. Velugula Ravi

The Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University, organized a **three-day workshop on Additive Manufacturing from 13–15 July 2026 in association with Wipro 3D Printing with one day industrial visit at Wipro 3D, Peenya, Bengaluru on 15 July 2026**. The programme was coordinated by Dr. Rajesh Ranjan Ravi and Dr. Velugula Ravi. It provided faculty members with hands-on exposure to 3D printing technologies, materials, CAD modelling, slicing, process parameters, post-processing, quality inspection, and industrial applications. Sessions also covered Design for Additive Manufacturing, case studies, metal additive manufacturing, and AI/ML integration. The workshop concluded with an industrial visit to Wipro 3D, Bengaluru, facilitating interaction with experts and identifying teaching and research opportunities.



DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING
Department of Mechanical Engineering

Learn, Innovate, Create, Grow
Bangalore, India - 560 075

THREE-DAY WORKSHOP ON
ADDITIVE MANUFACTURING
In Association with Wipro 3D Printing

13 - 15 JULY 2023 | **09:30 AM - 05:30 PM** | **Open to all DSU Faculty**

Open to all SOE Faculty Members, DSU

Make Office - Full Hands on | **Industry-Academia Collaboration**

3D PRINTING TECHNOLOGIES

DESIGN & SIM

MATERIALS & PROCESSING

INDUSTRIAL APPLICATIONS

CERTIFICATE PROGRAM

ABOUT DSU
Dayananda Sagar University (DSU) is a premier private university located in Bangalore, India, dedicated to fostering excellence in education, research, and innovation. Established under the Dayananda Sagar Institutions (DSI) Trust, DSU offers a wide range of academic programs across various disciplines, including engineering, management, and healthcare. DSU is committed to providing a high-quality education and fostering a culture of innovation and research.

ABOUT THE WORKSHOP
Additive Manufacturing (3D printing) is a transformative technology. This workshop is a collaboration with Wipro 3D Printing, covering the 3D CAD software design, material selection, process, 3D printing, post-processing, handling, and emerging trends including metal AM and AM-BI integration.

CHIEF GUEST
Dr. D. Hanumanthappa Sagar
Chairman, DSU

Dr. Hanumanthappa Sagar
For Chairman DSU

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Dr. S. Srinivasan Sagar
Chairman, DSU

Dr. Prakash B
Vice-Chairman, DSU

TRANSMISSION & COORDINATOR
Dr. Srinivasan Sagar
Professor & Chairman
Department of Mechanical Engineering
School of Engineering, DSU

COORDINATOR
Dr. Vinodh K. Srinivasan
Coordinator - Mechanical
Dept. of ME, DSU

Mr. Srinivasan K. Srinivasan
General Manager
Wipro 3D, Bangalore-560 075



SCHOOL OF ENGINEERING
Department of Mechanical Engineering

WORKSHOP OBJECTIVES

- To provide hands-on exposure to various additive manufacturing technologies.
- To understand materials and processes used in AM.
- To develop design for additive manufacturing (DFAM) principles.
- To demonstrate industrial applications and case studies.
- To promote industry-academia collaboration and foster research opportunities.

EXPECTED OUTCOMES

- Enhanced knowledge of AM technologies and their applications.
- Skills in CAD modeling, slicing, and 3D printing.
- Understanding of materials, process parameters, and post-processing.
- Ability to integrate AM into teaching, research, and projects.

PROGRAM HIGHLIGHTS

- Hands-on sessions on latest 3D printing technologies.
- Live demonstrations and machine setting.
- Exposure to industrial grade materials and processes.
- Design for Additive Manufacturing (DFAM).
- Researcher with experts from Wipro 3D Printing.
- Visit to Additive Manufacturing Lab, Wipro, Bangalore.

WORKSHOP CONTENT

Module	Topics
1	Introduction to Additive Manufacturing - Principles, Evolution & Applications
2	Additive Manufacturing Processes - From Concept to Production
3	3D Printing Technologies - FDM, SLS, DLP, Hybrid Processes
4	Materials for Additive Manufacturing - Polymers, Metals, Composites
5	Design for Additive Manufacturing (DFAM) - Guidelines & Best Practices
6	3D Modeling & CAD Tools for Additive Manufacturing
7	Printing Software & Process Optimization - Slicing & Optimization
8	Hands-on Session: 3D Printing FDM (SLA, SLS, DLP)
9	Post-Processing Techniques - Cleaning, Coating, Finishing
10	Industrial Applications & Case Studies
11	Quality Control & Inspection in AM
12	Visit to Additive Manufacturing Lab, Wipro, Bangalore

COORDINATORS

Dr. Rajesh Srinivasan
Faculty, Mechanical Engineering
DSU, Bangalore-560 075

Dr. Vinodh K. Srinivasan
Faculty, Mechanical Engineering
DSU, Bangalore-560 075

HOST INSTITUTIONS
Wipro 3D Printing, a leading provider of 3D printing solutions for various industries, is the primary sponsor of this workshop.

REGISTRATION
Registration is open for all DSU faculty members. Register by clicking on the QR code below.

RESOURCE PERSONS
Expert resource persons from Wipro 3D Printing will provide hands-on experience in additive manufacturing, materials, and applications across various sectors, including automotive, aerospace, and medical.

FOR QUERIES
Contact Dr. Srinivasan Sagar at srinivasan_sagar@dsu.edu.in or Dr. Vinodh K. Srinivasan at vinodh_k_srinivasan@dsu.edu.in



One-week Faculty Development Programme on “Engineering Graphics, Generative Design, Design Automation and Digital Product Development



Dr. Jerrin Joy Varughese



Dr. Shashidhar L C

The Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University, organized a one-week Faculty Development Programme on “Engineering Graphics, Generative Design, Design Automation and Digital Product Development” from 20 to 25 July 2026, in association with Autodesk India Limited. The programme was coordinated by Dr. Jerrin Joy Varughese and Dr. Shashidhar L. C. Sessions covered Autodesk Fusion, generative design, lightweight structures, Python scripting, Fusion API, design automation, parametric modelling, computational design, and ECAD–MCAD integration. Hands-on activities and expert interactions strengthened participants’ practical skills, enhanced teaching and research capabilities, and promoted industry-oriented digital product development and innovation within engineering education.

DAYANANDA SAGAR UNIVERSITY
Devaragaddahalli, Hosur-562102, Bengaluru - 562112

**SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING**
Organizes

AUTODESK
Make anything.

ONE-WEEK FACULTY DEVELOPMENT PROGRAM (FDP)
on
**ENGINEERING GRAPHICS, GENERATIVE DESIGN,
DESIGN AUTOMATION & DIGITAL PRODUCT DEVELOPMENT**
- IN ASSOCIATION WITH -
AUTODESK INDIA LIMITED

DATES
20th – 25th
JULY 2026
Daily Timings:
09:00 AM – 04:30 PM

DAY-WISE SCHEDULE (09:00 AM – 04:30 PM)

DAY 1 20 JULY 2026 (MONDAY)	DAY 2 21 JULY 2026 (TUESDAY)	DAY 3 22 JULY 2026 (WEDNESDAY)	DAY 4 23 JULY 2026 (THURSDAY)	DAY 5 25 JULY 2026 (SATURDAY)
• Inauguration and Overview of Autodesk Fusion Ecosystem • Generative Design Concepts, Workflow, Constraints, Materials & Loads • Design Space Definition, Objectives and Optimization Techniques	• Validation Techniques and Engineering Case Studies • Lightweight Structure Design using Generative Design • Introduction to Fusion API Architecture and Python Fundamentals	• Accessing Sketches, Features and Parameters through API • Automating 2D/3D Model Creation using Scripts • Event Handling, UI Development and Debugging	• Design Automation Workflows and Pipelines • Parametric and Rule-Based Design Systems • Computational Design and Data-Driven Design	• ECAD–MCAD Integration Overview • Schematic Capture, Component Libraries and 3D PCB Modelling • Co-design Workflow for Embedded Systems
HANDS-ON: Generative Design Setup	HANDS-ON: Python Scripting Basics	HANDS-ON: Exercises on Fusion API	HANDS-ON: Generating Design Variants	HANDS-ON: ECAD–MCAD Co-design Workflow

VENUE
Autodesk Design & Innovation Laboratory
School of Engineering,
Dayananda Sagar University,
Devaragaddahalli, Hosur-562102, Bengaluru - 562112

RESOURCE PERSONS

Mr. Anil Ghose Technical Director SCT Group – Autodesk Learning Partner (ALP), Chennai ☎ 9943627094	Mr. Ajay Kumar Reddy Senior Autodesk Fusion Expert SCT Group – Autodesk Learning Partner (ALP) ☎ 9789147235
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FACULTY COORDINATORS

Dr. Shashidhar L. C. Asst. Professor Dept. of ME, SdE, DSU	Dr. Jerrin Joy Varughese Asst. Professor Dept. of ME, SdE, DSU
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EMPOWERING FACULTY. ENRICHING EDUCATION. ENGINEERING THE FUTURE.



Dayananda Sagar University and Quest Global Sign MoU to Strengthen Industry–Academia Collaboration Bengaluru



Dr. Saravana Bavan D



Dr. Vinayak B Hemadri



Dr. Shashidhar L C

Dayananda Sagar University and Quest Global Sign MoU to Strengthen Industry–Academia Collaboration Bengaluru, 27 July 2026: Dayananda Sagar University (DSU), Bengaluru, has signed a Memorandum of Understanding (MoU) with **Quest Global** to foster stronger collaboration between industry and academia and create meaningful opportunities for students and faculty. The MoU signing ceremony was held on **27 July 2026 at 11:00 AM** in the **Board Room, School of Engineering (SoE) Block**, Dayananda Sagar University, Bengaluru.

The MoU aims to establish a collaborative framework for mutually beneficial academic and professional activities, with a focus on enhancing industry-oriented learning, technical skills, innovation, research, and career opportunities for students. Through this association, the university and Quest Global will explore opportunities for collaborative initiatives that can bridge the gap between academic learning and current industry requirements.

The **Department of Mechanical Engineering under the School of Engineering (SoE)** will take the lead in driving and coordinating the activities associated with the MoU. The collaboration is expected to provide a platform for

students and faculty to engage with industry professionals and gain exposure to real-world engineering practices, emerging technologies, and contemporary industrial challenges. It will also encourage knowledge exchange and facilitate opportunities for joint initiatives in areas of mutual interest.

The MoU signing meeting was attended by Rahul Dikshit, representing **Quest Global** and the **Registrar of Dayananda Sagar University, Dean of the School of Engineering, Chairperson of the Department of Mechanical Engineering, and faculty members of the Department of Mechanical Engineering**. The presence of university leadership and faculty members reflected the institution's commitment to strengthening industry partnerships and promoting industry-relevant education.

The collaboration with Quest Global marks an important step towards enhancing the industry connect of the School of Engineering and creating a more dynamic ecosystem for experiential learning, innovation, and professional development. The Department of Mechanical Engineering looks forward to actively implementing the MoU and developing impactful initiatives that will benefit students, faculty, and both partnering organisations.



MoU signing ceremony between Dayananda Sagar University and Quest Global Engineering Services Pvt. Ltd., 27 July 2026.



Dr. Shashwath Patil

Dr. Shashwath Patil, Assistant Professor, Department of Mechanical Engineering, SoE, DSU Bengaluru delivered a technical session during the Three-Day Workshop on Additive Manufacturing organized by the Department of Mechanical Engineering, Dayananda Sagar University, in association with Wipro 3D. The session focused on recent

advancements in additive manufacturing, sustainable materials, and biomedical applications, fostering knowledge exchange with faculty members and participants.



Bosch Higher Education Program – First Batch Celebration & PDC Distribution Ceremony



Prof. Karthik SB

The Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University, in association with Bosch India, successfully organized **Milestone 2026 – Bosch Higher Education Program: First Batch Celebration & Provisional Degree Certificate (PDC) Distribution Ceremony**. The event celebrated the successful completion of the inaugural Bosch Higher Education Program batch and distribution of PDCs.

The Department sincerely thanks the **DSU Management**, especially **Dr. D. Hemachandra Sagar**, Chancellor, and **Dr. Premachandra Sagar**, Pro Chancellor, for their continued guidance. The organizing committee also gratefully acknowledges **Prof. R. Janardhan**, Pro Vice Chancellor, and **Dr. Puttamadappa C**, Registrar, for their institutional and administrative support.

The ceremony was graced by **Prof. B. S. Satyanarayana**, Vice Chancellor; **Dr. Prakash S**, Pro Vice Chancellor; **Dr. Uday Kumar Reddy K. R.**, Dean; **Mr. Vijay Kumar S.**, Director–Training & Corporate Relations; Chief Guest **Ms. Pallavi Shastri**; and Bosch delegates **Mr. Vidyanand Shetty**, **Ms. Namita Garg**, and **Ms. Anitha P. Shirley**.

The programme was organized under **Prof. Saravana Bavan D.** with **Dr. Vinayak B. Hemadri** as Faculty Coordinator, supported by **Prof. Karthik S. B.**, **Dr. Vinay M. S.**, and **Dr. P. M. G. Bashir A.** as programme coordinators. The event concluded with PDC distribution, student interaction, vote of thanks and high tea, reaffirming the successful partnership between Dayananda Sagar University and Bosch India.





Prof. Karthik SB

REVA University – ICAMMAE 2026

Best Paper Award & Certificate of Appreciation

The Department of Mechanical Engineering proudly congratulates **Prof. Karthik S. B.** on being a **co-author** of the research paper titled “*AI-Assisted Intelligent Monitoring of Wear and Surface Degradation in Mechanical Components Using Material and Image-Based Analysis.*” The paper, presented at the **10th International Conference on Advances in Mechanical, Mechatronics and Aerospace Engineering (ICAMMAE-2026)**, held at **REVA University** on **10–11 July 2026**, received the prestigious **Best Paper Award**. The work was presented by **Puneeth S.** of Dayananda Sagar University, with **Pavan D.** and **Prof. Karthik S. B.** as co-authors. This recognition highlights the department's commitment to high-quality research, innovation, and collaborative academic excellence. The achievement reflects the growing impact of DSU faculty in advancing intelligent monitoring technologies for mechanical engineering applications and reinforces the University's focus on industry-relevant and interdisciplinary research.



Figure: Best Paper Award and Certificate of Appreciation received during ICAMMAE-2026 at REVA University.



Dr. Jerrin Joy Varughese

Dr. Jerrin Joy Varughese, Assistant Professor, Department of Mechanical Engineering, served as a Resource Person on 1 July 2026 (Day 3) during the Five-Day Faculty Development Programme on Nanomaterials – Advanced Research Opportunities and Applications organized by St. Thomas College of Engineering & Technology, Chengannur. He delivered an expert lecture on "Ultrasonication Assisted Exfoliation of Two-Dimensional Nanomaterials: Characterization and Predictive Modelling."

FDP BROCHURE

ABOUT THE FDP

The Faculty Development Programme (FDP) is a program organized by St. Thomas College of Engineering & Technology, Chengannur, to provide an opportunity for faculty members to update their knowledge and skills in the field of Nanomaterials. The program is designed to enhance the faculty's understanding of the latest research and developments in the field of Nanomaterials and to provide them with the necessary tools and techniques to conduct research in this area.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering, St. Thomas College of Engineering & Technology, Chengannur, is a leading institution in the field of Mechanical Engineering. The department is equipped with state-of-the-art facilities and is staffed by highly qualified and experienced faculty members. The department is committed to providing quality education and research in the field of Mechanical Engineering.

CONTACT DETAILS

Prof. J. Joy Varughese
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Department of Mechanical Engineering
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Chengannur, Kerala
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OBJECTIVES

The Faculty Development Programme aims to:

- Provide participants with a strong foundation in nanomaterials, their characterization, and emerging applications in various fields.
- Enhance the faculty's understanding of the latest research and developments in the field of Nanomaterials.
- Provide the faculty with the necessary tools and techniques to conduct research in this area.

TOPICS TO BE COVERED

- Introduction to Nanomaterials
- Characterization of Nanomaterials
- Applications of Nanomaterials
- Emerging Trends in Nanomaterials

REGISTRATION DETAILS

For more information, please contact the FDP Coordinator at St. Thomas College of Engineering & Technology, Chengannur.

Registration Fee: 2000/-

CONCLUSIONS

The FDP was a successful event that provided a valuable opportunity for faculty members to update their knowledge and skills in the field of Nanomaterials. The program was well-organized and the faculty members were highly motivated and engaged throughout the course.

RESOURCE PERSONS

Dr. J. Joy Varughese
Assistant Professor
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St. Thomas College of Engineering & Technology
Chengannur, Kerala
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Email: jjoyvarughese@stthomas.ac.in

Zoom Meeting Interface

Dr. Jerrin Joy is presenting, annotating

31 others

Dr. Jerrin

STM



Dr. Jerrin Joy Varughese

Dr. Jerrin Joy Varughese, Assistant Professor, Department of Mechanical Engineering, published a research article titled "Investigation on the Effect of Fibre Modifications with Nanoparticles on Solid Particle Erosion Wear Response of Advanced Epoxy Carbon Fibre Composites" in Tribology International (Elsevier), a Q1 SCI-indexed journal with an Impact Factor of 7.6. The study presents innovative fibre modification strategies to enhance the erosion resistance and mechanical performance of advanced epoxy carbon fibre composites.

Tribology International 225 (2027) 112404



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TRIBOLOGY
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Full length article

Investigation on the effect of fibre modifications with nanoparticles on solid particle erosion wear response of advanced epoxy - carbon fibre composites

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ARTICLE INFO

Keywords:
Erosion Resistance
Molybdenum disulfide
Multiwalled Carbon Nanotubes
Fibre modification
Silane Grafting

ABSTRACT

Epoxy/carbon fibre composites exhibit poor solid particle erosion (SPE) resistance, which adversely affects their suitability for highly erosion-prone tribological structural applications. The investigation evaluates the effect of different carbon fibre (CF) modifications, including grafting nanoparticles such as multiwalled carbon nanotubes (MWCNTs) and molybdenum disulfide (MoS₂), as well as advanced hybrid particles such as MoS₂-functionalized MWCNTs (MoS₂-MWCNTs), using oxidation followed by silane functionalization. Conventional epoxy/CF composites show poor erosion resistance characteristics, with a maximum erosion rate of 914 mg/kg occurring at 90° impingement angle. Epoxy/CF-MWCNTs showed worsened erosion resistance characteristics, with the erosion rate of 990 mg/kg occurring at 90° impact angle. Epoxy/CF-MoS₂ shows very good erosion resistance characteristics, with the erosion rate of 547 mg/kg occurring at 90° impact angle, whereas epoxy/CF-MoS₂-MWCNTs shows moderate erosion resistance characteristics, with the erosion rate of 795 mg/kg occurring at 90° impact angle. Epoxy/CF-MoS₂-MWCNTs laminates show superior tensile strength of 667 MPa, surpassing their counterparts epoxy/CF-MoS₂ and epoxy/CF-MWCNTs, which demonstrate strengths of 556 MPa and 565 MPa, respectively. Ultimately, the improved erosion resistance and tensile strength mechanisms were investigated in-depth using FESEM analysis. The brittle erosion characteristics and the associated mechanisms were also validated with volume loss calculation using a 3D micrograph. The investigation would provide a reference for the development of high-strength and erosive-resistant epoxy/CF composites.



Dr. Jerrin Joy Varughese

Dr. Jerrin Joy Varughese, Assistant Professor, Department of Mechanical Engineering, Dayananda Sagar University, Bengaluru, successfully participated in a five-day online Faculty Development Programme titled “Sustainable Advanced Manufacturing Technologies: Micromachining, Biomanufacturing and Additive Manufacturing (SAMT-2026)”, conducted from 20 to 24 July 2026 by Anant Gyan Knowledge and Skills Private Limited.



Dr. Mridusmita Roy Choudhury

Dr. Mridusmita Roy Choudhury, Assistant Professor, Department of Mechanical Engineering, Dayananda Sagar University, Bengaluru, successfully participated in a five-day online Faculty Development Programme titled “Sustainable Advanced Manufacturing Technologies: Micromachining, Biomanufacturing and Additive

Manufacturing (SAMT-2026)”, conducted from 20 to 24 July 2026 by Anant Gyan Knowledge and Skills Private Limited.



Dr. Rajeev Kumar Gupta

Dr. Rajeev Kumar Gupta, Assistant Professor, Department of Mechanical Engineering, Dayananda Sagar University, Bengaluru, successfully participated in a **five-day online Faculty Development Programme** titled “**Sustainable Advanced Manufacturing Technologies: Micromachining, Biomanufacturing and Additive Manufacturing (SAMT-2026)**”, conducted from 20 to 24 July 2026 by Anant Gyan Knowledge and Skills Private Limited.

