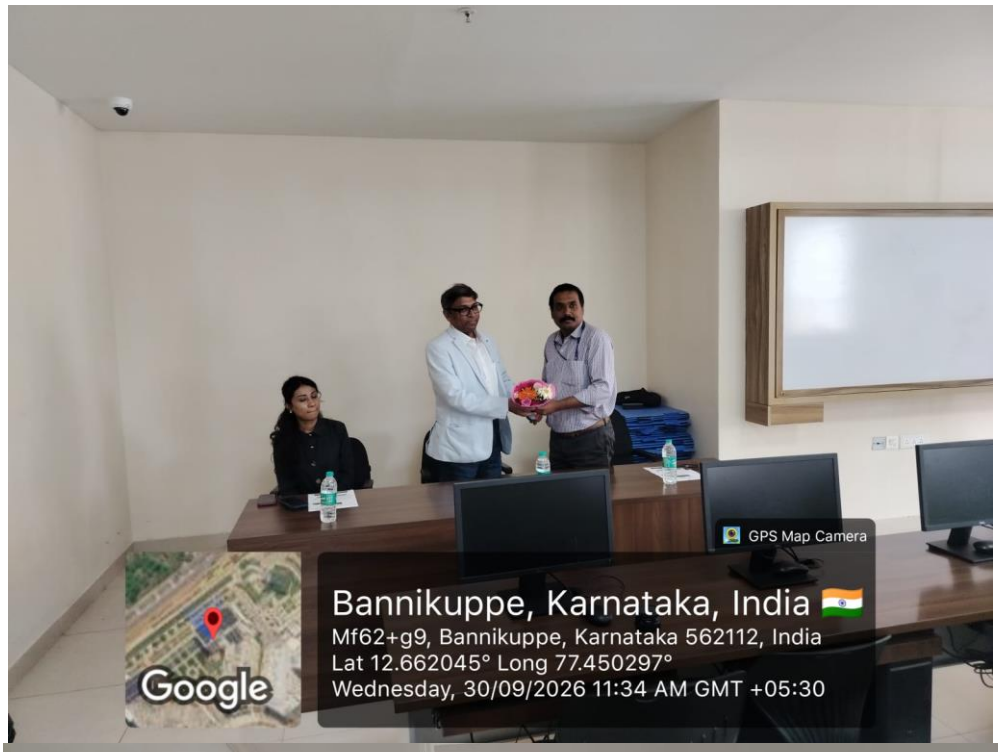
Newsletter for September 2026
Department of Mechanical Engineering
Dayananda Sagar University
Bengaluru-562112

Guest Lecture on "Future Energy Engineers: Solving the Net Zero Challenge"

The Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University (DSU), in association with the Materials and Manufacturing Science (MatMa-Sci) Technical Club, organized a guest lecture on "Future Energy Engineers: Solving the Net Zero Challenge Using Abundant Natural Sources such as Air, Water, Sunlight, and Minerals" on 30 September 2026. The lecture was delivered by Prof. Nadimul Faisal, PhD, FHEA, CEng, MIMechE, MIMMM, Professor of Surface Engineering and Micromechanics, School of Computing, Engineering and Technology, Robert Gordon University, Aberdeen, UK. The session provided students and faculty members with insights into emerging energy technologies and the role of engineers in addressing the Net Zero challenge through sustainable utilization of natural resources. The lecture also highlighted the importance of advanced materials and innovative engineering approaches in developing future energy solutions. The program was coordinated by Dr. Rahul Kumar, Associate Professor, Department of Mechanical Engineering, under the guidance of the Department Chairperson, Dr. Saravana Bavan D.




GPS Map Camera
Bannikuppe, Karnataka, India
Mf62+g9, Bannikuppe, Karnataka 562112, India
Lat 12.662045° Long 77.450297°
Wednesday, 30/09/2026 11:34 AM GMT +05:30
Google



Dept. of Mechanical Engineering makes a Strong Presence at ASME IMECE India 2026, Chennai

Faculty Representation as Session Chair

Adding to the University's professional representation, **Dr. K. Sudha Deepthi, Manager – Bosch Rexroth CoE & Asst. Professor Department of Mechanical Engineering, served as a Session Chair** at the conference. The role involved moderating technical presentations, facilitating research discussions, coordinating the technical session, and interacting with researchers and engineering professionals from different institutions and organizations. This recognition further strengthened the Department's and University's professional engagement with the international engineering community. She has also presented her research work**. Dr. Ravi velugula – Asst. Professor** has also presented his research work in the IMECE and there were also presentations from students co -authored by **Dr. Basheer & Dr. lokendra - Assistant Professors.** 5th sem Mechanical students who were the runner ups of the Brain Bolt hackathon organised by the ASME team also actively participated in the ASME IMECE conference.

Hon'ble Vice Chancellor Invited as Speaker

Another major highlight of the conference was the **invitation extended by ASME to the Hon'ble Vice Chancellor of Dayananda Sagar University as a speaker** for the session on **"Trusted AI, Standards & Future Workforce – Responsible AI, Cybersecurity, Engineering Standards, Governance and AI-Ready Talent."** The session focused on the rapidly evolving role of Artificial Intelligence in engineering and emphasized the importance of responsible AI, cybersecurity, engineering standards, governance frameworks, and preparing an AI-ready future workforce.



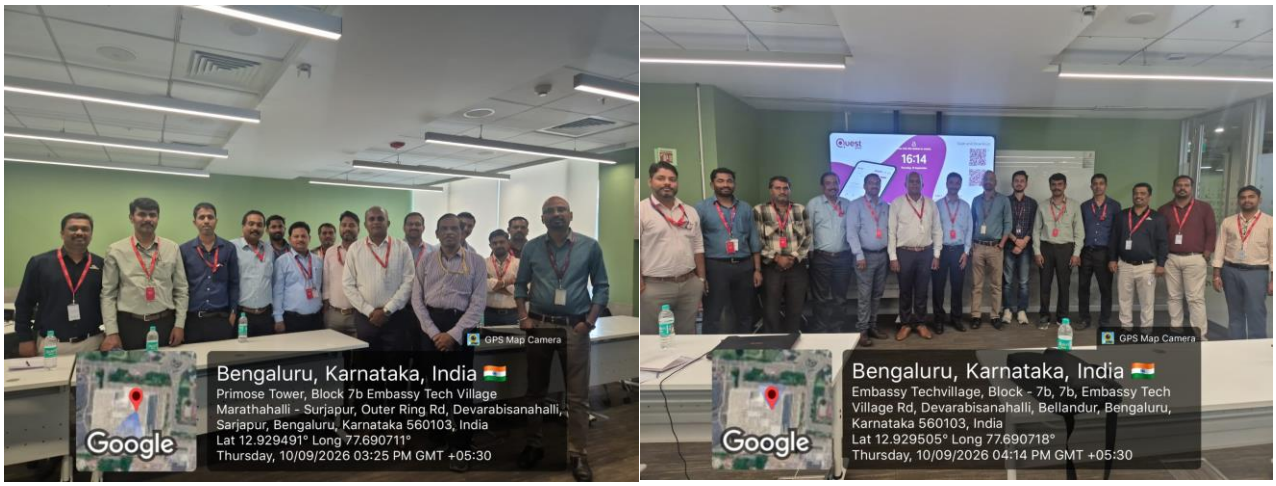


Faculty Participation in Quest Global's NextLeap Train-the-Trainer Program

On 10 September 2026, four faculty members from the Department of Mechanical Engineering, Dayananda Sagar University, attended the NextLeap Train-the-Trainer session at Quest Global, Embassy Tech Village, Bengaluru. The participants were Dr. Saravana Bavan D, Professor and Chairperson, and Assistant Professors Dr. Vinay M S, Dr. Manish Kumar Mishra, and Dr. Kumaravel S.

Mr. Rahul Dixit welcomed the participants, while Mr. Rajan Babu and Mr. Karthikeyan conducted discussions on the elective syllabus, teaching methodologies, industry practices, assessment approaches, and placement expectations. The session aligned faculty understanding with the program's learning objectives and industry requirements.

At Dr. Saravana Bavan D's request, Quest Global agreed to conduct selected student sessions and provide supporting study materials. The trained faculty will deliver the elective courses, with continued coordination between DSU and Quest Global. This engagement strengthened industry–academia collaboration and supported curriculum development, student skill enhancement, and placement readiness through industry-aligned teaching and continued professional guidance.

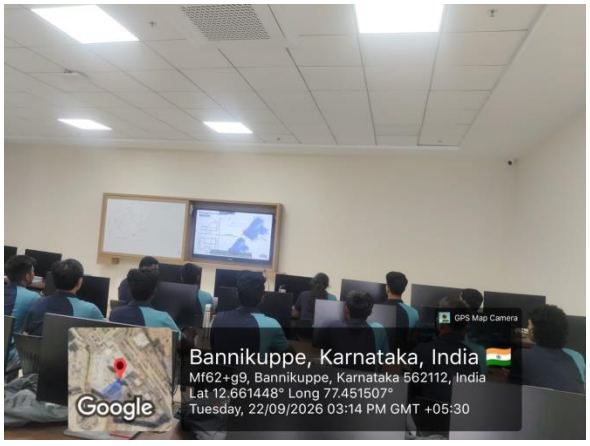


Corporate Training on Autodesk Inventor & AutoCAD for Bühler India Graduate Engineer Trainees (21st September–14th October 2026)




The Department of Mechanical Engineering, Dayananda Sagar University, is conducting a corporate training program on Autodesk Inventor and AutoCAD for Bühler India's Graduate Engineer Trainees from 21 September to 14 October 2026. Sessions run Monday to Wednesday, led by Dr. Shashidhar L C and Dr. Vinay M S. The program covers advanced 3D modelling, parametric design, assembly modelling, 2D drafting, and technical documentation. Conceptual instruction, demonstrations, and hands-on exercises expose participants to industrial design workflows. This initiative enhances trainees' CAD proficiency, design capabilities, and problem-solving skills while strengthening industry–academia collaboration and supporting professional development in engineering design through practical learning experiences.


Dayananda Sagar University Bengaluru
AUTODESK
DEPARTMENT OF MECHANICAL ENGINEERING
Autodesk Design & Innovation Lab.
Corporate Training on Autodesk Inventor & AutoCAD
To Empower Innovators with Design
For GET'S FROM BUHLER ACADEMY
14th BATCH
21st September – 14th October 2026
TIME
9.30 AM – 4.00 PM
TRAINER
Dr. Shashidhar L C
Dr. Vinay M S
VENUE
Digital Engineering Simulation (DES) Lab,
1st floor, Block B, School of Engineering.
Main Campus, Daynanda Sagar University.

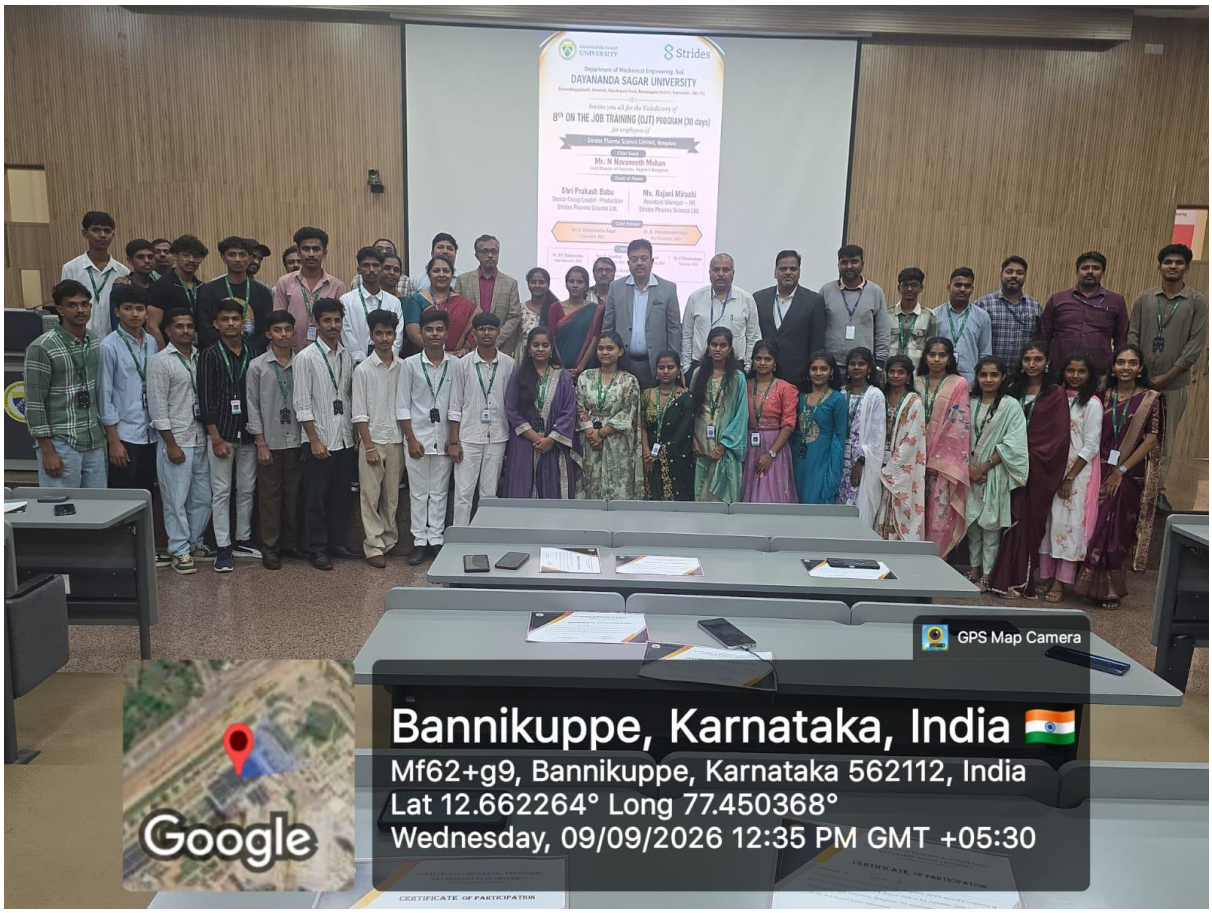

GPS Map Camera
Bannikuppe, Karnataka, India
Mf62+g9, Bannikuppe, Karnataka 562112, India
Lat 12.661448° Long 77.451507°
Tuesday, 22/09/2026 03:14 PM GMT +05:30
Google


GPS Map Camera
Bengaluru, Karnataka, India
No. 467, 468, 469, Peenya Industrial Area Phase Iv, Peenya, Bengaluru, Karnataka 560058, India
Lat 13.018769° Long 77.509843°
Tuesday, 22/09/2026 03:14 PM GMT +05:30
Google

8th On the Job Training (OJT) Program for M/s Strides Pharma Science Ltd.

The Department of Mechanical Engineering, Dayananda Sagar University, hosted the eighth Industry-Oriented On-the-Job Training program for 32 trainees from Strides Pharma Science Ltd., Bengaluru. Conducted at the Harohalli Campus, this 30-day initiative combined expert lectures, practical exercises, and interactive modules to develop technical skills and professional competencies for the pharmaceutical sector. Customized to the company's operational practices, departmental workflows, and organizational culture, the program strengthened participants' preparedness for their roles while reinforcing industry–academia collaboration through targeted training and practical learning experiences.







Dr. Jerrin Joy Varughese
Assistant Professor
Department of Mechanical Engineering

Dr. Jerrin Joy Varughese published the research article titled “Solvent-Assisted Dispersion of Multiwalled Carbon Nanotubes in Epoxy-Based Glass Fiber-Reinforced Polymer Composites: Experimental Investigation, Micromechanical Modeling, and Machine Learning Prediction” in Polymers for Advanced Technologies (Wiley),a Q2 journal with an Impact Factor of 3.8, on 22

September 2026.The study demonstrates enhanced mechanical performance of nanomodified GFRP composites and establishes a predictive framework integrating micromechanical models with machine learning techniques.

Polymers for Advanced Technologies

WILEY

polymers advanced technologies

RESEARCH ARTICLE

Solvent-Assisted Dispersion of Multiwalled Carbon Nanotubes in Epoxy-Based Glass Fiber-Reinforced Polymer Composites: Experimental Investigation, Micromechanical Modeling, and Machine Learning Prediction

Jerrin Joy Varughese[1] | Lince Mathew Thomas[2] | Arun Sam Varghese[3] | Dinah Ann Varughese[4] | Kakarla Dilleswara Rao[2] | Shyam Sundar M. N. V. Manikanta[2] | Varshith Pedireddi[2] | M. S. Sreekanth[2]

[1]Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University, Bengaluru, India | [2]Department of Manufacturing Engineering, School of Mechanical Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India | [3]Department of Mechanical Engineering, Carmel College of Engineering & Technology, Alappuzha, Kerala, India | [4]Department of Electronics and Communication Engineering, School of Engineering, Dayananda Sagar University, Bengaluru, India

Correspondence: M. S. Sreekanth (sreekanth.ms@vit.ac.in)

Received: 9 July 2026 | **Revised:** 31 August 2026 | **Accepted:** 7 September 2026

Keywords: epoxy nanocomposite | glass fiber-reinforced polymer composite | Halpin–Tsai model | machine learning models | mechanical properties | Mori–Tanaka homogenization | multiwalled carbon nanotubes | solvent-assisted dispersion

ABSTRACT

The investigation examines the improvement of mechanical behavior of epoxy and glass fiber (GF)-reinforced nanocomposites containing multiwalled carbon nanotubes (MWCNT) with weight fractions of 0.25, 0.50, and 0.75 respectively using ultrasonication-assisted dispersion in organic solvents namely, ethanol and dimethyl ketone. A systematic approach to solvent-mediated dispersion was investigated and assessed its impact on macro-scale mechanical response, interfacial interaction, and microstructural morphology. Epoxy nanocomposite with 0.5 wt.% ethanol-dispersed MWCNT demonstrated a notable 23% increase in ultimate tensile strength (48 MPa), as compared to pure epoxy. In MWCNT/glass fiber-reinforced polymer (GFRP) nanocomposite, 0.5 wt.% MWCNT improves the Young's modulus by 5.3%, whereas 0.25 wt.% MWCNT results in a significant 48.54% increase in flexural strength (339.4 MPa) and a remarkable 142.22% rise in maximum flexural extension (15.26 mm) as compared to pristine GFRP. The Halpin–Tsai micromechanical model and the Mori–Tanaka mean field homogenization approach are used to provide a mechanistic basis for the experimental observations. This allows for a quantitative evaluation of the impact of filler aspect ratio, volume fraction, and orientation on composite elastic response. Agglomeration effects and solvent residuals phenomena are quantitatively modeled using an agglomeration efficiency parameter, and the empirically obtained moduli are contextualized against Halpin–Tsai predictions. Moreover, machine learning models accurately predict mechanical characteristics, demonstrating R^2 values ranging from 0.976 to 0.983. This research establishes a dual analytical-predictive framework with high translational potential for advanced structural applications.



Dr. Shashwath Patil
Assistant Professor

Dr. Shashwath Patil, Assistant Professor, Department of Mechanical Engineering, has published a Research Article titled “Marine biowaste-derived squid pen powder (SPP) as a bio-filler in PLA filaments: A route toward eco-friendly composites” in the Q1-ranked Journal Next Materials, an Elsevier Publication, with an Impact Factor of 4.7. This achievement reflects the faculty member’s commitment to high-quality research and continuous contribution to the university research ecosystem.



Next Materials
Available online 11 September 2026, 103406
In Press, Corrected Proof What's this?

Recommended articles
No articles found.

Research Article

Marine biowaste-derived squid pen powder (SPP) as a bio-filler in PLA filaments: A route toward eco-friendly composites

Shashwath Patil [c], Sathish Thanikodi [a], Sabarinathan Palaniyappan [b]

Show more

Add to Mendeley Share Cite

https://doi.org/10.1016/j.nxmate.2026.103406 Get rights and content

Under a Creative Commons license Open access



Dr. Kumaravel Sundaram
Assistant Professor
Department of Mechanical Engineering

Dr. Kumaravel Sundaram, Assistant Professor, Department of Mechanical Engineering, has published two SCIE-indexed research articles: “Effect of Planetary Stir-Assisted Semi-solid Processing on the Microstructure and Mechanical Properties of A356 Alloy” in Springer’s International Journal of Metalcasting (Q2), and “Sequential Magnesium- and Zinc-Substituted Hydroxyapatite Coatings for Corrosion and Tribocorrosion Performance of Ti-6Al-7Nb Alloy” in Elsevier’s Ceramics International (Q1), co-authored with Saravanakumar Sengottaiyan, Sathyanarayanan Seetharaman and R. Gunasekaran. These studies advance alloy processing and biomedical implant coatings, strengthening the university’s research contributions.

DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

SPRINGER NATURE Link

Log in

Find a journal | Publish with us | Track your research | Search | Saved research | Cart

Home > International Journal of Metalcasting > Article

Effect of Planetary Stir-Assisted Semi-solid Processing on the Microstructure and Mechanical Properties of A356 Alloy



Technical Paper | Published: 26 September 2026

(2026) Cite this article

Save article

International Journal of Metalcasting

Aims and scope →

Submit manuscript →

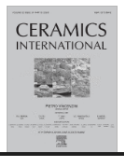
M. S. Vijayanand, S. Kumaravel, N. Shalom & S. Krishnakumar

2 Accesses Explore all metrics →

Access this article

ScienceDirect

LeapSpace | Journals & Books | Help | Search | Kumaravel S



Ceramics International

Date: Available online 27 September 2026

In Press, Corrected Proof

View accessibility information

Published by

Research article Get rights and content

Sequential magnesium- and zinc-substituted hydroxyapatite coatings for corrosion and tribocorrosion performance of Ti-6Al-7Nb alloy

Saravanakumar Sengottaiyan [a], Sathyanarayanan Seetharaman [b], R. Gunasekaran [c], S. Kumaravel [d]

[a] Faculty of Engineering and Technology, Villa College, Male, 20002, Maldives
[b] Department of Mechanical Engineering, Easwari Engineering College, Ramapuram, Chennai, Tamil Nadu, 600089, India
[c] Department of Mechanical Engineering, V.S.B. College of Engineering Technical Campus, Coimbatore, 642109, India
[d] Department of Mechanical Engineering, School of Engineering, Dayananda Sagar University, Bengaluru, Karnataka, 562112, India

Received 2 August 2026, Revised 23 September 2026, Accepted 24 September 2026, Available online 27 September 2026.

What do these dates mean?

Show less

Cite | Add to Mendeley | Share | 10.1016/j.ceramint.2026.09.444

Access through your organization | Purchase PDF