

SHABDKOSH

NEWSLETTER

Department of Mechanical Engineering

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ADITYA ENGINEERING COLLEGE (A) APPROVED BY AICTE, PERMANENTLY AFFILIATED TO JNTUK, ACCREDITED BY NBA & NAAC with 'A++' GRADE Recognized by UGC under section 2(f) and 12(B) of UGC Act, 1956 Aditya Nagar, ADB Road, Surampalem 533437, Kakinada Dist.



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ABOUT THE DEPARTMENT

Managing moving machines of the world! It is this catchy phrase that has made Mechanical Engineering the thriving branch for being an integral part in shaping our world run on machines. The Mechanical Engineering department at Aditya has earned a place of high repute through its quality teaching rendered by highly qualified and experienced faculty with remarkable number of research publications in reputed journals like ASME, ELSEVIER etc. and rigorous practical training creating an ambience of excitement in all the stages of study. The department lays impetus on hands-on training with the support of simulation packages such as CATIA, ANSYS, IDEAS, PRO-E, UNIGRAPHICS and SOLID WORDS. The academic activities include guest lectures, industrial visits, workshops, seminars, technical festivals VEDA and programs under Mechanical Engineering Students Association (MESA), collegiate club of the Society of Automotive Engineers (SAE) and Auto gear club. The projects that received appreciation in various events organized at state and national level are Go-Kart, Quad bike, Solar powered wheelchair, LPG bike, Reaping Machine, and many more such highly relevant contraptions. Students are encouraged to do internships in reputed industries like TATA Motors PVT. LTD., Hindustan Shipyard, BHEL PVT. LTD., Bhilai Steel Plant, Bokaro Thermal Power Station, Nalco Mining Division etc

VISION OF THE DEPARTMENT

- To be a preferred knowledge hub in Mechanical Engineering towards critical thinking, quality research and innovation.

MISSION OF THE DEPARTMENT

Mission 1:

- Provide infrastructure for design and development of modern-day solutions.

Mission 2:

- Impart leadership, critical thinking and innovation to address the societal needs.

Mission 3:

- Collaborate with industry, academia, & R&D organizations for excellence in teaching, research Consultancy services.

FACULTY PUBLICATIONS



1.Strategic combination of waste plastic/tire pyrolysis oil with biodiesel for natural gas-enriched HCCI engine: Experimental analysis and machine learning model, *Energy*,2023,280,128233, (IF- 9, SCIE)

2.Substitution of diesel fuel in conventional compression ignition engine with waste biomass-based fuel and its validation using artificial neural networks, *Process Safety and Environmental Protection*, 2023, 177, pp. 1234–1248, (IF-7.8, SCIE)

3.Investigation on Ammonia–Biodiesel Fueled RCCI Combustion Engine Using a Split Injection Strategy, *ACS Omega*, 2023, 8(34), pp. 30990–31001,(IF-4.1, SCIE)

4.Exploration of low heat rejection engine characteristics powered with carbon nanotubes-added waste plastic pyrolysis oil, *Process Safety and Environmental Protection*, 2023, 176, pp. 1101–1119, (IF-7.8, SCIE)



Development of high strength and corrosion resistance Mg-Zn-Dy/HA-Ag composite for temporary implant applications, *Materials Letters*, 2023, 347, 134604,(IF- 3.0, SCIE)



Effect of overlapping technique on the grain size distribution and grain orientation in friction stir processed aluminum alloys *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, (IF- 2.4, SCIE)



MIMO- Multi Channel Synthetic Aperture Radar System with Higher Visibility for Autonomous Vehicles to Identify Mobile and Immobile Objects, *Remote Sensing in Earth Systems Sciences*, 2023 (Scopus)

FACULTY PUBLICATIONS

Conference Paper/ Book

Mr. Veeranjaneeyulu Itha

- Maskless electrochemical microtexturing AIP Conference Proceeding 2023, 2786, 020009

Dr. Sandip Kumar

- Fuzzy-based modeling for prediction of machining performance measures for micro-EDM process, AIP Conference Proceedings, 2023, 2786, 020015
- Hybrid Micromachining and Microfabrication Technologies: Principles, Varieties and Applications, 2023

Dr. P.S. Ranjit

- An Optimized Filter Design with Cuckoo Search Algorithm for Industrial Microgrids, Proceedings of 2023 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunication, IConSCEPT 2023, 2023
- A Comprehensive Review on Dynamics of Droplet Impact on Airfoil Surface and Its Adverse Impact on Airfoil Performance Characteristics.. Lecture Notes in Mechanical Engineering, 2023, pp. 183–191

Dr. Pritam Kumar Das

- Numerical simulation for heat transfer enhancement of ZnFe₂O₄-water hybrid nanofluid, AIP Conference Proceedings, 2023, 2786, 020002

FACULTY DEVELOPMENT PROGRAM ORGANIZED

- A Five Day Online FDP on “**Future Scope For Additive Manufacturing In Industrial Manufacturing And Biomedical Applications**”
- **Dr. Bh Varaprasad and Dr. GVK Pradeep** are the coordinators of an event from 17th July to 21st July 2023.

The screenshot shows a Zoom meeting interface. The main window displays a title slide for a "Five Day Online Faculty Development Program on 'FUTURE SCOPES FOR ADDITIVE MANUFACTURING IN INDUSTRIAL AND BIOMEDICAL APPLICATIONS'". The program is organized by the Department of Mechanical Engineering at Aditya Engineering College (A) and runs from 17th to 21st July, 2023. The slide also mentions the coordinators, Dr. Bh Varaprasad and Dr. GVK Pradeep. The right sidebar shows a list of participants, including anjani devi, Bhemuni Vara Prasad, G V Krishna Pradeep (Organizer), Kadupu Rakesh Varma, Kagithapu Rajendra, pragna, and several attendees like UZMAL (Guest), Kannan G R (Guest), ANUSHAMYLAV... (Guest), and Arvind kumar na... (Guest). The bottom of the slide shows the name Krishna Pradeep.

The screenshot shows a Zoom meeting interface. The main window displays a slide titled "Feature size" for the "Selective laser sintering process". The slide includes a table with "LAYER THICKNESS" (0.1026mm) and "MINIMUM HATCHING SIZE" (0.16mm). It also features several diagrams and text boxes explaining key parameters:

- Wall thickness:** The minimum wall thickness to ensure a successful 3D print varies between 0.8 mm (for P112) up to 2.0 mm (for carbon filled polyamide).
- Hole Size:** All holes should be larger than 1.5 mm diameter.
- Feature size (pins, protruding features etc.):** A minimum size of 0.8 mm is recommended.
- Tolerances:** Typical tolerances for SLS parts are ± 0.3 mm or ± 0.05 mm, whichever is greater.
- Escape holes:** To save weight (and sometimes costs) SLS parts are printed hollow. To remove unsintered powder after production escape holes must be included. Escape holes must be a minimum of 3.5 mm diameter.
- Embossed and engraved details:** To ensure small details are visible the following rules apply: Minimum depth of engraving 1 mm. Minimum height of embossing 1 mm.
- Text:** To ensure readability of text the following rules apply: Minimum font height of 2 mm (font size 14) suitable for every direction. Sans serif font is recommended for readability.

 The slide footer mentions "Future Scopes for Additive Manufacturing in Industrial and Biomedical Applications, FDP 2023, Dr. Anand/ IIT Jammu". The right sidebar shows a list of participants, including Anand- IIT Jam..., Pavan..., MM, GA, Guest..., chakra..., and PRITAM KUMAR DAS. The bottom of the slide shows the name Anand- IIT Jammu (Guest).

STUDENT ACHIVEMENTS

- Participated In Indian Prokart Endurance Champion Ship
- Got 2nd Place On Acceleration Test With Prize Money 5000/-Rs.



CAMPUS PLACEMENTS

ADITYA
ENGINEERING COLLEGE (A)
Surampalem, Andhra Pradesh, INDIA

#2023 Placements

NAAC A++
ACCREDITED BY GRADE

ADITYA

DEPARTMENT OF
MECHANICAL ENGINEERING

Congratulations
for being placed in

Package

₹ 6.25 LPA

B. SATYA SIVA GANESH
ROLL NO. 18A95A0306
B.Tech (ME)

K. SATYA HEMANTH
ROLL NO. 18A95A0387
B.Tech (ME)

P. JAI SHANKAR
ROLL NO. 18A95A0338
B.Tech (ME)

K.R.P. VARDHAN
ROLL NO. 18A95A0384
B.Tech (ME)

D. PAVAN KUMAR
ROLL NO. 20A95A0311
B.Tech (ME)

P. VEERA RAGHAVA
ROLL NO. 20A95A0342
B.Tech (ME)

V. BHUVAN KUMAR
ROLL NO. 20A95A0365
B.Tech (ME)

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ENGINEERING COLLEGE(A)
Surampalem, Andhra Pradesh, INDIA

ADITYA

Congratulations
for being placed in

Mahindra
Rise.

package

₹ 8 LPA

D. SHANKAR SATYA NARAYANA
B.Tech
MECHANICAL

EAPCET COUNSELLING CODES

ACES ACET ADTP

#2023 PLACEMENTS

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