



## ACHIEVEMENTS OF STUDENTS

**Atama Nirbhar Madhya Pradesh Hackathon** : Mr. Nirbhay Borikar, 3rd Year, Mech. Engg. & Mr. Jayant Shakya, 3rd Year, Elect. Engg participated

& secured 5th rank in zonal level & also qualified for final round



Atama Nirbhar Madhya Pradesh Hackathon as a team "**Falcon**" from S.A.T.I. Vidisha under the guidance of Prof. Bharti Mehra , EC Dept.

**Project Title:** "Internet Of Things Based Intelligent Street Lightning System".



**Initiative by Fellow Student** : **EFFI-CYCLE** is an initiative of SAE INDIA Northern Section

with the objective of providing an opportunity for the students to explore the "Environment Friendly and Economical" solutions for the day-to-day mobility needs of people.

This year it is a virtual event due to the pandemic. 12 students of our college participated in this event who are part of SAE Collegiate Club.

**Faculty Advisor** : J. P. Shakya Sir.

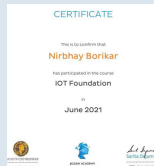
Till now they are done with the submission of package 1 submission for the event & package 2 submission is in progress. During this course many sessions were organized by SAE INDIA & every student benefited from it. They organized ANSYS workshop & IPG Carmaker software to see the vehicle motion in real time.

## ONLINE COURSES



Mr. Ankit Patel has successfully completed the two courses in concept of Thermodynamics & Strength of material with a decent score through NPTEL online certifications program score.

Mr. Karan Singh Bhadoriya has successfully completed the two courses in concept of Thermodynamics & Strength of material with a decent score through NPTEL online certifications program score.



Mr. Nirbhay Borikar has successfully completed the course in IOT Foundation with a decent score through online program mode.

## FROM HOD'S DESK

by Dr. Pankaj Agarwal Sir

I have immense pleasure to announce that the **Department of Mechanical Engineering** is publishing the first volume of "Newsletter". This Newsletter is portraying the academic and non-academic activities of the department among S.A.T.I. fraternity. I take this opportunity to congratulate the publication team for their commendable efforts in bringing out the first volume successfully. In this Volume of Newsletter there are articles ranging from achievements of students and faculty members to activities of the department for industry ready manpower. I hope this Newsletter continue to act as a platform for sharing activities, information's, achievements of the department.

## IDENTIFIED PROBLEMS FROM SOCIETY

- Headlight Design is to be Modified to Avoid Accidents due to Glare of Light during Crossing & its Model Making by Rapid Prototyping Technique. **Identified by Dr. Pankaj Agarwal.**
- Need of Customized Artificial Knee for Human Comfort : Can be done using 3-D Printing. **Identified by Dr. Pankaj Agarwal.**
- Knee Support for Elderly for Transferring Body Weight to Shoe. **Identified by Dr. Pankaj Agarwal.**
- Need to Design such Shock Absorbing System which can provide more Human Comfort & less wear and tear while running on bad road. **Identified by Dr. Pankaj Agarwal.**
- Uncomfortable feeling during sultry weather. **Identified by Dr. Sanjay Katarey.**
- Humidity Control without cooling below dew point temperature (without condensation). **Identified by Dr. Sanjay Katarey.**
- Higher Electricity Consumption in air-conditioning process. **Identified by Dr. Sanjay Katarey.**
- Limitation of Evaporative Cooler in maintaining comfort conditions. **Identified by Dr. Sanjay Katarey.**
- Using of PLC system to control building/classroom cooler, AC, FAN, or other lighting devices so that reduces the wastage of electric power. **Identified by Prof. Neeraj Sen.**
- Design such system which can sense an obstacle from a distance and alert the driver of vehicle to avoid accidents. **Identified by Prof. Pankaj Sonkusare.**

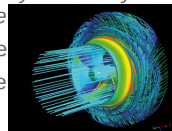
## RECENT ONLINE ACTIVITIES

**Expert lecture session:** Dr. I.A. Palani,



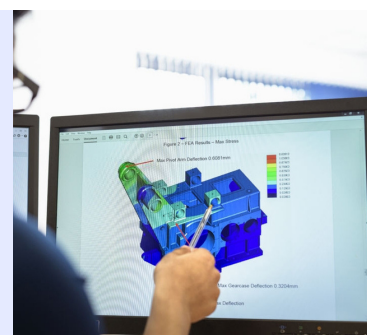
Asso. Professor, IIT Indore, delivered a lecture on 'Shape Memory Alloys & its Applications in soft robotics' on 9th Sept. B.Tech final & pre-final (ME), M.E. (APS) & some interested faculty members attended this Session. **Shape Memory Alloys** are a class of metal alloys that remember their original shape when are bent or twisted from their original shape & can retain their initial form when heated to a certain temperature.

**Bridge Course:** A Bridge course on basics of **Computational Fluid Dynamics** has started from 23/09/2021 on every Thursday & Friday at 2.00 pm via online mode. The aim of this course is to provide basic knowledge of CFD to UG students so that they can solve the various industrial problems. All Third year and final year student can attend this course. Instructor of this course are Dr. Arvind Kumar Patel & Dr. Mangal Singh Iodhi.



**A Day Workshop on ANSYS:** A Day Workshop

on "Design & Analysis of Engg. Components using ANSYS" was organized in Mechanical Engineering Department on 25th Sept. 2021 Saturday from 10:30. All the students of Mechanical Department were instructed to attend the workshop. Instructor of this course were Mr. Balendra Dhakar and Mr. Dharmendra Shah. The workshop include Introduction to types of designing tools & ANSYS Workbench, EKM, ANSYS Design Modeler etc. Application of ANSYS, & detailed description of FEA. Detailed description of ANSYS tools used for design & analysis.



## DEPARTMENTAL ACTIVITIES

- **Remedial Classes:** Remedial time table has been released on 13.09.2021, It would surely be beneficial for all of you all. It is a great opportunity to get clarified with your doubts in any of the subjects that are being taught in the current semester.
- **Diagnostic Test:** Mech. Engineering Department had organized an assessment diagnostic test that was conducted on 14th Aug. 2021 at 11:00 a.m. via online mode. This test was an opportunity for students to examine themselves.
- **5P to 5P Model:** Many 2nd year students are linked with the Alumni with the live problem identified by them to work further on them under 5P to 5P model of our Institute.
- The accreditation of our dept. B.Tech. (Mech. Engg.) programme is extended for one more year. As it is known to all that this programme is accredited for three years in 2018 by National Board Of Accreditation, New Delhi.

जब मिट्टी के सम्मान में, मैं मिलने सबसे आऊंगा,  
तेरा भी सिर यूँ झुक जाए, वो चला गया इस बोली में,  
तब इच्छा है मेरी भी, रे फिर शहीद हो आता वो,  
मिट्टी से तिरंगा उग जाए, कपटी बंदूक की गोली में,  
कभी होली में रंगोली में, तो जीवन के चरम पे जब,  
आंगन की आँख मिचौली में, जो धड़कन उसकी रुक जाए,  
माथे के कुमकुम रोली में, रे तब इच्छा है मेरी भी,  
घर की खुशियों की झोली में, मिट्टी से तिरंगा उग जाए।

By **ANIRUDDHA SONI**  
4th year Mech Engg.

## What one should do to get a job ?

- **Coding skills** must be known to extend job opportunities, One CAD/CAE software.
- One computer language such as C/C++, Python, etc. must be known.
- **Develop skills such as:** Good English Communication, good presentation, Be ready with industry ready skills, be aware of futuristic technologies.
- **Don't confined** yourself up to domain boundaries, think out of it.

## SARCASM

**Teacher:** How many programmers does it take to change a light bulb ?

**Student:** None. It is a hardware problem.

**To** an optimist, the glass is half full.

**To** a pessimist, the glass is half empty.

**To** an engineer, the glass has a Factor of Safety of 2.0.

## Our Team

**Advisor:** Dr. Pankaj Agarwal, HOD  
Mechanical Engineering

**Editors:** Atul Sharma (final Year),  
Yash Naiwar (final Year), Aishvary  
Turkar (3rd Year), Shalu Dwivedi (3rd  
Year).

## DEPARTMENTAL RESEARCHES

- Pradeep Singh, P. Agarwal, et.al, "Microstructural evolution, compressive deformation and Corrosion behaviour of thermally oxidized porous Ti4Al4Co alloy made of Mechanically alloyed powder" published in Materials chemistry and Physics Journals 261 (2021)124191, [www.elsevier.com/locate/matchemphys](http://www.elsevier.com/locate/matchemphys), SCI Indexed publication.
- Pankaj Agarwal, et.al, "Microstructure and high temperature compressive deformation in lightweight open cell titanium foam" published in Manufacturing Letters 27 (2021) 67-71, [www.elsevier.com/locate/mfglet](http://www.elsevier.com/locate/mfglet), SCOPUS Indexed publication.
- Pradeep Singh, P. Agarwal, et.al "Effect of ball powder ratio on microstructure and compressive behavior of porous Ti-4wt %Al alloy" IOP Conf. Series: Materials Science and Engineering 1136 (2021) 012065 IOP Publishing, doi:10.1088/1757-899X/1136/1/012065, SCOPUS Indexed publication.
- Bhavani Sahu, Pankaj Agarwal, Ashish Manoria, et.al, "Analysis and prioritization of Lean Manufacturing framework with multi-criteria decision-making approach", published in Journal of Huazhong University of Science and Technology (ISSN-1671-4512), Vol 50, issue: 7, pp 1-10, SCOPUS Indexed publication.
- Prof. Yashwant Ahirwar, et.al, "Optimization of the Surface Quality in Milling Machine using PVC Composite Plate" an international research paper published in SCI approved general AIP on Cite as: *AIP Conference Proceedings 2204, 040004 (2020)*.
- Prof. Pankaj Sonkusare, A review paper on Brief discussion of et.al, "Power Generation by the use of Various Technologies from Bio-renewable Resources." & Study of Various Renewable Resources Polymer & Different Types of Nano-Composite Materials.

## FELLOWSHIPS/INTERNSHIPS

- **The Schaeffer India Social Innovator Fellowship Program:** It is an initiative of Schaeffer India to recognize & reward individuals who are developing unique solutions that have the potential to positively impact society at scale. Under this fellowship program, a total of 11 individuals between the age of 18 to 30 years will be provided the fellowship grants worth INR 15 lakhs.
- **VIKRAM SARABHAI SPACE CENTRE GRADUATE APPRENTICESHIP:** Online applications are invited for the selection of graduate apprentices. Candidate with first-class B.E./B.Tech in the respective field with at least 65%/6.84 CGPA is eligible for this apprenticeship. Final year students are also eligible.
- **Abhyaz** is a virtual experiential platform where Virtual Internships in Core Engineering, Marketing, and HR areas are executed. *Details Regarding Abhyaz:* Part-time: 4 to 6 hours a week; Virtual: Work with us from anywhere in India; Project-based: Complete a project and apply for the next internship; Available Weekly: Positions open every week all through the year; Eligibility: UG from 2nd year onwards / PG from 1st year onwards / Graduates and Jobseekers

## Recent Events

- **Colleges to Re-Open:** After remaining shut for months due to the ongoing COVID-19 pandemic, Universities & Colleges in M.P. will re-open with 50% attendance from 15th Sept. It's compulsory for teaching staff & students to submit certificates of having taken at least the first shot of vaccine against covid-19.
- **MESID CLUB:** It organized an event to brief the students about various software which they must learn to use in order to excel in their academics as well as in professional career. Interested students may communicate to contacts provided here.

## Career Opportunities

- **UPSC ESE 2022:** Union Public Service Commission has started the online application process for recruitment to the post of group A and group B posts on the official website [upsc.gov.in](http://upsc.gov.in). Important dates are - Starting date of online registration 22sept, 20 Feb is ESE prelims exam, March/April - ESE prelims expected result declaration. Total UPSC ESE vacancies are 247, Exam fees for Gen/OBC candidates are 200/- rupees & for SC/ST, there are no exam fees.

**For any suggestions, edits, updates, articles etc. Contact Us at:**

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