



MECHANICAL NEWSLETTER

WINTER EDITION (DECEMBER 2022)

Congratulations



Dr. Sanjay Katarey has assumed the charge as our new HOD. We would like to extend our warm welcome and good wishes on behalf of all the faculty members and students. We all are enthralled to learn and grow under your distinguished leadership and charismatic persona.



We extend our heartiest congratulations to the former HOD of department, **Dr. Pankaj Agarwal** for having been appointed as in-charge of AICTE IDEA lab and faculty coordinator of T & P cell of institute. He is also currently the chaired president of IIC of SATI.



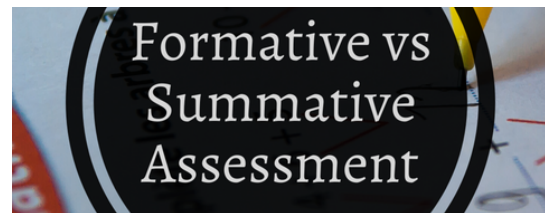
We heartily congratulate **Prof. Neetesh Singh Raghuvanshi**, Assistant Professor in our department has been recently awarded with the degree of "Doctor of Philosophy" by Pt. Dwarka Prasad Mishra Institute of Information Technology, Design and Manufacturing, Jabalpur. His thesis title is "Linear and Non-linear stability analysis of supercritical natural circulation loop"

FROM HOD'S DESK

Synergizing Formative and Summative – The Evaluation Debate

The buzz word in the corridors of our institute is continuous evaluation, a form of formative assessment that is being introduced or rather being tried to introduce in true sense from current academic session. There is a palpable apprehension, although uncalled for, among a section of students regarding repercussion of this system on their academic performance.

This system is a part of overall academic evaluation system – that mainly consist of formative and summative assessment, and has been in practice in almost all the academic institutions from primary to UG and PG. The basic difference between two systems is the point(s) of assessment. In formative, which is a kind of continuous evaluation, the assessment is a continuous one and runs concurrently with the teaching – learning of course whereas summative is a one time that occurs at the end of teaching learning. Other difference is that the former is somewhat informal way of evaluation and the later one is formal. Earlier, only summative assessment was used to evaluate academic performance, but later it is found that summative assessment has certain limitations and at times failed to reflect true potential of students.



Since in continuous evaluation laboratory write ups, assignments, attendance etc. are the basic parameters of evaluation, they are completed with the progress of course and thus by the end of semester students are free to focus on end semester examination. Secondly, it provides an opportunity to students to improve their performance over the entire period of semester, as they can identify their weakness, if any, and improve over the subsequent evaluation. Thirdly, it helps teacher to monitor and review overall learning outcome of the course and if need be, remedial steps may be taken. Lastly the overall evaluation is much more comprehensive and benefits sincere students by separating men from boys. So, in overall larger scheme of things, continuous evaluation may be a short term pain, but certainly a long term gain that is in the interest of all the stakeholders

• **Dr. Sanjay Katarey**

SMART MANUFACTURING

Smart Manufacturing (SM) is an intelligent manufacturing ecosystem in which all the physical systems are connected with each other and take their own decisions with sharing real time data and using cutting edge technology such as **IOT, CPS, AI, bigdata, Additive Manufacturing, Autonomous Robots, Augmented and Virtual reality**, etc. it is the manufacturing system in which the action may be taken proactively to avoid any failure during the operations. SM focuses on the establishment of intelligent and communicative system including Machine to Machine (M2M) Communication and Human-Machine Interaction (HMI).

The Characteristics of SM Comprises of:

- a) Real time data Communication and Processing,
- b) Machines are Connected as a community. Collaborative,
- c) M2M Communication,
- d) H2M Communication,
- e) Autonomous system



Internet of Things (IOT) is a network of devices, machines, buildings and equipment that can exchange data and information digitally. It enables remote access though out the network, allowing each network-connected device to communicate without manual interference. Additive Manufacturing is the technology to convert digital to physical and is popularly known as 3-D printing. The prominent application of 3-D printing is in medical area, where customized implants are now possible due to this disruptive technology.

• **Dr. Pankaj Agarwal**

MECHANICAL NEWSLETTER

Dreamer & Achiever



Lakshit Singh Bagri
Final Year Engineering

YouTube channel "Lakshit Bagri - Scholge"

Lakshit Bagri is a content creator. Creating content for Youtube as well as other social media sites. He has over 2k subscribers and app. 200 K + views in his channel making content on the niche of Education, College Stuffs, Self Growth and Podcast. He also helped no. of students while the time of college counselling by mentoring them according to their condition as well as ranks and that too free of any cost.

Sport's Achievement



Aditya Suryawanshi has been selected for the state level rounds of volleyball, handball and basket ball Nodal sports being held at different colleges. Along with him, Shubh Katare and Chandrama Prasad Shastri have also been selected for badminton nodals

CONGRATULATIONS

Being Selected In National Handball Team



Ms . Divya Verma, final year student of Mechanical Engineering has been selected for the national level handball tournament. She is the only student of SATI to achieve and make her position in the national level team

Students who wish to share any *article, research, achievement, certification, etc.* for publishing in the next edition of the "**Mechanical Newsletter**", can submit their work at newsletter.me@satiengg.in
For any suggestions, updates, and queries, you can contact us at the above-mentioned email.

AICTE IDEA Lab

Establishment of AICTE IDEA lab and opportunities for Engineering Students.

Engineering is all about to create things facilitating comfort to human life. Innovation and innovative thinking is utmost requirement of engineering students. Students are required to develop skill set to compete in today's competitive environment. AICTE has set IDEA (Idea Development, Evaluation & Application) lab in various institutions to promote students' innovative activities.

AICTE has selected about 49 colleges in first phase for setting IDEA lab and our college is one of them. The aim of developing IDEA lab is to produce seasoned students by providing them with relevant training, faculty/expert mentoring and latest technology. Thus innovative students' ideas can be developed in physical and virtual environment for promoting it commercially and set the student Start-ups. Student's participation in various events/activities of IDEA lab will promote collaboration and tie ups between institutions / universities and industries. Initially in the first phase our institutes' IDEA lab will provide facilities of 3D Printing, Laser Cutting and engraving, Vinyl Cutting, CNC Router, PCB Milling, Arduino Uno Boards etc. Further trainings on open ware software will be provided.



The IDEA Lab (Innovate-Design-Engineer-Apply) facilitates a trans-disciplinary, problem-based, community engaged innovation environment through digital fabrication and advanced manufacturing. Some of the IDEA lab activities are: students' skill development program, projects by students for patent filling, training of industry participants, Faculty development program, technical exhibition etc. Also 3D printing and other digital fabrication technologies are revolutionizing prototype development as well as customized manufacturing.

• **Dr. C.P. Singh**

Glimpses of Industrial tour & award of certificates



Induction program

Induction program for first year students of Mechanical Engineering department was organized as a part of centralized induction program. The program was convened by **Dr. Ashish Manoria**. The class coordinator, **Dr. Gaurav Bajpai** and Prof. Nikhil Mohan Vyas scheduled the events of program, followed by overview of the department by Head of Department, and introduction of faculty members with newly admitted students. For providing greater insight of the department, students were taken for the tour of the classroom, labs, workshop. Students were also provided demonstration and had opportunity to interact with alumni, and senior students .

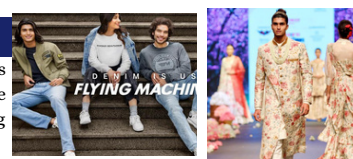


Research papers

- Density wave instability analysis in a parallel channel natural circulation loop of supercritical pressure fluid, Journal of Nuclear engineering and design, Elsevier. - Published by : **Dr. Neetesh Singh Raghuvanshi**
- Nuclear coupled thermal-hydraulic analysis of parallel channel density wave instabilities in a supercritical water reactor, Journal of Annals of Nuclear energy, Elsevier.- Published by : **Dr. Neetesh Singh Raghuvanshi**

Mechanical Engineer with a diversified talent

Aman Sharma, currently in 3rd year pursuing B-tech degree in Mechanical Branch was named Mr. Madhya Pradesh GLAM 21' and also featured in the Bombay Times and Indore Times Fashion Week. Recently he modeled for the well renowned clothing company Flying Machine and featured as brand endorser for the company all over India.



Our Mechanical Newsletter's team :

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Professor, MED.

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Abhishekh kumar (3rd year)

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Aditya Suryawanshi (3rd Year), **Akshat Namami Pathak** (3rd Year),
Mahima Choudhary (3rd year), **Shailee Soni** (3rd year)