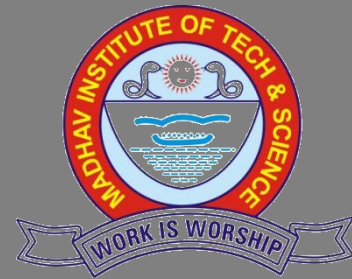


# E-Newsletter

## Department of Mechanical Engineering



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### New Joining under NPIU



**P.K. Neema**  
Assist. Professor



**N. K Raghuwanshi**  
Assist. Professor



**A. K. Dhamneya**  
Assist. Professor



**Kapil Tyagi**  
Assist. Professor



**Vikas Yadav**  
Assist. Professor



**Ravi k. Ranjan**  
Assist. Professor



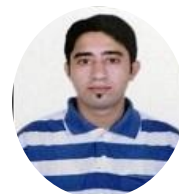
**Kaustubh Khot**  
Assist. Professor



**Sarvesh Yadav**  
Assist. Professor



**Vaibhav Gupta**  
Assist. Professor



**Manish Sharma**  
Assist. Professor



**N. S. Sikarwar**  
Assist. Professor



**Neeraj Mishra**  
Assist. Professor



**Dhruv Maggu**  
Assist. Professor



**S. F. Ahmad**  
Assist. Professor



**Gyanesh Sharan**  
Assist. Professor

#### Editorial Team

- Dr. Amit Aherwar
- Prof. Bhupendra Pandey

## Activity Organized

1. Department has organized a three-day workshop on the '**Soccer Bot**' from **22<sup>nd</sup> - 24<sup>th</sup> Sep, 2018** under **SAE INDIA MITS Collegiate Club**. In this workshop students from all over the city of Gwalior participated in the competition and learnt the basics of Arduino controlled robotics. Total **177 participants** in form of 42 teams were registered. **Day one** was of the starting of program and was followed by the lecture of guest mentor in which students learned what the importance of robotics is, he told students that Gesture Based Robotics (also known as Accelerometer Controlled Robotics) deals with robots which involve human-machine interaction-where a robot is controlled through hand movements. The robots take inputs from the accelerometer sensor and are controlled by programmed microcontrollers. This project-based course helped participants to understand the concepts behind accelerometer sensor, microcontrollers and other electronic components in Robotics. The course included practical training on building robots based on gesture recognition, providing students a glimpse into Human Machine Interaction technologies. In **Day 2**, workshop enhanced on the practical learning of the students, they were provided the kits to assemble them and check whether the gesture robot is working or not. On this module, the students were able to learn to build their very own Gesture Controlled Robot that can be controlled via hand gestures with the help of an ADXL-335 accelerometer sensor. The course was also equipped with scratch-based block programming modules that make programming the robot super easy even for beginners. The **Day 3** was the match day and included the fixtures and matches between the team and the participants on the knock out basis. A football ground shaped carving was initiated in main hall of college and the matches were organized in it.



2. An Expert Lecture was conducted on "**Evolutionary Algorithm**" on 18<sup>th</sup> August 2018 by the Mechanical engineering Department. The lecture was delivered by Prof. Pramod Kumar Singh, ABV-IITM, Gwalior. In this lecture, Dr. Singh said Genetic algorithm is the most popular type of Evolutionary Algorithm (EA). EA uses mechanisms inspired by biological evolution, such as reproduction, mutation, recombination and selection. Total 31 participants attended the lecture. The outcome of this lecture is to discuss the importance of genetic algorithm and solve the optimization problem using GA.



3. Mechanical and Automobile engineering students were organized the blood donation camp with NSS unit and Red Ribbon Club, on the occasion of the Punya-Tithi of Late His Highness Shrimant Madhav Rao Scindia (30th September 2018). 136 units were donated to Red Cross society.



## Students Achievement & Activities

Automobile 2<sup>nd</sup> year engineering students participated in **NATIONAL SUPERCARTING CHAMPIONSHIP** held in Ujjain and Hyderabad on 18<sup>th</sup>-19<sup>th</sup> of August (virtual round) and 24<sup>th</sup> - 27<sup>th</sup> September 2018 (main event) under the guidance of Prof. Vaibhav Shivhare as faculty advisor. They secured 3<sup>rd</sup> position in the virtual round in design presentation and overall AIR 7<sup>th</sup> in the competition having more than 50 teams from prestigious colleges all over India.



TEAM ID- SR18-O ; CART No.- 07	
ANUPAM SHARMA (captain)	ABHISHEK JAIN
ADITYA SINGH (vice captain, cart driver)	PRAKASH RAJAWAT
AKHAND TOMAR	NAVDEEP PARASHAR
ASHISH PARASHAR	VAIBHAV CHAUBEY
HARDIK KULASHRESHTA	BHARAT RAJPUT
HIMANSHU PRAJAPATI	HARSH PARASHAR
PRASHANT TOMAR	PRAGYAN VERMA
ABHISHEK JAIN	PRANJAL SHARMA
SIDDESHWAR PANDE	ANIKET TIWARI

Team Name	Ranking
E-Juno Racers	1
Precisio	2
Scavengers	3
Velociraptors	4
E-Resonance Racing	5
Phantom 2.0	6
HiGama	7
Torque Twisters	8
Irident	9
GIET Ignitors	10
Hornbill Hasturs	11
Resonance Racing	12



Rank	Team Name	College Name
1	Invader Racing	MMIT,Pune
2	Resonance Racing	AISSMS,Pune
3	Mech Cheetah	Jaihind College of Engineering,Pune
4	Mechbots 3.0	GLA University, Mathura
5	GIET Velocity	GIET,Kota
6	The Phoenix	Arya College of Engineering & IT,Jaipur
7	Scavengers	MIITS,Gwalior
8	Trinity Karters	Punjabi University, Patiala
9	Hornbill Hasturs	Eluru College of Engineering & Technology, Eluru
10	Fireheart	SNS College of Engineering, Coimbatore
11	The Mechanix	Gulzar Group of Institutes,Ludhiana
12	Altimas	Mangalore Institute of Technology & Engineering, Mangalore
13	Automaniacs	IPS,Indore
14	Precisio	SSN College of Engineering,Kalavakkam
15	Piston Breakers	Builders Engineering College,Tirupur



**Chandan Saxena** is a mechanical engineer student. He passed out in 2016 from MITS and was awarded gold medal for having highest aggregate. After that, he had worked on TRIDENT GROUP in Hoshangabad, M.P. as utility manager for 9 lakh per annum. Out of 25 months of total service, he worked 18 months in shifts. He spare some time in rotating periods. Last 6-7 months he was promoted and was offered general shift profile with additional responsibilities. During these periods, he continues studying after duty hours. Throughout, he was giving other technical exams. He keeps on preparing and was selected for BEL Bangalore. But he didn't choose to opt BEL over Trident. After that in April 2018, he appeared for ISRO written and then appeared for interview in August for the first time. Currently, he is now working in **ISRO as a scientist engineer. His designation is "C" position and working on LIQUID PROPULSION SYSTEM centre in Thiruvananthapuram.**



## Industrial Visit

An Industrial visit to **Rail Spring Karkhana Sithouli**, Gwalior, Madhya Pradesh was organized by Mechanical Engineering Department on **13<sup>th</sup> September 2018**. Total 32 students and one faculty visited to Rail Spring Karkhana to understand current market scenarios in Spring Industry and latest most demanding technologies & criteria for selection etc. Students were divided in a batch of 8 students for interaction with the Industry person. The Technical Head of Rail Spring Karkhana conducted very informative session for the students. He motivated the students to select their domain area and importance of Spring Industry in the current market. He also discussed on current technology which they are using. The session was concluded with Question-Answer session. Many of the students asked different questions to the Technical Head on current demanding technologies, market scenarios and they cleared all the doubt and myths which was in students mind about the technologies and spring manufacturing sector. All students were satisfied after the visit and Q&A session.



## Publications

- Sanni Dev, **Amit Aherwar**, Amar Patnaik, 'Preliminary Evaluations on Development of Recycled Porcelain Reinforced LM-26/Al-Si10Cu3Mg1 Alloy for Piston Materials" *Journal of Silicon*, **Springer**. DOI: 10.1007/s12633-018-9979-9.
- **Amit Aherwar**, Amit Singh, Amar Patnaik, Mechanical and wear performance evaluation of tungsten added Co-30Cr-4Mo-1Ni biomedical alloy with Taguchi optimization' *Materialwiss. Werkstofftech*, **Wiley**. 2018, 49, 912–927.
- Sagar Supekar, **Chandra Shekhar Malvi**, 'An Experimental Study on Design and Fabrication of Sheet and Tube Type PVT Collector' *Journal of Alternate Energy Sources and Technologies*. 2018, 9(2), 33-38.
- Pranav Singh, **C.S. Malvi**, S.K.S. Rathore, J. Bhartiya, 'Design, Simulation, Installation and Economic Analysis of 50kW Grid Connected Solar PV System'. *Journal of Alternate Energy Sources and Technologies*. 2018, 9(2), 1–14

