



**VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE**  
**MECHANICAL ENGINEERING DEPARTMENT**



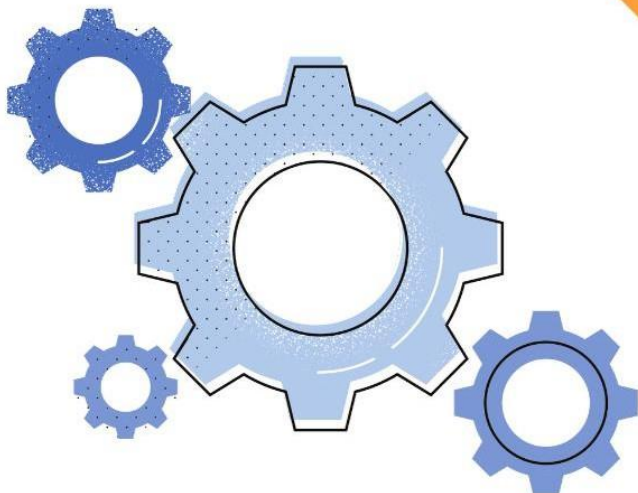
# Departmental Newsletter



**Volume 1 | Issue 2**



**Jan-Mar 2026**





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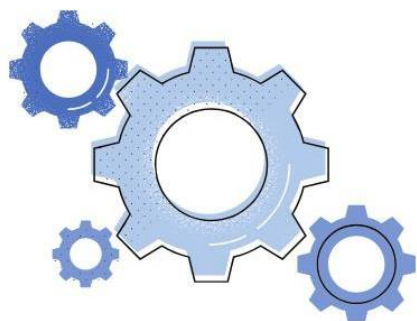
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### Editors

□ Dr. Nishit Bedi  
□ Dr. Prasanna. P. Raut



I on behalf of Mechanical Engineering Department proudly presents the second issue of departmental newsletter. This bulletin consists of many positive happenings carried out by our department in various spheres such as academic, research initiatives as well as interactions with organizations during the first quarter of 2026. This issue reflects the collective dedication and enthusiastic engagement of our students and faculty that reflects the conducive environment of learning and innovation at VJTI.

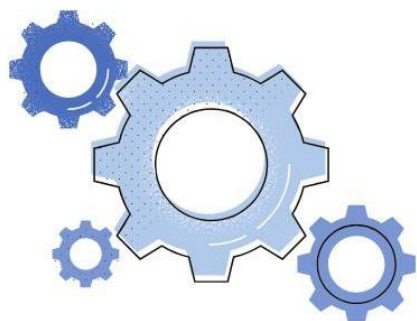


I am happy to share about many enriching experiences such as academic as well as research initiatives taken at ground level by the department. An audit of our academic curriculum and Ph.D poster presentation activity can be noticed in this issue of newsletter. Other significant activities such as outreach initiatives, industrial visits for practical exposure, placement highlights, etc. have also marked their appearances.

Newsletter serves not only as a record of accomplishments but also as a testament to the collaborative spirit and commitment to excellence. I extend my sincere appreciation to everyone who contributed to this edition and look forward to many more successful milestones in the journey ahead.

Enjoy reading !!

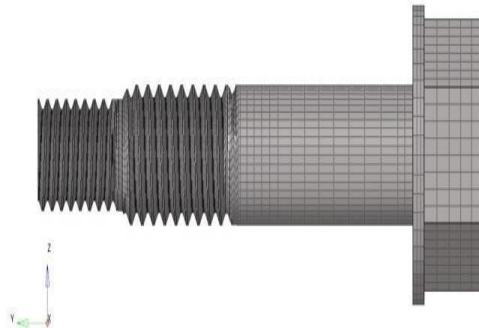
**Dr. Sachin S. Naik**



## Journal Articles and International Conferences

### Investigations on Loosening of Oppositely Threaded Stepped Bolted Joint

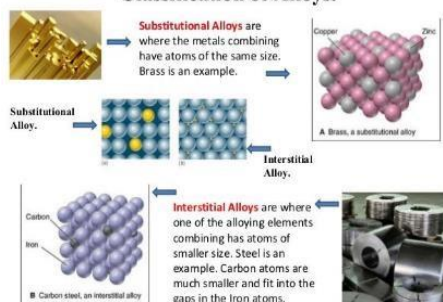
[10.1007/s40032-026-01325-w](#)



**Faculty Name : Dr. Sachin S. Naik**

Loosening of bolted joint is quite common in bolted structures subjected to fluctuating load. In this study, numerical and experimental investigations for comparing loosening behaviour is presented for a novel design of a bolted joint – *Oppositely Threaded Stepped Bolted (OTSB)* joint. Comparison of the experimental and numerical studies shows that the *OTSB* joint is very effective in prevention of loosening behaviour.

### Classification of Alloys.



### Recent Advances in AM of HEAs: Processing Routes, Micro structural Evolution and Performance

**(Accepted for Publication)**

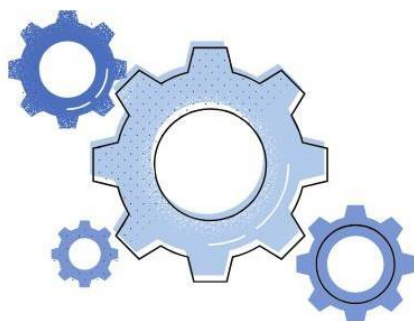
**Faculty Name : Dr. Shrinivas Rathod**

Alloying is conducted to enhance the intrinsic characteristics of metals. In this context, combining several major elements in nearly equal proportions to form product is called high entropy alloys (HEAs). This study presents the current state of AM-processed HEAs. Considerations for feedstock designs of laser based AM and comprehensive survey of HEAs by various other means is also presented.

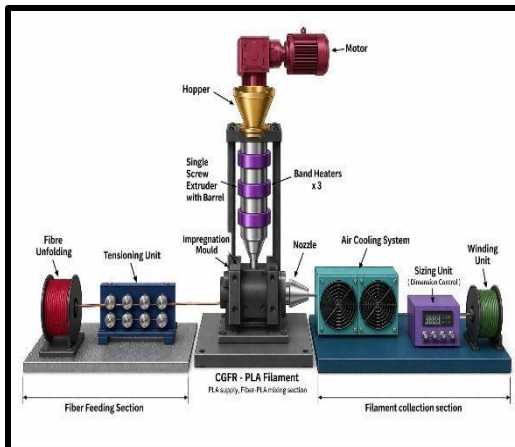
### Performance Evaluation of Friction Material Derived from Crop Residue for Automotive Application ICAMAS, March 10-12, 2026, NIT Tadepalligudam, AP, India

**Faculty Name : Prof Sachin Barve**

The potential of utilizing crop fibre resources in eco-friendly brake manufacturing, reducing the environmental and health impacts of traditional materials was presented in the paper Utilizing crop fibre in brake pad composites has lead to superior mechanical and tribological properties. Additionally, increased calcium carbonate content results in enhancing the wear resistance.



## Pre PhD synopsis on Additive Manufacturing of Continuous Glass Fibre Reinforced Polymer Composites



**Student Name - Ms. Nehal Jayesh Muchhala**

**Supervisor – Dr. R M Tayade,**

**Co- Supervisor – Dr. V B Suryavanshi**

Additive Manufacturing of CFRPCs has attracted the research community. In this context, the pre-impregnation (prepreg) process is an important step before filament extrusion or printing. The research focused on producing pre-impregnated filament by using an innovative method i.e. melt impregnation technique. The effects of yarn density, impregnation temperature, and pulling speed on fiber-resin bond quality was experimentally investigated.

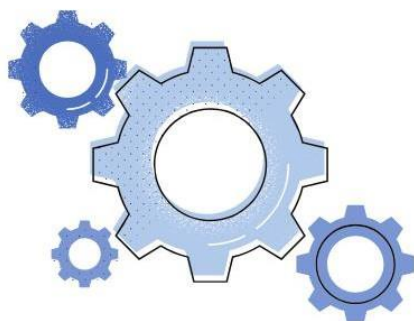
## Doctoral Colloquium

The Department of Mechanical Engineering VJTI, Mumbai, organized a PhD Colloquium (Poster Presentations) in March 2026. Research Scholars, thirteen in number, presented their research across diverse areas related to Mechanical Engineering.

The event featured expert evaluation by Prof. Deepak Marla and Prof. Rajkumar S. Pant both from Indian Institute of Technology Bombay (IIT Bombay). Feedback from both the professors greatly benefited the participants.



The colloquium provided a valuable platform for research exchange, enhancing both academic insight and presentation skills.





At ground level, Placements can be one of the parameter to observe the quality of engineers produced at VJTI. In addition to the regular drive conducted by companies, some placement and startup highlights were also observed during this quarter.

### **Placement Opportunity at Lubrizol**

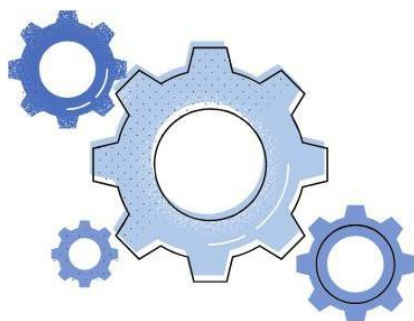
Mr. Avinash Kamuni, Senior Manager at Lubrizol, a well known MNC in the field of lubricants, is a VJTI alumnus. He completed his Master's Thermal Engg from VJTI in the year 2018. Mr. Kamuni visited the campus in March to interview our PG thermal students for placement at Lubrizol.



### **Compact Robotic Wheel Chair – A startup by VJTI student**



Mr. Siddhart Singh under Dr. Gulhane and Dr. Wankhade initiated a startup that deals with developing a compact robotic wheel chair that can climb stairs and move across uneven surfaces. The device is currently at prototype stage and combine robotics with assistive technology to improve mobility for people with disability. The news is also covered in media by Indian Express ePaper.



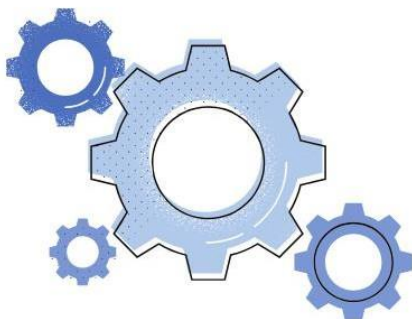


Dr. Gulhane presented a technical session on 'how to prepare for innovation and placements' at TIT Bhopal on 14<sup>th</sup> March 2026. The invited lecture shared some simple yet useful remarks that can make huge difference during placement drives at the institute. Huge response from side of students of TIT was also observed reflecting their keen interest.



Prof. Rajiv Dubey, Professor & Chair, Dept. of Mech Engg. Director CARRT, University of Florida visited VJTI for academic and research collaboration on 5<sup>th</sup> Jan 2026. Various topics such as pedagogy systems, student/ faculty exchange and ways in which the two institutes can grow with mutual interaction were discussed. In this regard, meeting with faculty of the department as well as Director, VJTI was observed to be fruitful.

Dr. Kajal Vinayak delivered an invited lecture in 2-Day Interactive Course on "Basics of Aircraft Low Observables' Technology (Aspects of Stealth Technology)," organized by the DIA-CoE at IIT Bombay on January 2-3, 2026. During her talk on the topic 'Mastering the Art of Thermal Stealth in Frontal Aspect' concept of passive IR suppression technique was shared. Many other fascinating insights into the thermal signatures of aircraft was also presented.



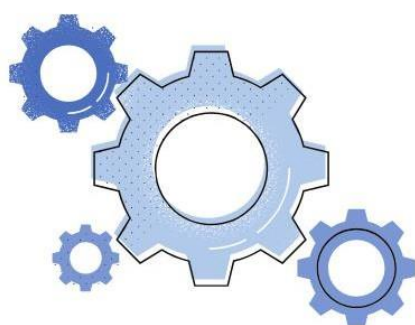
### Expert Lectures organized by the Mechanical Engineering Department



In an expert lecture organized by the department in Feb 2026, Dr. Sudhir Raikar (passout of 1985 batch) addressed students of third and final year and delivered an invited talk on 'Research and Development in Engineering'

The talk initiated with basic theme of Research and Development and revolved around imparting systematic process aimed at developing new products as well as improving the existing ones.

Another notable session was delivered by Dr. Tanvi Prakash in second fortnight of Feb 2026, Deputy General Manager (UAV) at Larsen and Toubro. Her lecture revolved around applications of UAVs across industries, emerging advancements, and their growing significance in modern engineering. A keen interest among students about such lectures was observed. An exposure to the design principles, applications, and future scope of airships and related technologies was gained by students





### **Aero VJTI**

Aero VJTI is actively engaged in academic and outreach activities to promote awareness in the field of aerospace engineering. The club aims to provide practical learning and industry exposure through workshops, seminars, and guest lectures. The quality presence of Aero VJTI can be observed from the fact that the club has consistently securing top ranks in both national and international competitions. Recently, in an AIAA international competition the team was able to secured 1<sup>st</sup> rank in Asia pacific region. In another event, SAE Aerothon 2025, the team successfully achieved 19<sup>th</sup> rank at all India level. The team is geared up to participate in two prestigious design competitions. The National Aerospace Conceptual Design Competition (NACDeC-IX) conducted at all India level and The 43<sup>rd</sup> Vertical Flight Society (VFS) Annual Student Design Competition will be at international level.

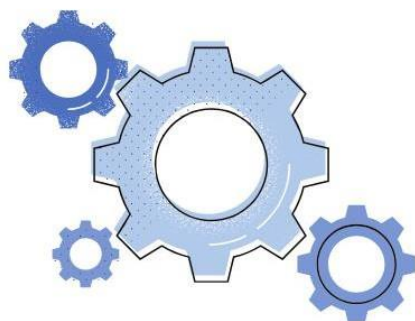


### **VJTI Racing, Motorbreath at eBAJA 2026**

VJTI racing is student organization that focus on Design, manufacturing, sustainability and optimization of automobiles. The students compete in national level competitions such as SAE BAJA, ATVC and many kart competitions such as IKR and SUPRA. The club thus keeps its promise to provide the entire spectrum of subjects within the engineering domain. VJTI racing team was able to secure AIR 1 in the presentation round of SAE



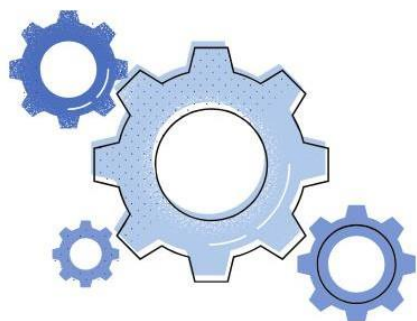
BAJA and received a cash prize of Rs. 30000. In an other event, ATVC 2026, Organized by Infi-League Motorsports at Naroda, Ahmedabad. VJTI racing worked diligently and finished in 4th place out of 40 participants in total. The club recently conducted an autoshow in March 2026 that aimed to spark interest in motorsport. All Terrain Vehicle (ATV) manufactured by Team Motorbreath of our institute was the center of attraction.



### **Industrial Visit to Blue Star Limited**

B. Tech Final year students recently towards end of March 2026 visited manufacturing facility of Blue Star Limited located at Wada, Palghar, Maharashtra.

Accompanied by Dr. M V Tendolkar, manufacturing of wide range of products with primary emphasis on deep freezers along with other units such as air conditioners, cold storage solutions, water coolers, and refrigeration systems were observed by students. The plant spanning over 36 acres is certified by ISO 9001:2015 and ISO 45001:2018 for its quality management and occupational health and safety systems respectively. As a result, facility also displayed the glance of modern manufacturing practices such as Lean Manufacturing, Six Sigma, TPM, and Kaizen to ensure high productivity and quality standards.



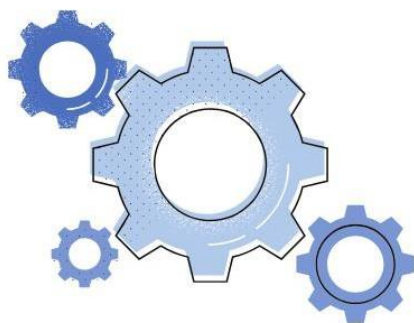


### Academic Audit of Mechanical Engineering Department

An academic audit for last three semesters of the department was conducted in march 2026. Head, Dr. S. S. Naik, on behalf of department had the privilege of hosting distinguished experts i.e Prof. Arunkumar Sridharan (IIT Bombay), Prof. Sudarsan Ghosh (IIT Delhi), and Prof. Atul B. Andhare (VNIT Nagpur) for the purpose. Extensive experience of experts along with the insights given by them added immense value to the evaluation process. Constructive feedback on curriculum enhancement by the experts so as to bridge the gap between academic and industry were also suggested

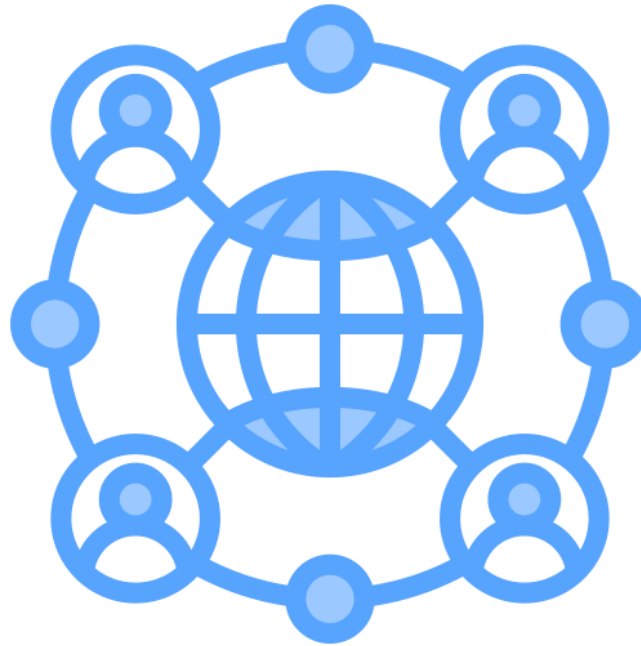
### Alumini Meet held in Jan 2026

An alumini meet for the year 2025-26 was held in Jan 2026. Many notable alumini, now serving at even higher ranks in various private and public departments joined the occasion. In this context, Dy RTO commissioner (passout of 1998 Batch) can be observed with Director sir. Many ongoing initiatives at the institute to bridge the gap between industry and academics along with some general open ended discussions were observed during the interaction.





# Stay connected with us



Stay in touch with us for the latest updates on research, events, and achievements in in our department.

## Connect us at

 <https://vjti.ac.in/mechanical-engineering>

 [hod\\_degree@me.vjti.ac.in](mailto:hod_degree@me.vjti.ac.in)

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