



S.B. Jain Institute

of Technology, Management & Research

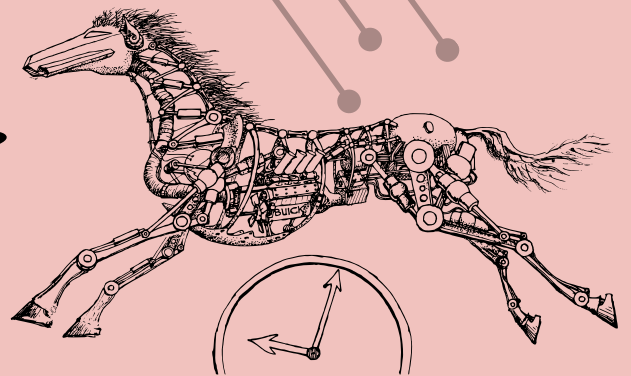
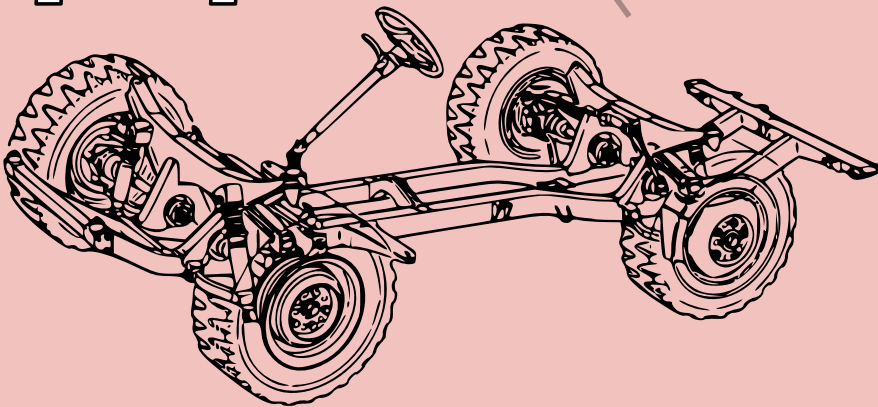
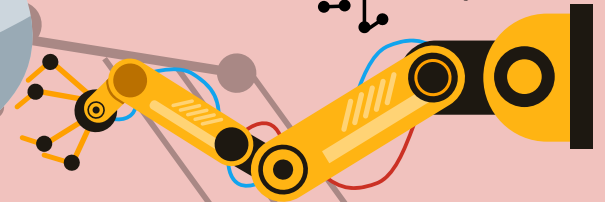
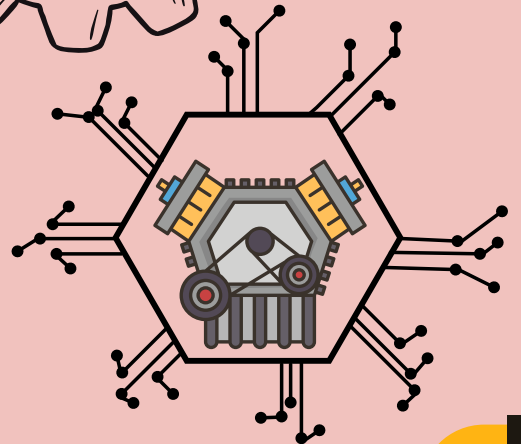
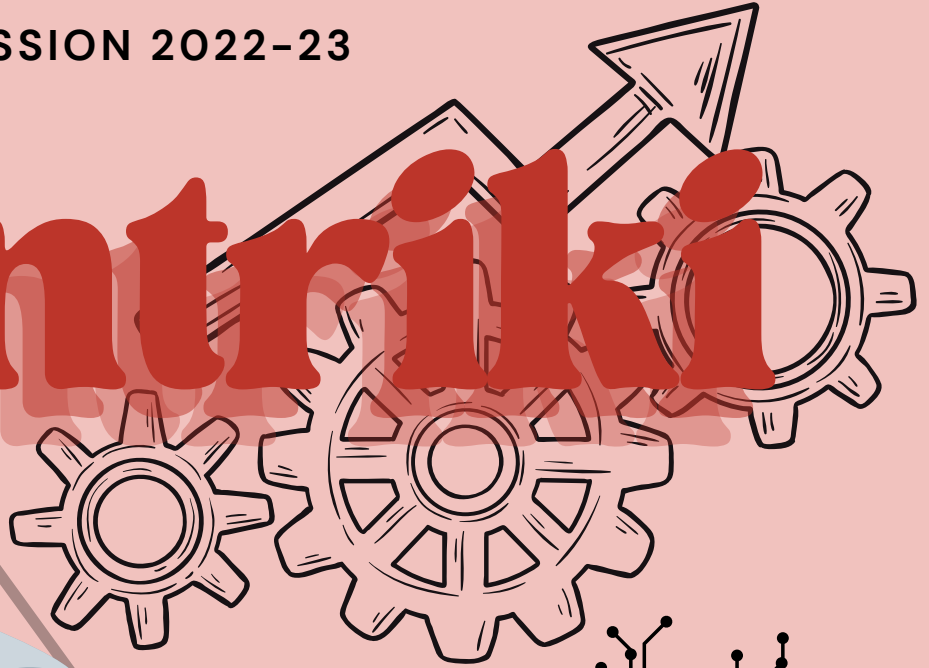
An Autonomous Institute

Affiliated to R. T. M. Nagpur University



SESSION 2022-23

Yantriki



VISION – MISSION

DEPT. OF MECHANICAL ENGG.

Department Vision:

Emerge as an excellent centre for Mechanical Engineering education.

Department Mission:

DM1: To ensure quality teaching-learning process and infrastructure for developing competent professionals.

DM2: To impart the skills of teamwork, leadership, communication and inculcate ethical values.

DM3: To establish linkages with industry so as to understand the contemporary practices in the field of Mechanical Engineering.

Program Educational Objectives (PEOs):

PEO1: Demonstrate excellence in profession or pursue higher education.

PEO2: Develop skills to excel in innovation through out-of-the-box thinking to create advanced Mechanical Systems.

PEO3: Apply skills to enhance participation in professional and societal activities.

Program Specific Outcomes (PSOs):

PSO1: Ability to design, analyze, and realize physical systems, components or processes by applying principles of thermal, design and production engineering.

PSO2: Able to accept new challenges through their experiences and learning from industry institute interaction.



PROGRAM OUTCOMES

01

ENGINEERING KNOWLEDGE



02

PROBLEM ANALYSIS



03

DESIGN/DEVELOPMENT OF THE SOLUTIONS



04

CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS



05

MODERN TOOL USAGE



06

THE ENGINEER AND SOCIETY



07

ENVIRONMENT AND SUSTAINABILITY



08

ETHICS



09

INDIVIDUAL AND TEAM WORK



10

COMMUNICATION



11

PROJECT MANAGEMENT AND FINANCE



12

LIFE-LONG LEARNING



2



3



4



11



MAGAZINE COMMITTEE

YANTRIKI-2022-23

Faculty Coordinator/ Chief Editor:



Prof. Sarvesh Biyani

Editor:



Mr. Prateek Tinguria

Student Coordinator:



Ms. Gargi Sande



Dr. Sanjay Badgate

Engineering in SBJITMR is a culture. Our vision is to emerge as an excellent centre for Mechanical Engineering education, thereby creating a stimulating environment that looks to develop and deliver innovation in engineering education and to capture emerging research areas that address new technological and societal challenges.

Mechanical Engineering involves the design, analysis, and manufacture of a wide variety of mechanical components and systems. While there are a number of disciplines within mechanical engineering, some of the major areas are energy conversion, materials engineering, design engineering, and manufacturing engineering.

A mechanical engineering curriculum is diverse because it is central to so many modern industries (e.g. aerospace, shipping, defense armament, refrigeration and air conditioning, biomedical, automobile, mechatronics etc.) and because individual mechanical engineers may be employed in a wide range of engineering endeavors from initial research and development of a product to manufacturing and marketing. Between these diverse activities, mechanical engineers integrate engineering sciences, conceptual product design, and manufacturing capabilities into a cost-effective and quality product. Typical technologies in which mechanical engineers find employment are manufacturing sector, defense sector, power generation sector, industrial automation, software, materials engineering, aviation, quality control, and mechanical engineering design. In addition to employment in industry, mechanical engineers also work in government, management, consulting, and academic organizations.

HEAD OF DEPARTMENT

Prof. Amit Tayne

Our mission to shape the next generation of Mechanical Engineering leaders and serve society began. Our meticulously designed infrastructure, equipped with state-of-the-art laboratories and a seasoned faculty, is dedicated to academic excellence. Our teaching methodology is thoughtfully crafted to ensure students absorb knowledge effectively.

We guide students towards membership in prestigious societies like SAE and ISHRAE, fostering participation in nationwide competitions and activities.

We prioritize the development of our students' attitudes, aptitudes, and soft skills, preparing them to become competent engineering professionals. We invite industry and academia experts to conduct enlightening seminars and guest lectures, enriching their learning journey.



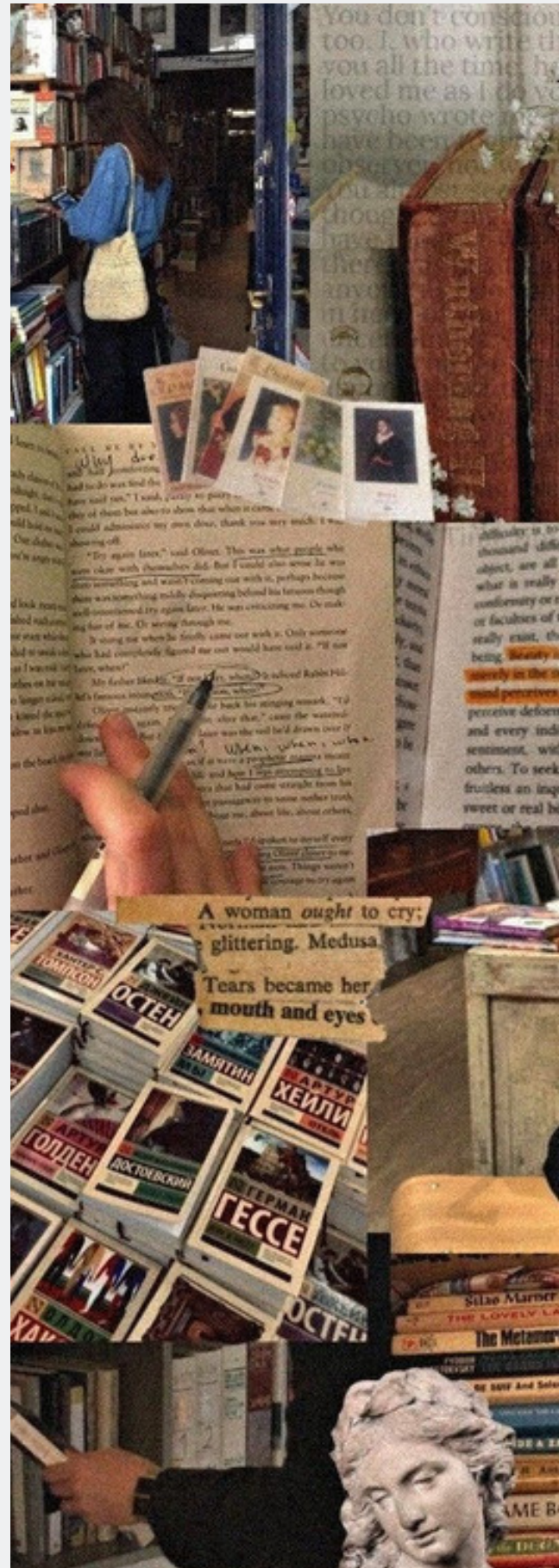
Our students are encouraged to showcase their talents through paper presentations, project competitions, and engineering exhibitions across the nation. We emphasize practical exposure, with opportunities for industrial training, internships, and industrial case studies. Regular industrial visits help us stay in tune with industry needs and technological advancements.

Welcome to YANTRIKI: Exploring the Mechanical Marvels

As we delve into the world of mechanical engineering, YANTRIKI takes you on an exhilarating journey through the intricate and awe-inspiring realm of machines and innovation. In every issue, we celebrate the genius of mechanical engineers who bring to life the extraordinary inventions that shape our modern world. From cutting-edge robotics and sustainable energy solutions to the timeless elegance of classic automobiles, YANTRIKI is your gateway to the remarkable world of gears, gadgets, and groundbreaking technology. Join us as we unravel the secrets behind the machines that power our future and pay tribute to the visionaries who make it all possible. Buckle up, because the adventure starts here!

Mr. Prateek Tinguria

THE EDITOR



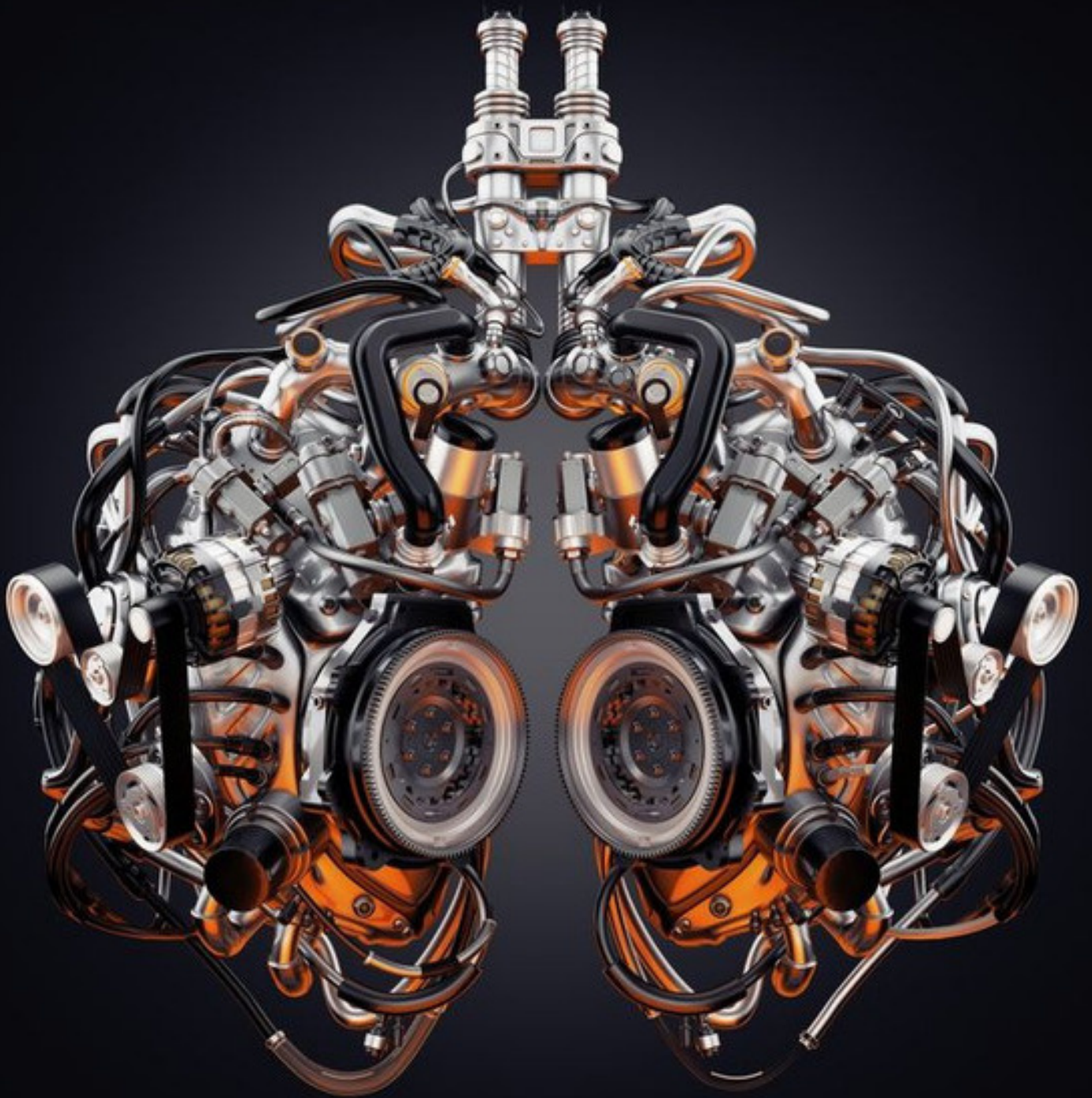
ज्ञानिज्ज

"आचार्यं ब्रह्म विद्यां परं ब्रह्म पुरेत्र गच्छति।"



Technical Articles

Empowering Innovation: Navigating the Technical Frontier



Underwater Turbine

ADITI DAGWAL, Third Year Student

An underwater turbine, also known as a tidal turbine or marine current turbine, is a device that harnesses the kinetic energy from moving water, such as ocean currents or tidal flows, to generate electricity. These turbines operate in a manner similar to wind turbines but are submerged in water.

There are a lot of renewable energy resources sources which are used to obtain energy such as the solar energy obtained by placing solar panels, wind energy obtained by placing windmills on fields so that by wind energy it will give rise to rotation of blades and producing electricity further.

Similarly this new technique has been coming into practice to the coastal areas where the turbine blades which are used for the wind energy purpose are placed underwater near the coastal areas.

Because the coastal area receives the high and low tides due to the gravitational effect by sun and moon and the rotation of earth. Ocean currents have the tendency to produce more currents as oceans are more dense than air (they are 832 times more dense than air), due to which it applies greater force on turbines.

Tidal energy can be produced by many technologies, the major ones are:

- 1) Tidal barrages
- 2) Tidal fences
- 3) Tidal turbines.

Hence tidal has one very distinct benefit it is virtually 100 predictable as unlike windmills which are criticized for spoiling the views on land. With underwater turbines you cannot hear it or see it and hence they are very environmentally beloved and does not produce any noise.



The Rise of 3D Printing in Manufacturing

In the ever-evolving landscape of manufacturing, there's a revolution underway, and it's happening layer by layer. 3D printing, once considered a novelty, has surged to the forefront of modern manufacturing, transforming the way industries create, innovate, and adapt to change. In this article, we'll explore the remarkable rise of 3D printing in manufacturing and its far-reaching implications.

Traditional manufacturing processes have long relied on subtractive methods, such as cutting, drilling, and molding, to shape raw materials into finished products. 3D printing, or additive manufacturing, flips this paradigm on its head. Instead of removing material, it builds up layers of material, resulting in less waste and increased efficiency. This shift towards additive manufacturing represents a seismic change in how goods are produced.

The rise of 3D printing in manufacturing represents a shift towards a more agile, sustainable, and innovative future. As this technology continues to evolve and mature, we can expect even greater disruptions across industries, from healthcare to aerospace and beyond. It's a thrilling time to witness and be part of this revolution in the world of manufacturing, as 3D printing shapes the future of how we make things.

ADITI KHOBRADE
Final Year Student



The Future of Sustainable Energy in Mechanical Engineering

In a world facing growing environmental challenges, the role of mechanical engineering in shaping the future of sustainable energy cannot be overstated. As we stand at the intersection of innovation and necessity, it's clear that the field of mechanical engineering is poised to lead the charge towards a cleaner and more sustainable energy landscape.

The urgent need to transition from fossil fuels to sustainable energy sources has never been more apparent. Climate change, dwindling natural resources, and the quest for energy independence are driving this transformation. Mechanical engineers are at the forefront of this transition, developing technologies that harness renewable energy and increase energy efficiency.

Renewable energy sources such as wind, solar, hydro, and geothermal power hold the key to a sustainable future. Mechanical engineers are instrumental in designing and optimizing the systems that capture and convert these sources into usable energy. From designing more efficient wind turbines to developing advanced photovoltaic panels, their contributions are pivotal in expanding the reach of renewable energy.

The future of sustainable energy in mechanical engineering is both exciting and necessary. It's a field where creativity, technology, and environmental stewardship converge to create solutions that will define our planet's future. As mechanical engineers continue to push the boundaries of what's possible, we can look forward to a world powered by clean, abundant, and sustainable energy sources. The future is bright, and it's up to the innovators in mechanical engineering to lead the way toward a more sustainable and energy-efficient world.

BHUMIKA BURDE
Final Year Student





Revolutionizing the Automotive Sector: The Future of Electric Vehicles

In the ever-evolving world of automotive engineering, one topic has been making waves like no other - Electric Vehicles (EVs). As future mechanical engineers in the automotive sector, understanding the significance and trends in EV technology is paramount. In this article, we'll delve into the world of EVs and explore how they are reshaping the future of transportation.

EVs are not a novel concept, but recent advancements in battery technology, charging infrastructure, and environmental concerns have fueled their rapid growth. Traditional internal combustion engines are being challenged by electric propulsion systems, leading to a paradigm shift in the automotive sector.

The automotive sector is undergoing a transformation like never before. As we move towards a more sustainable and electric future, our role as mechanical engineers is vital. We must embrace this change, focus on innovations, and collaborate across disciplines to develop cutting-edge solutions that will shape the future of transportation. So, gear up, because the future of the automotive sector is electric, and it's up to us to drive this revolution forward.

LAXMIKANT PATLE
Final Year Student

**The road to a sustainable future
is paved with electrons, not
emissions**

Ultra Efficient Jet Engines

Pollution by aviation is one of the major causes of global temperature increase and Ocean acidification caused by the release of carbon dioxide and other greenhouse gases into the upper part of Earth's atmosphere. Globally around 8.3 million people fly daily, twice the total in 1999, burning almost 500,000 metric tons per day. With no much advancement in the alternate fuel research currently same old gasoline is being used causing ever increasing pollution, and many in industry believe the pathway to cleaner jets is through advances in engine technology rather than cleaner fuel. That's the main idea behind tomorrow's aircrafts with engines that are much lighter, quieter, durable and more energy efficient than the conventional turbofan engines used today in commercial airliners today.

Pratt & Whitney is an aerospace manufacturer which has introduced a new series of engines called 'Pure Power' which uses an internal gearbox to slowdown the speed of the fan. The technology effectively saves 16% on fuel consumption compared to the airliners with conventional engines. Meanwhile CFM International aviation mogul which is a joint venture between GE Aviation and Safran Aircraft Engines has introduced.

its own advanced engine, called the 'Leap', which could achieve similar improvements without a huge break from existing technology. Both new engines have been deployed on different versions of Airbus's new jet the A320neo. Pratt & Whitney first attempted to build a geared turbofan starting around 1998 with PW800. Soon afterwards Advanced Technology Fan Integrator (ATFI) project commenced using the engine PW308 at the core but along with a new gear box and a single stage fan.

It had its first run on March 16, 2001. This led to the geared Turbofan program which was developed with German MTU Aero Engines. In addition to Turbofan, initial design included variable area fan nozzle which allows improvements in propulsive efficiency across a range of flight. GTF was then renamed as PW1000G, the first in new line of "PurePower" engines. In the PurePower 1000G engine family, a state of the art gear system separates the engine fan from the low Pressure compressor and turbine, allowing each of the modules to operate at their optimum speeds. This enables the fan to rotate slower and while the low pressure compressor and turbine operate at high speed, increasing engine efficiency and delivering significantly lower fuel consumption, emissions and noise.

This increased efficiency also translates to fewer engine stages and parts for lower weight and reduced maintenance costs. This high-bypass geared turbo fan engine is 16% more fuel efficient as well as being up to 75% quieter. It has a 3:1 gearbox between the fan and the low pressure spool, each spinning at its optimal speed of 4000-5000 rpm for the fan and 12,000-15,000 rpm for spool, the high pressure spool is spinning at more than 20,000 rpm. The 30,000 hp gearbox is designed to run lifelong with no scheduled maintenance other than changing oil. CFM International introduced their LEAP engine intended to compete with Pratt & Whitney PW1000 engine.

This engine basically makes use of advanced material composites and different cool air mixing cycles modulating the amount of air flow to the internal passages inside its high pressure turbine to keep the temperature under control.

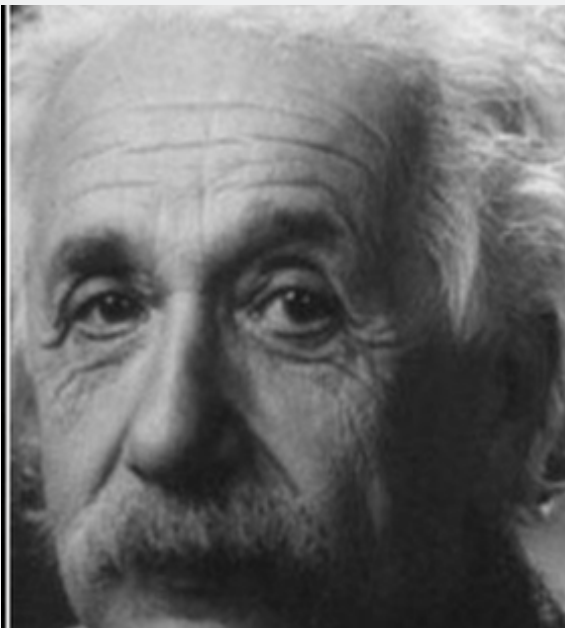
The fan used in the engine has flexible blades manufactured by a resin transfer molding process, which are designed to untwist as the fan's rotational speed increases. Currently proposed for the LEAP is a greater use of composite materials, a turbine fan in the compressor, a second generation Twin annular Pre Swirl combustor that cuts the nitrous oxide emissions in half, and a bypass ratio around 10:1. The company is using ceramic matrix composite to build the turbine shrouds. CFM developed a new carbon-fiber blade whose design involves weaving individual carbon-fiber strands on gigantic Jacquard looms into a complex, three-dimensional laminate and infusing epoxy resin into the structure by means of a proprietary transfer molding technique.



Each individual blade consists of 7 kilometers of carbon-fiber and after being cured in autoclave the finished blade is strong enough that an entire Airbus A350 could be suspended from it without the blade breaking. CFM uses a ceramic matrix composite (CMC) material consisting of silicon carbide and graphite matrix. Each shroud is a ring of 36 tightly fitting white-colored CMC parts forming a ring round the inside of the HTP casing outside the circumference of the first HTP rotating stage. Combining all the material advantages these engines are saving fuel by almost 15%.

To sum up these new technologies competing each other for the ultra-high efficiencies has made it possible to look into future jet engines or at least bridge the gap between today's and tomorrow's engines providing a durable, low maintenance, highly efficient, cleaner, less noisy and advanced engine indicating a reliable future of aircraft industry.

KUNAL NIMKAR, Final Year Student

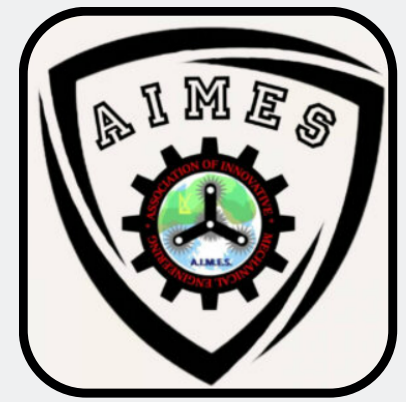


Scientists investigate that which already is; Engineers create that which has never been.

— *Albert Einstein* —

AIMES

Association of Innovative Mechanical Engineering Students

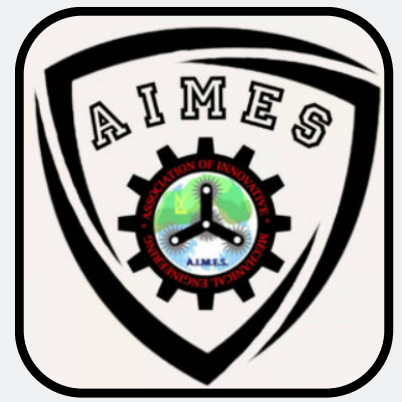


A.I.M.E.S. stands for the Association of Innovative Mechanical Engineering Students. It represents students using their mechanical skills and intellect for innovation, aligning with current technology trends. The Student Forum's motto is to leverage students' strengths, address weaknesses, and cultivate leadership skills in all aspects of life. A.I.M.E.S. is run by students with departmental involvement and organizes programs featuring technical and non-technical events like cricket, football, kabaddi, mini-projects, and zestomania. A.I.M.E.S. serves as a focal point for developing interpersonal skills within the institution, encouraging students to participate and nurture their interests. Additionally, it promotes interaction within the institute and engages in social activities outside of it.



A I M E S

Activities



Technical, Non Technical and Sports Activities





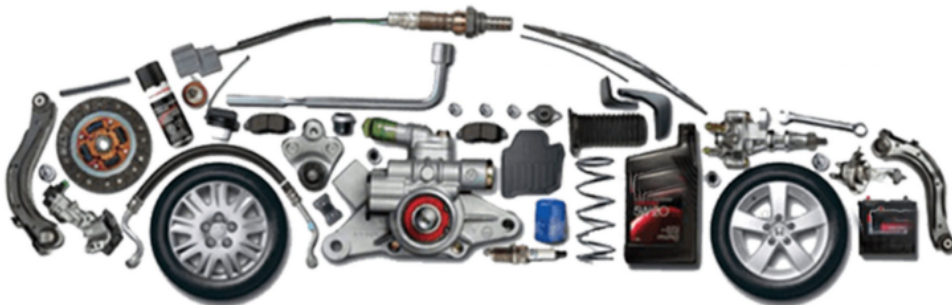
The Society of Automotive Engineers

SAE, the Society of Automotive Engineers, is an organization that holds a paramount position in the realms of automotive and aerospace industries. With a rich history dating back to its founding, SAE has continuously evolved to become a driving force in advancing mobility knowledge and solutions for the betterment of humanity. SAE has a prominent presence with active student chapters. Students can easily become part of this dynamic organization, which opens doors to a world of opportunities. From the renowned Formula SAE and Baja SAE competitions to aerospace projects and EcoCAR challenges, SAE provides students with hands-on experiences that foster skill development and innovation.

Additionally, SAE offers a wealth of publications and resources, connecting students with industry experts and career prospects. By joining SAE, students can not only enhance their engineering capabilities but also establish valuable connections with professionals in their field. SAE is not just a campus organization; it's a gateway to personal and professional growth, paving the way for a future at the forefront of mobility innovation. So, whether you're interested in cutting-edge technology or seeking to build a network of like-minded individuals, SAE is your ticket to an exciting journey in the world of engineering and mobility.

**MOBILITY
ENGINEERING**
ENGLISH QUARTERLY

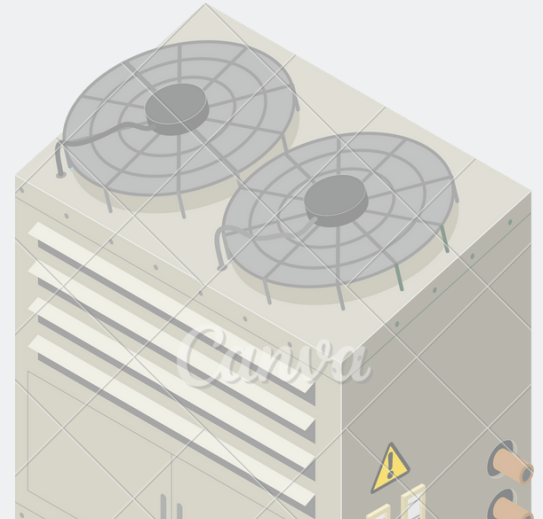
SAEINDIA
Society of Automotive Engineers INDIA



ISHRAE

Indian Society of Heating, Refrigerating and Air Conditioning Engineers

The Indian Society of Heating, Refrigerating, and Air Conditioning Engineers (ISHRAE) is the torchbearer in HVAC&R. It's dedicated to advancing this field's arts and sciences, continuously evolving to match industry demands. ISHRAE offers vast opportunities, connecting members with experts, cutting-edge research, and enriching events via student chapters. Technical gatherings provide essential knowledge and industry links. ISHRAE's publications offer insights into HVAC&R's forefront. It's also a career accelerator, linking professionals with jobs and promoting sustainability and innovation in the energy-efficient sector. ISHRAE transforms HVAC&R, empowering individuals in this dynamic field. Join ISHRAE, where innovation and sustainability meet for a brighter future.



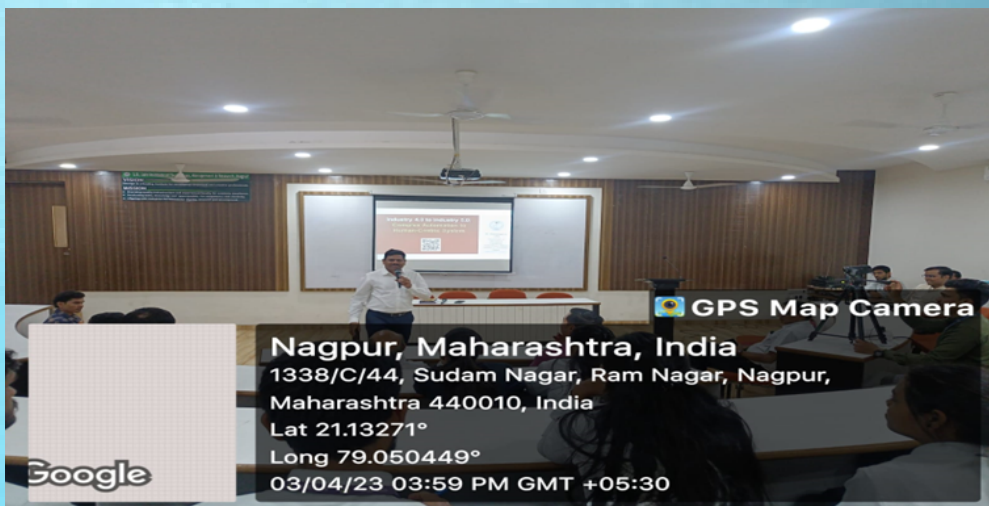
Technical Activities

Exploring the Frontiers of Technology: Technical Activities



Expert Session on “Industry 4.0”

The objective of the expert talk on Industry 4.0 is to provide a comprehensive understanding of the fourth industrial revolution, its key technologies, and how they are transforming the manufacturing industry. The talk aims to explore the benefits and challenges of Industry 4.0, and provide insights into how businesses can leverage these technologies to stay competitive in today's rapidly changing digital landscape. Additionally, the talk will cover the impact of Industry 4.0 on the workforce, and how companies can prepare their employees for the digital age. Overall, the objective of the talk is to equip attendees with the knowledge and tools they need to successfully navigate the digital transformation of the manufacturing industry.



GPS Map Camera

Nagpur, Maharashtra, India

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Maharashtra 440010, India

Lat 21.13271°

Long 79.050449°

03/04/23 03:59 PM GMT +05:30

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Seminar on “Industrial Robotics & Automation and Its Future opportunities”

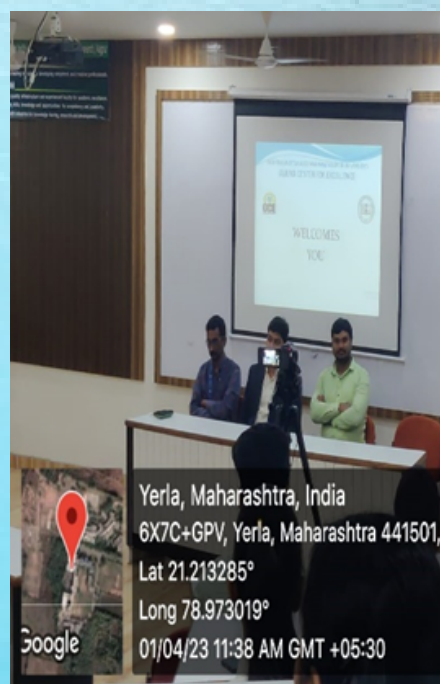
The objective of the program was to make the students aware about the latest trend, types, applications, and career opportunity of industrial robotics.

Department of Mechanical Engineering in association with IIC organized a seminar on “Industrial Robotics & Automation and Its Future opportunities” Mr. Anil Tatode, Training officer, Dept. of Robotics & Cloud Technology, RTMNU, Nagpur was the resource person. The agenda of seminar was

- 1.The Latest trend of Industrial Robotics
- 2.Types of Industrial Robots
- 3.Application of Industrial Robots
- 4.Visuals of Superior Motion control
- 5.User segment and Robot Manufacturer
- 6.Worldwide statics of Robot Trading
- 7.Career opportunity for engineers
- 8.How to prepare for robot engineering

This is followed by interaction with students.

Total 54 students participated in the event. Prof. Nilesh Gowardipe coordinated the event.



Expert Lecture on “Machinery Vibration Analysis and its Maintenance”

To provide students with in-depth knowledge and practical understanding of vibration analysis techniques and their application in machinery maintenance.

The expert lecture was delivered by Mr. Sanat Kumar Manjre, Director, Unitech Reclamation Services, Nagpur. He discussed about common sources and types of vibrations in machinery, importance of vibration analysis in predictive maintenance, identifying common machinery faults through vibration analysis, case studies and practical examples of fault diagnosis using vibration analysis. Also he covered condition-based maintenance and predictive maintenance concepts, industry best practices for machinery vibration analysis and maintenance and highlighted real-world case studies of vibration analysis. At the end, an interactive question and answer session was conducted by engaging participants and addressing specific concerns and challenges related to vibration analysis.



Activities by the Department

hostel ward brain crashed

always single fest

never getting crush late-night gaming

one side love boys

PROJECT

PROZONE

party for new pencil

ENGINEER

freindzone

Daily assignment always late

8am wake up

5am sleep

friends

PROXY

backbenchers

one night prep

one queen @

mech&civil branch

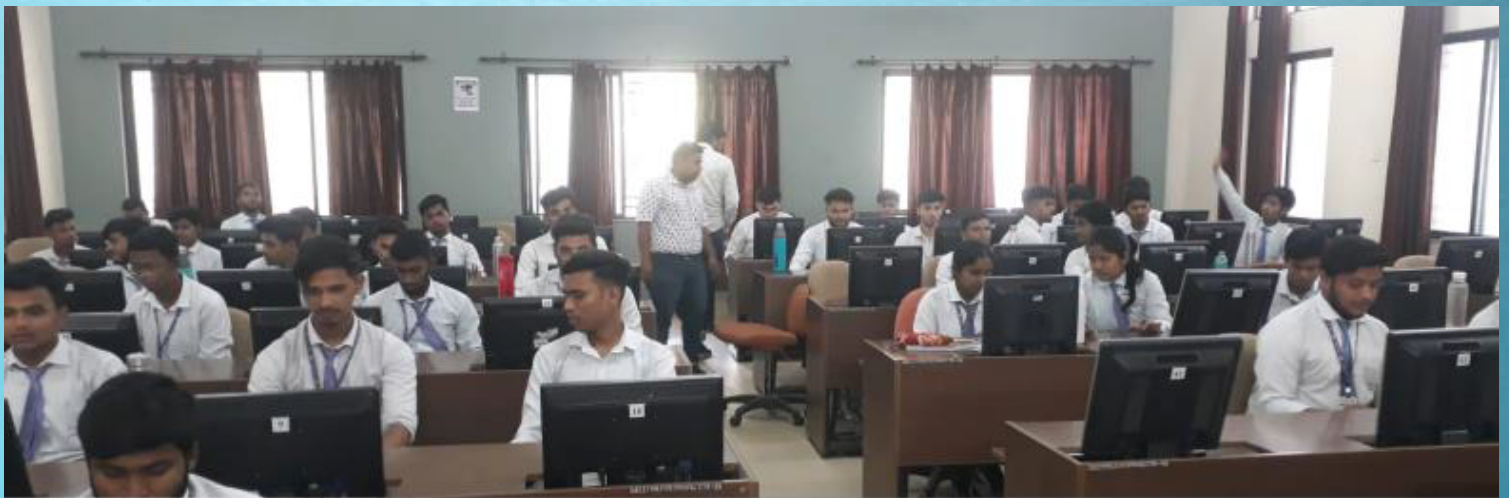
canteen food

memory

Value Added Course on “Use of Excel, Power Point and LinkedIn for Professional growth”

The purpose of this course was to introduce Microsoft Excel, Power Point and LinkedIn in their Programme. With this course student will be able to Apply the knowledge of Microsoft Excel, Power Point and LinkedIn also they will Organize and Analyze data using Microsoft Excel, Create Professional LinkedIn Profile and interactive Power Point presentations.

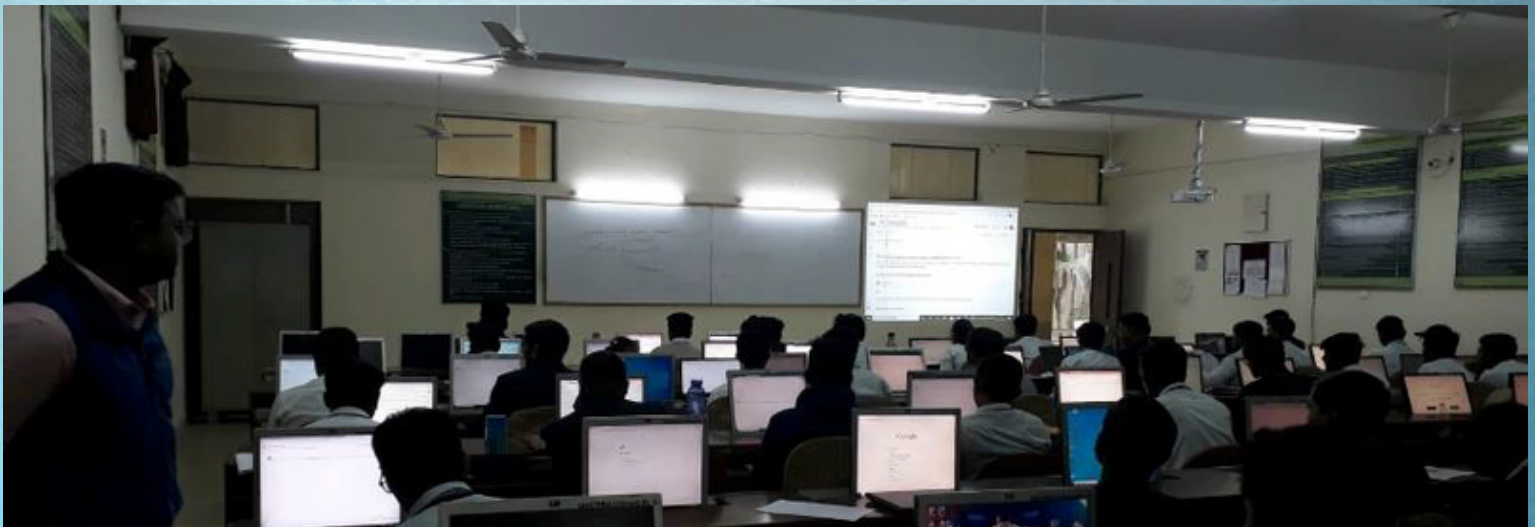
Department of Mechanical Engineering, SBJITMR, has organized a course on “Use of Excel, Power Point and LinkedIn for Professional growth” for second year students from 20/05/2023 – 06/06/2023. The session started with the course introduction, Course Objectives, Course Outcomes, Course Content and software required for the course. The Session started with the hands-on session on MS Excel Fundamentals and data organization using MS Excel. Through these activities, participants gained the confidence in navigating Excel, working with formulas and functions, and utilizing data analysis tools effectively. The PowerPoint activities focus on designing and delivering impactful presentations. Participants will have opportunities to develop their own presentations on different topics and receive feedback from instructors and peers. The LinkedIn activities revolve around optimizing participants' LinkedIn profiles and engaging with the platform's features. The activities aim to enhance participants' networking skills, build a strong online presence, and leverage LinkedIn's resources for career advancement.



Value Added Course on “Python Programming”

The purpose of this course was to introduce python programming and also to develop analytical, logical, Problem-Solving and programming skills that will enhance their employability.

Department of Mechanical Engineering, S.B. Jain Institute of Technology Management and Research, Nagpur has organized a Value-Added Course on “Python Programming” for third-year students from 24th December 2022 to 3rd January 2023. The session started with the course introduction, Course Objectives, Course Outcomes and Course Contents. The course was divided into SIX Modules (Total course duration 48 Hour). This course was conducted in the DBMS computer lab, so that students were also able to perform the task simultaneously. Prof. Yogesh Joshi and Prof. Gaurav Mohite assisted during the course. There were various programming tasks and assignments for the students during the course duration. Students were attentive and asks various doubts.



Motivational Talk on “Walking the path of successes - Entrepreneurship way”

The main objective of the session is to make students aware about carrier path other than jobs and higher education that is entrepreneurship. Student will gain knowledge about how successfully become entrepreneur, what qualities (Mindset) they required to acquire for the same, how to start the early planning for startup, how college can help them, what are the help offered by government and other agencies.

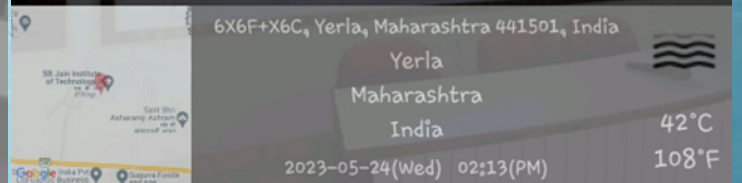
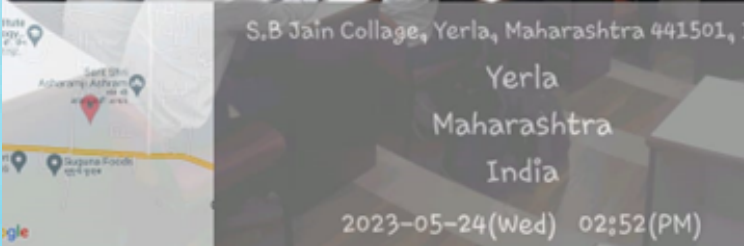


Session on Yoga and Meditation

To provide individuals with an opportunity to learn, practice, and experience the principles and techniques of yoga and meditation.

The purpose of a session on Yoga and Meditation is to provide individuals with an opportunity to learn, practice, and experience the principles and techniques of yoga and meditation.

The Department organized an Expert session on Yoga and Meditation for second and third year B. Tech Mechanical Engineering students. Prof. Biyani began by educating the participants about the origins, philosophies, and scientific basis of yoga and meditation. He emphasized the potential physical, mental, and spiritual benefits that can be achieved through regular practice. The session focused on creating awareness among participants regarding the positive impact of yoga and meditation on overall well-being.



Seminar on Career counselling and Hands on training on CV building

The purpose of this course was to guide students about the career counselling and student should be able to develop an impressive CVs.

Department of Mechanical Engineering, S.B. Jain Institute of Technology Management and Research, has organized a seminar on Career counselling and Hands on training on CV building for third year B. Tech Mechanical Engineering students. Prof. Amit Tajne has discussed about Career counselling with the students. Sir, also explained about the how to write an impressive CVs for the placement point of view. Students also asked their queries related to resume/ CV writing.



Achievements

Design Patent for Solar Dryer



Best faculty coordinator of professional body student chapters for mentoring the students in various dimensions.

Securing research grants of Rs 50000/- for innovative project undertaken.



Obtaining patents and publishing research work in renowned journals like Elsevier, Springer, and Scopus.

Students Achievement

- Winning best paper awards at international conferences/Project Competitions.
- Obtaining patents, and publishing the research work in reputable journals such as Elsevier, Springer, and Scopus showcase their commitment to excellence in impactful research.
- The receipt of prestigious NPTEL Believers Awards for NPTEL certification highlighting their commitment in acquiring advanced knowledge in specific area.
- The collaborative efforts of both faculty and students in the field of research, underscore the department's efforts in fostering a culture of innovation and intellectual growth among both students and faculty leading the department towards its vision.



Students Achievement

Sr.No	Name of Student	Name of Event	Position/ Rank in the Event
1	Shreyash Vaidya	Student Research Project Grant (SRPG UG)	Winner
2	Sarvesh Neware	Student Research Project Grant (SRPG UG)	Winner
3	Kunal Nimkar	AQuest National Quiz Competition	Runner Up
4	Kunal Nimkar	Student Research Project Grant (SRPG UG)	Winner
5	Kunal Nimkar	ISHRAE HACKTHON 2022-2023	Winner
6	Sudip Pidkalwar	A Quest National Quiz Competition	Runner Up
7	Sudip Pidkalwar	ISHRAE HACKTHON 2022-2023	Winner
8	Sudip Pidkalwar	Student Research Project Grant (SRPG UG)	Winner
9	JANHAVI BOPCHE	HVAC&R HACATHON	Winner
10	Devesh Ninave	HACKATHON	Winner
11	Jagrut Meher	IICIETSM-2023	Winner
12	Team Elite Karters of SAE Collegiate Club SBJITMR	AIRC Go-Kart Championship,	Best Safest Kart award and Fastest Technical Inspection Award
13	Team Elite Karters of SAE Collegiate Club SBJITMR	Edgeline Go-Kart Championship	Best In-House Built Award and Best Cost Winners

Students Publications

Sr. No.	Name of the Author/ Investigator	Title of the Paper/ Patent	Name of the Journal	Month and Year of publication
1	Kunal Khelkar, Adesh Kolhe, Akhilesh Bhoyar	Flow boiling heat transfer and thermophysical characteristics of graphene-POE-R134a based nanorefrigerant	ICMPC-23, Hyderabad	Mar-23
2	Pratik N. Dhandale, Akshay Patil, Ashwin Kudawale	Synthesis and performance investigation of novel graphene nanoplatelets-based nanosuspension in PAG and MO refrigeration lubricants	ICMPC-23, Hyderabad	Mar-23
3	VRUSHABH BODHE KAMESH BAWNE JAGRUT MEHER HARSH WANJARI KUNAL CHAUDHARI VRUSHABH BODHE	Design and analysis of passivation system to improve the quality and productivity of components	ICIETSM, JIT Nagpur	May-23

Sports Participation

S. N.	Name of Student	Name of Sports event/ Activity	Level
1	Meet Deshmukh	Athletics	University level participation
2	Mukinda Wakode	Athletics	University level participation
3	Jaitrik Nikose	Chess	University level participation
4	Gargi Sande	Boxing	University level participation

Students Patents

Sr. No.	Name of the Author/ Investigator	Title of the Paper/ Patent	Name of the Journal	Month and Year of publication
1	Kunal Nimkar Sudip Pidkalwar Kunal Nimkar Sudip Pidkalwar	Patent on Heat Exchanger Tubes	THE PATENT OFFICE, GOVT. OF INDIA	Mar-23
2	Janvhi Bopche Devesh Ninave	Patent on concentric tube with spring loaded internal ribbed tube	THE PATENT OFFICE, GOVT. OF INDIA	Mar-23
3	Yash Ghorpade, Mrunalini Deshbhratar, Shubham Patre, Kaushik Wanjari, Vishal Dhanwate, Harsha Bhairam, Manish Rewatkar Aditi Khobragade, Shubhanshu Zade, Priyanshu Sakhare	SOLAR DRYER	THE PATENT OFFICE, GOVT. OF INDIA	May-23
4	Kunal Nimkar Akhilesh Bhoyar Nikhil Rane Munishwar Rahangdale Mahesh Meshram Pranay Uikey	SEED SOWING DEVICE	THE PATENT OFFICE, GOVT. OF INDIA	May-23
5	Janvhi Bopche, Devesh Ninave.	Twisted Tube Condenser Enclosed with Phase Change Material	THE PATENT OFFICE, GOVT. OF INDIA	Mar-23

Science is about knowing; engineering is about doing.

-Henry Petroski

Faculty Achievement

Sr.No.	Name of Faculty Member	Details of Achievement
1	Prof. Faisal Hussain	Best Paper Award , Titled as “Design and Analysis of Passivation system to improve the quality and productivity of components” in International Conference on Innovation in Engineering, Technology, Science and Management (ICIETSM), organized by Jhulelal Institute of Technology, Nagpur, during 12th -13th May-2023.
2	Prof. Prasad Mangalkar and Prof. Himanshu Wagh	Industrial Design Patent, Title of the Invention: SOLAR DRYER, the Complete Specification relating to the invention is Design No.: 385652-001, Date : 05/05/2023
3	Prof. Himanshu Wagh and Prof Pankaj Jaiswal	Industrial Design Patent, Title of the Invention: HEAT EXCHANGER UNIT, the Complete Specification relating to the invention is Design No. : 380792-001, Date : 03/03/2023
4	Prof. Himanshu Wagh and Prof Pankaj Jaiswal	Industrial Design Patent, Title of the Invention: HEAT EXCHANGER TUBES, the Complete specification relating to the invention is Design No. : 380793-001, Date : 03/03/2023
5	Prof. Himanshu Wagh and Prof Pankaj Jaiswal	Industrial Design Patent, Title of the Invention: TWISTED TUBE CONDENSER ENCLOSED WITH PHASE CHANGE MATERIAL, the Complete Specification relating to the invention is Design No. : 380791-001, Date : 03/03/2023
6	Prof. Himanshu Wagh and Prof Hemant Bansod	Industrial Design Patent, Title of the Invention: CONCENTRIC TUBE WITH SPRING LOADED INTERNAL RIBBED TUBE, the complete specification relating to the invention is Design No. : 380791-001, Date : 03/03/2023



Faculty Publications

Sr. No.	Author Name	Title of Publication	Name of Publisher	Volume	Issue	Date of Publication
1	Mr. Yogesh Joshi	Performance investigation of vapor compression refrigeration system using novel amine treated graphene quantum dots based nanosuspension	Thermal Science and Engineering Progress, Elsevier	38	1	23/01/2023
2	Mr. Yogesh Joshi	A critical review on the machinability aspects of nickel and cobalt based superalloys in turning operation used for aerospace applications	Advances in Materials and Processing Technologies , Taylor and Francis	–	–	23/03/2023
3	Faisal Hussain	A Review on Frequency Domain Analysis Approach for Parametric Identification of Nonlinear Joints	Recent Advances in Machines and Mechanisms Select Proceedings of the iNaCoMM 2021	–	–	October 2022



Achievements (Professional Bodies)

ISHRAE

1. Runner-up in AQuest Quiz Competition:

The ISHRAE Student Chapter at S B Jain Institute of Technology demonstrated its academic excellence by securing the runner-up position in the national quiz competition AQuest organized by ISHRAE at Mumbai.

2. Runner-up in AQuest Quiz Competition, Recognition as Best Student Chapter Award , Winner in National Hackathon:

The ISHRAE Student Chapter at S B Jain Institute of Technology has been honored with the "Best Student Chapter" award for its outstanding performance and contributions to the HVAC community.

3. Winner in National Hackathon:

ISHRAE Student Chapter was zonal winner in a national hackathon organised by ISHRAE, demonstrating the innovative solutions and problem-solving skills of the student members.



Achievements (Professional Bodies)

SAE

Under SAE Student Chapter also , student members are recognised with various awards through their participation in various go-karting competitions organized by SAE , like -

1. Best Aesthetic Award at RACY Formula Kart:

Demonstrating the chapter's excellence in performance and design aesthetics.

2. Best In-House Built Award and Best Cost Winners in Edge line Go-Kart Championship:
Highlighting the chapter's excellence in in-house fabrication and cost management without compromising on quality.

3. First Position in Global Youth Fest Car EXPO:

Showcasing the chapter's overall excellence in design, fabrication, and performance.

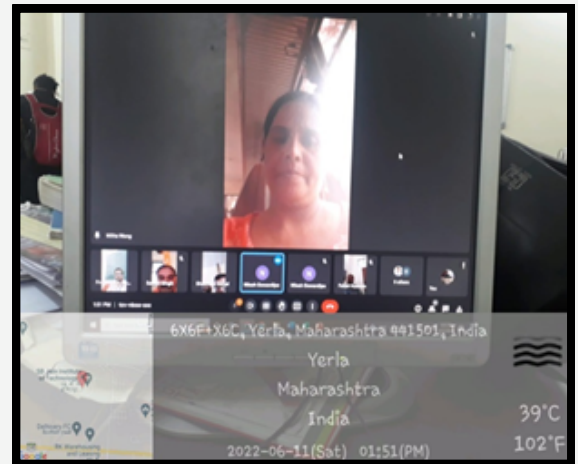
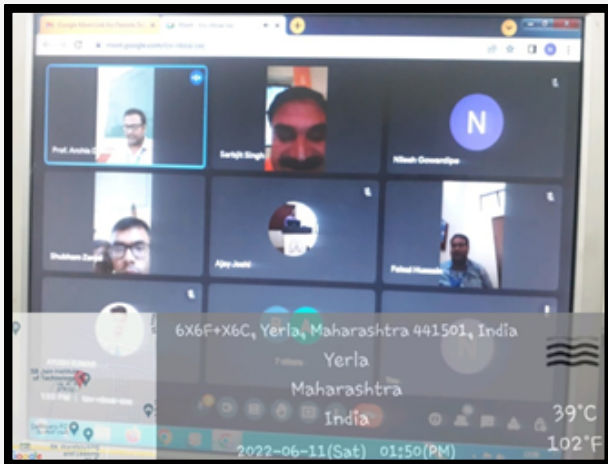
4. Best Safest Kart award and Fastest Technical Inspection Award

Showcasing the chapter's commitment to safety, innovative design, and efficient technical processes.



Parent-Teacher Meet

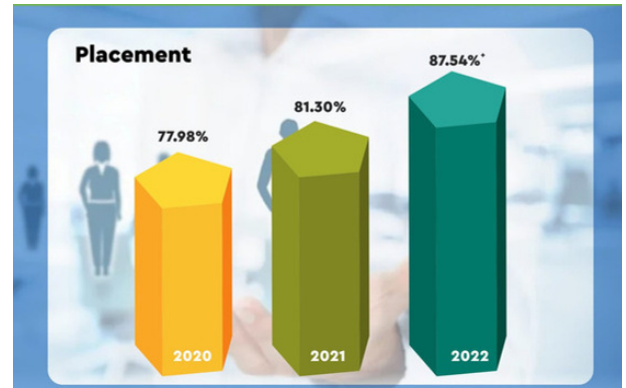
Department of Mechanical Engineering, S.B.Jain Institute of Technology, Management and Research has organised Parent-Teacher Meet on 11/06/2022. The meeting is held on online platform of Google meet. The event is coordinated by Mr Nilesh R.Gowardipe and class coordinators along with the respected TGs of the class. Detailed discussion about the performance and improvement of the ward was done. Lastly, parents have also given their valuable feedback.



Department of Mechanical Engineering, S.B.Jain Institute of Technology, Management and Research has organised Parent-Teacher Meet on 24/12/2022 for B-tech second year and third year Mechanical Engineering. The meeting is held offline as well as on online platform of Google meet. The event is coordinated by Mr Nilesh R.Gowardipe and class coordinators along with the respected TGs of the class. Detailed discussion about the performance and improvement of the ward was done. Lastly, parents have also given their valuable feedback.



PLACEMENTS



Zappkode

Kaushik Wanjari

Suntronic Renewables

Bhumika Burde	Dipansh Hirudkar	Ganesh Dhoble
Harshal Chandravanshi	Harsh Wanjari	Pranay Kaggate
Prateek Tinguria	Partik Sharma	Raja Tembhone
Ritik Gotmare	Sandhish Raut	Shreyash Vaidya

Tiveni Turbine

Kunal Nimkar

Pinkclick

Shreyash Adhao

Schwing Stette

Akhilesh Bhojar	Shravan Wadekar

IDFC Bank

Prateek Tinguria	Yash Ghorpade	Milind Bawankule



MECHANICAL ENGINEERING DISTINGUISHED ALUMNI



Musharaf Khan Pathan
Sr. Engineer - Projects
Atlantic, Gulf & Pacific



Nitish Sharma
Quant Consultant
EY



Madhur Shetye
Manager
Fonzel



Mahendra Jannam
Sr. Engineer
Inox Wind Ltd



Palash Jadhav
Planning Engineer
Gasco, Qatar



Dhanmesh Kamble
Design Assurance Engineer
MS Abbott Labs, Chicago, IL



Hardik Bhautkar
M.S., New Zealand



Ashlesha Oke
Assistant Manager
Triveni Turbines



Satyam Balbudhe
Maintenance Engineer
Indorama Synthetics



Saurabh Lanjewar
B.Sc, Bangalore
Ph.D



Akshay Warhade
Founder
AS-Team Car Spa



Avishek Prasad
Marketing Officer
Union Bank Of India



Ebin K Philip
Founder
Film Maker



Aadhar Khadse
Assistant Engineer
Eastern Pacific Shipping



Anshul Dhangaye
Technical Head
Nissan Technical Center
Japan



Dipak Nimgade
Assistant Loco Pilot
Indian Railway



Eshana Pandey
TI-Inside Sales & Sale Operation
Network Techlab India



Harsh Shah
Assistant Manager
ADIT Advertising Pvt. Ltd,



Akash Dongre
Content Developer
IIT Guwahati - M.Tech
BYJUS



Abhishek Lad
Deputy Manager
Volvo Eicher
Commercial Vehicle



Aakash Bangarwar
SRH Hochschule Heidelberg



Chetan Goyal
Manager-Business Development



Chirag Karnawat
Wright State University



Saurabh Nimbalkar
Sr. Executive



Piyush Bawankar
Content Developer

PLACEMENTS

Name of Student	Placed In
Akhilesh Bhojar	Schwing Stetter (INDIA) Pvt. Ltd.
Ayush Gajbhiye	Kinetic Gears
Bhumika Burde	Suntronic Renewables Pvt. Ltd.
Bhupendra Farkunde	Ascent Technologies
Deepansh Hirudkar	Suntronic Renewables Pvt. Ltd.
Ganesh Dhobale	Suntronic Renewables Pvt. Ltd.
Harsh Wanjari	Suntronic Renewables Pvt. Ltd.
Harsha Bhairam	Layam Flexi Solutions Pvt. Ltd.
Harshal Chandravanshi	Suntronic Renewables Pvt. Ltd.
Kaushik Wanjari	Zappkode
Kunal Choudhari	PSV Energy Systems and Technologies
Kunal Nimkar	Triveni Turbines Pvt. Ltd
Milind Bawankule	IDFC
Nikhil Tekade	JSW Steel Limited
Om Barange	Ascent Technologies
Palash Nimje	Sansoft Web Technologies Pvt. Ltd
Pranay Kapgate	Suntronic Renewables Pvt. Ltd.
Pranil Dudhkawale	Polyrub Cooperstandard FTS Pvt, Ltd
Prateek Tinguria	Suntronic Renewables Pvt. Ltd.
Pratik Sharma	Suntronic Renewables Pvt. Ltd.
Raja Tembhurne	Suntronic Renewables Pvt. Ltd.
Ritesh Zingare	Jellies Services Pvt Ltd.
Ritik Gotmare	Suntronic Renewables Pvt. Ltd.
Sandesh Raut	Suntronic Renewables Pvt. Ltd.
Sangam Daharwal	Thriveni Earthmovers Pvt. Ltd.
Sanket Pawade	Polycab Support Force Pvt. Ltd
Shravan Wadekar	Schwing Stetter (INDIA) Pvt. Ltd.
Shreyash Adhao	Pin Click
Shreyash Vaidya	Suntronic Renewables Pvt. Ltd.
Shubham Patre	Mahindra & Mahindra
Tanishq Paraye	Vishwakarma Plumbing Consultancy Services
Yash Ghorpade	IDFC





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