



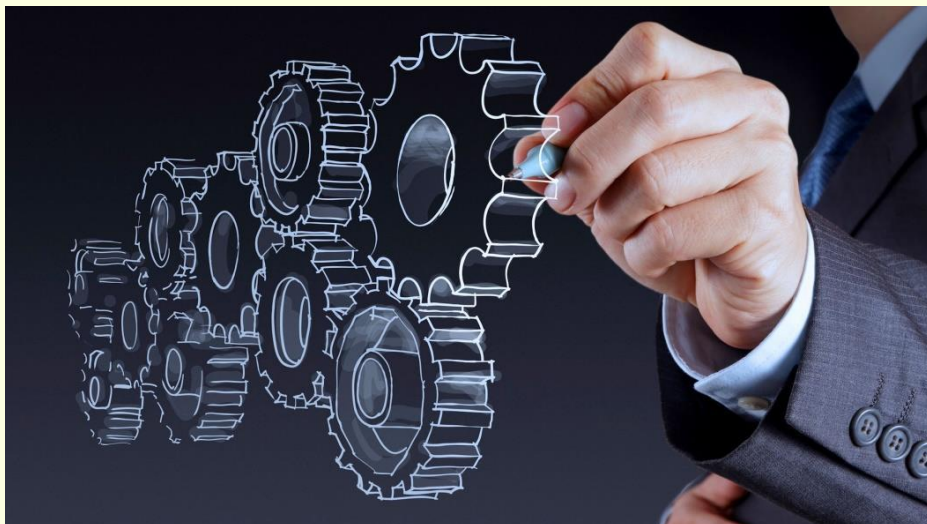
JAIN
DEEMED-TO-BE UNIVERSITY

FACULTY OF
ENGINEERING
AND TECHNOLOGY

MECHANICAL ENGINEERING JNANA VITHAHA

January-June 2019

A Biannual Newsletter; Issue 2; Volume 4.



VISION

Imparting quality education towards interdisciplinary research and innovation in Mechanical Engineering which provides professional ethics and entrepreneurial success through sustainable development.

MISSION

- Empower student knowledge in basic and applied areas of Mechanical Engineering.
- Creating Centers of Excellence to provide students with opportunities to strengthen their leadership, entrepreneurial skills and research proficiency.
- Strengthening collaboration with industries, research organizations and institutes for internship, joint research and consultancy.
- Imbibing social and Professional ethics in students and staff through personality development programs.

Program Educational Objective (PEOs)

- PEO1. Prepare students for successful carriers in industry, research and Institutions of higher learning in Mechanical Engineering.
- PEO2. Enable the graduates to become innovators, Entrepreneurs to meet the needs of social, Technical and business challenges.
- PEO3. Motivate the Mechanical Engineering graduates to be engaged in Life-long Learning.
- PEO4. Professional development through self-study, continuing education and Research.

Program Specific Outcomes (PEOs)

- PSO 1: Our graduates will be able to apply knowledge of design, thermal, materials, and manufacturing to solve complex problems in mechanical engineering and allied areas.
- PSO 2: Our graduates will create and implement new ideas on product/process design and development with the help of modern CAD/CAM/CAE tools while ensuring best engineering practices.

DIRECTOR'S MESSAGE

I am happy that school of Engineering and Technology (SET), Jain University is bringing out a Newsletter. The college newsletter will definitely help to show case the activities that are happening in the campus. It also helps in building up team work which is very much needed today in the world of competition. It



provides a platform for exposing the merits and academic achievements of the faculty as well as students. This enhances the documentation culture of the institute. This would definitely create an impact in the minds of readers, by way of providing larger visibility and dimension to the campus all credits and thanks go to the dedicated staff and their team work.

Dr. S A Hariprasad

FROM THE DESK OF HOD



Welcome to the Department of Mechanical Engineering at SET, Jain University. We started our journey in the year of 2009 with mechanical stream. Over the past decade, we have grown our expertise and competence with industry centred Mechanical Engineering curriculum and research.

Our vision is to impart quality education towards interdisciplinary research and innovation in mechanical engineering which provides professional ethics and entrepreneurial success through sustainable development.

The department offers B.Tech in Mechanical Engineering with an annual intake of 60 students, & M.Tech in Energy and Environmental Management with an intake of 9 students. Our department is engaged in the student-centered teaching with an emphasis on OBE (Outcome Based Education) frame work. The course contents are periodically updated for introducing new scientific and technological developments. Undergraduate students are encouraged to undertake various research projects and encouraged to spend time in neighbouring industry.

All the laboratories have been established procuring state of the art equipment's. Our department has a distinguished record in both teaching and research. Faculty members have excellent academic credentials and are highly regarded.

Dr. Adarsha H
Associate Professor,
Head, Mechanical Engineering

ACADEMICS

Bachelor of Technology Program: The 4-years, B.Tech programme structure such as foundation, core discipline, perspective, skill, Elective-core discipline, Elective open choice and practice school. Students are required to take a certain number of credit units from each of the categories.

M.Tech Program: Over the first two semesters, M.Tech students are required to do substantial amount of course work to complement their undergraduate or masters level education. the third semester is devoted mostly to internships and projects although there are some courses to be taken during that period. The fourth semester is fully devoted to completion of the project. The curriculum has been designed to provide all students with general background in Thermal Engineering. Electives taken during the second and third semester provide specialized knowledge in the area of individual interest.

Ph.D. Program: The focus of the PhD. programme is a multi-disciplinarily and sustainability, linkage engineering, Technology, management, science, social science and education pedagogy based societal challenges, specifically with an aim to deliver inclusive innovation. The uniqueness of the SET, JU would be the opportunity to excel in research supported with eminent publications and patenting.

Events & Activities

1. National Conference JNANA CHILUME-2019

JNANA CHILLUME -2019 - A one day National Conference on Recent Advances in Materials, Manufacturing and Design Engineering (RAMMDE – 2019) was jointly organized by School of Mechanical Engineering, School of Civil & Environment Engineering and department of Physics, School of Engineering & Technology on 29th March 2019.



JNANA CHILLUME is an event related to a series of conferences in various fields of engineering, conducted by School of Engineering and Technology, JAIN (Deemed to-be University) every year in order to bring the experts from various fields to share their knowledge regarding updates and advances in their respective fields. In connection with the same, school of Mechanical Engineering, School of Civil &

Environment Engineering and department of Physics planned to jointly organize one day national conference on “Recent Advances in Materials, Manufacturing and Design Engineering” on 29th March 2019.



Figure 2 Dr. L M Das giving a plenary talk on Hydrogen as alternate fuel and Mr. Anurag C B.Tech student presenting a technical paper

The session covered papers related to topics like Aluminium alloy composites, Laser beam machining, and Review of finite element analyses. The delegates and faculty members of the Mechanical department at the session had good time gaining insights to novel fields by listening as well as interacting.



Figure 4 Dr. Adarsha H, HOD presenting a token of appreciation to Dr. Ramprasad A and Dr. K Venkadeswaran presenting a token of appreciation to Dr. Manjunath T S

At the end of the session, Dr. Ramprasad A, summarized the findings and suggestions allied to the works presented. The session also witnessed Dr Shashishankar and Dr L M Das as guest appearances as audiences.

Guest lectures

2. Guest Lecture on Applications of CAE for mechanical engineers

Guest Lecture on “*Applications of CAE for mechanical engineers*” organized by the Department of Mechanical Engineering was held on 25th of April 2019 at School of Engineering & Technology, JAIN (Deemed to be University), Bangalore. Active participation of students of second year and third year from mechanical engineering is highly appreciated and has made this event inspiring and a grand success. The Guest Lecture was initiated with a formal inauguration of the speaker by Dr. M K Aravindan.



Figure 5 Guest Speaker Mr. Amar Shankar giving a topic on application of CAE for Mechanical engineers

The guest lecture was on broad topic of CAE, design, manufacturing and quality. The lecture provided insightful information to the students on the subject and the future career prospective.

Speaker highlighted the need for CAE in the fast advancing engineering world and the pace at which innovations are happening and applications and the challenges in CAE in which students will face in India and abroad role the students. The program was found to be very fruitful for the students, faculties of mechanical engineering.

3. Guest lecture on Convincing Arguments -Common characteristics of the JAIN and Foreign university system to do higher study

The event hosted by Yanthrik club – School of Mechanical engineering in association with IDP group (Bangalore chapter) to encourage the students to communicate and express their learning level and progress. The program went up to four hours odd discussions in various levels with more then 120+ students gathering along with the international counselors including USA, UK, Canada and more.



Figure 6 during the interactive sessions between councillor's and students

Students enquired more about career-focused programmers, curriculum adapted to current events and the needs of the job market and graduates' high employability rate. The event covered all the ingredients to achieve whatever the students planned for the future successful career: excellent academic training, the safe and diverse environment and a friendly cultural life for an outstanding study adventure!.

Industrial Visits

4. Industrial Visit to Supa Power Plant (Dandeli) & Hindustan Cococola Company Goa.

Industrial Visit has been arranged to Supa power house Dandeli and Hindustan cococola company Goa on 07-09-2018. Mr. Vinod, Dr Alok Kumar Rohit, were accompanied VI Sem Mechanical Engineering students.

Originating near the village of Kushavalli of Joida taluk, in Uttara Kannada district, the Kali river flows in a south-west direction towards SUPA dam. The river is lifeline for 4 lakh people in Uttara Kannada district and supports the livelihoods of thousands of people on the coast of Karwar. This river flows entirely through the district of Uttara Kannada.

The Supa Power house Project is today one of the backbone of Karnataka's power generating arsenal and some parts of Goa. The Supa power house Station with its 2 units has an installed capacity of 55MW. The project has equipment from US, Canada, France, Japan and other specified markets. The generating units have been recently renovated and upgraded.



Figure 7 Supa Power house Dandeli , Supa Power grid system Dandeli

The KPCL blueprint identifies Supa power house as its “Master Station of Uttara Kannada” – a headpoint that will control all peripheral stations through a nodal monitoring system. The prime objective here is to optimize power generation through a systematic integration of several Reservoirs and water conductor systems.

5. Industrial visit to IMTMA Bangalore

Indian Machine Tool Manufacturers' Association (IMTMA) organized its flagship IMTEX 2019 at the Bangalore International Exhibition Centre (BIEC) from 24th to 30th January, 2019 in Bengaluru. IMTEX 2019 is a premier event concurrent showcasing machine tool accessories, metrology and CAD/CAM cutting tools, tooling systems and current trends in the tooling industry. An initiative of IMTMA, IMTEX is a flagship event for the Indian metal cutting industry.

School of Engineering & Technology, Jain (Deemed to be) University students of VII Semester Mechanical Engineering and 4th Semester Automobile Engineering students visited to campus of imtex-2019 under the guidance of Dr. Alok Kumar Rohit and Prof. Pradeep G.V

Our students saw the South East Asia's apex exhibition showcasing the latest trends as well as technological refinements from India and other global players. Students learned about how to attract visitors from a wide spectrum of manufacturing and ancillary industries including key Decision and policy makers as well as industry captains who are keen to source latest technologies and manufacturing solutions for their product lines.



Figure 10 Industrial Visit to IMTMA Student's with faculty coordinator

6. WORKSHOP on FESTO MOBILE EXPOTAINER

The Department of Electrical and Electronics Engineering joining with Department of Mechanical Engineering in collaboration with FESTO India Private Limited conducted a two day workshop on the title FESTO Mobile Expotainer on 14th and 15th March. This workshop starts at 10.00 PM on 14.03.2019. Initially Aerospace Students visited the FESTO Expotainer where they are exposed to real time Industrial Equipment's. Later around 11.00 a.m Students from Electronics and Communication Engineering Department attend the Mobile Expotainer where they learn about the current trends about Industrial Processing and Automation.

Later in the afternoon the school of Computer Engineering i.e Department of Computer Science Engineering, Department of Information Science and Computer Science Specialization students attended the workshop. The students are exposed to Industry 4.0, the most advanced technology used in the Industry which is purely related with Industrial IOT.

The Mobile Expotainer was visited by Dr.EaswaranIyer, Dean, Faculty of Commerce and Director, Placement along with Mr.Jayaprakash, Manager, Placement and Training and Mr.Prince, Manager, Admission. The team has appreciated the effort made by the faculty coordinators and the student volunteers who explain the technical details of various equipment's in the Mobile Expotainer.



Figure 11 Mr. Sameer Khan, Representative from FESTO exposing FESTO exhibition

The Second day that is 15.03.2019 the students from Mechanical Engineering Department visited the Mobile Expotainer where they were taught in real time what they are learning in Class room. The students feel themselves so informative as many advance equipment's are placed in the workshop followed by them the civil department and Electrical Department students visited the Mobile Expotainer and gather the information about the advanced hydraulic and Pneumatic equipment's and their applications in Industries.

Dr. Hariprasad, Director of School of Engineering College visited the Mobile expotainer and appreciated the effort made by the coordinators and the students volunteers for their wonderful exhibition of technical content. The Representative from FESTO Mr. Sameer Khan also exposed that the students are so energetic and appreciate the students for their support during the two day period.



Figure 12 Students are analysing the mechanism hydraulic and Pneumatic equipment's

Research Publications

1. Abhijeeth Nagaraj, Adarsha H, Kaushik V Prasad and V Ravinarayan , “Investigations of hydraulic performance of a flap type check valve using CFD and experimental technique” in International Journal of Mechanical Engineering and Technology (IJMET) Volume 10, Issue 1, January 2019, PP 409-413, ISSN Online: 0976-6369.
2. Rames S et.al, invented “Hybrid power generation system by using wind, solar and hybrid energy models” patented in the field of Mechanical engineering.
3. Arun Kumar D T, Vinod M, Dr Ashutosh Pattanaik, P S Raghavendra Rao, “Study of Mechanical Properties of Aluminium Based Hybrid Metal Matrix Composite”, Journal of Material Science & Manufacturing Technology, Mantech publication, Volume 4 Issue 2, <http://doi.org/10.5281/zenodo.2654584>.
4. P. C. Sharath et.al, “Mechanical and Microstructural Properties of Multi-Axially Forged LM6 Aluminium Alloy”, Advances in Manufacturing Technology, Lecture Notes in Mechanical Engineering, Springer Nature Singapore Pte Ltd. 2019, https://doi.org/10.1007/978-981-13-6374-0_16.
5. H. Adarsha, Sunil Bhat, “PRELIMINARY DESIGN OF A MULTI-TERRAIN TRANSPORTER”, International Journal of Mechanical Engineering and Technology (IJMET) Volume 10, Issue 03, March 2019, pp. 290-297. Article ID: IJMET_10_03_030, ISSN Online: 0976-6359.
6. Ashutosh Pattanaik et.al, “Effect of environmental aging conditions on the properties of fly ash filled epoxy composites”, Advanced Composite Materials, 2019 <https://doi.org/10.1080/09243046.2019.1610930>.
7. D T Arun Kumar et.al, “Studies on Machinability and Microstructures of Hypereutectic Al-Si Cast Alloys”, Indian Foundry Journal | Vol 65 | issue 5 | may 2019.
8. Adarsha Hiriyannah, Kaushik Vijaya Prasad, V. Ravinarayan, “Review on effect of various reinforcements on the thermal properties of lm-25 al alloy and some common light metal alloys”, International Journal of Mechanical Engineering and Technology (IJMET), Article ID: IJMET_10_05_015, ISSN Online: 0976-6359.
9. H. Adarsha*, Sunil Bhat** and S. Rakesh, “Design of a bus battery box”, Adarsha Journal of Engineering Research and Application, ISSN : 2248-9622 Vol. 9, Issue 5 (Series -I) May 2019, pp 27-32.

Presentations/participation in conferences/seminars/workshop

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1. Dr. K Venkadeswaran participated in International conference on Mechanical engineering Design (ICMechD 2019) held at Chennai on 25th-26th April-2019
2. Dr Ashutosh Pattanaik attended workshop on Application of Optimization Techniques on Advanced Manufacturing Processes held at Vssut, Burla, Odisha on 25th-30th March-2019
3. Dr Ashutosh Pattanaik et.al, presented a paper titled “Comparison of Different Mixing Conditions on Mechanical Properties of Particulate Composite” in National Conference On “Recent Advances in Materials, Manufacturing and Design Engineering” organized at School of Engineering & Technology , Jain University Bengaluru on 29th March 2019.
4. Dr. K Venkadeswaran et.al, presented a paper titled “Application of Numerical Simulation To Determine The Heat Transfer Rate for Different Mass Flow Rate”, in National Conference On “Recent Advances in Materials, Manufacturing and Design Engineering” organized at School of Engineering & Technology , Jain University Bengaluru on 29th March 2019.
5. Dr. M K Aravindan et.al, presented a paper titled “Effect of Microstructure And Mechanical Characterization Of Aluminium Alloy6061 With Mg” in National Conference On “Recent Advances in Materials, Manufacturing and Design Engineering” organized at School of Engineering & Technology , Jain University Bengaluru on 29th March 2019.
6. Dr. AlokKumar Rohit et.al, presented a paper titled “Amelioration of Heat Transfer Rate with W-Discrete Rib Artificial Roughness” in National Conference On “Recent Advances in Materials, Manufacturing and Design Engineering” organized at School of Engineering & Technology , Jain University Bengaluru on 29th March 2019.
7. B R Moharana, Viswanath K, Jaidev B M, Benetta B K presented a paper titled “Process Parameter Optimisation and Prediction of The Mechanical Property of Ss-Copper Dissimilar Joint by Pulsed-Gtaw Process” in National Conference On “Recent Advances in Materials, Manufacturing and Design Engineering” organized at School of Engineering & Technology, Jain University Bengaluru on 29th March 2019.
8. Prof. Ramesh S given a guest lecture entitled “Carrier opportunities in Mechatronics and “Carrier opportunities in industrial automation” at NTTF- Electronics, Bengaluru.

Rewards/recognition



Dr. Adarsha H, Head, Department of Mechanical Engineering has been awarded the Prestigious “Adarsh Vidya Saraswati Rashtriya Puraskar” by Glacier journal Research Foundation, Global Management Council Ahmedabad on 01-06-2019 and confirms a letter recognizing the Nobel work done in the interests of students, teachers and the entire education fraternity; the governing body of Global Management Council, an apex body in the field of academics gives a distinction of being one of the **best teacher**, in the country. Sir has also be a Member of editorial board in Glacier journal Research Foundation, Global Management Council Ahmedabad.



Dr. Venkadeshwaran K has received the grant of worth 35 Lakhs for the project titled “Development of strategies and database for Automated 3D forming of complex shapes for AA 2024 Aluminium Alloy” by the Science & Engineering Research Board (SERB) on 02-01-2019.

Placements / Higher Studies

The department handles all aspects of campus placements for the graduating students at JAIN University. The Placement process is initiated with a clear focus on the students from all academic levels. All levels of the companies are contacted and invited for the campus recruitment drive which matches with different academic levels of students. Branch specific core companies are focused equally to ensure students obtain the right match of their passion and competency. The department is well equipped with excellent infra-structure to support every stage of the placement process. Arrangement for Pre-Placement Talks, interviews, Group Discussions etc. are all handled by the staff at the office. Following students are the alumni of Academic year 2018-19 got placed in the companies and got admitted for higher studies.

Student Name	Company/ Institution Name
Ankith	BASF
Arjun E L	SLK software

B Vikram Pol	University of POONA
Bibin Mathew	Byjus
Deepu Kumar T G	University of Hamberg, Germany
Infant Roshan R	University OF SIEGEN, Germany
Jayasimha Yadav R A	University of Hamberg, Germany
Karthik U Shetty	ENAC UNIVERSITY, FRANCE
Kishor H N	TIEI Ltd
Praveenkumar Raikar	Merchant navy
Raghu R	Reliance retail
Rahul Sah	Reliance retail
Rohan Varghese	Reliance retail
Sadanand V Giraddi	University of Hamberg, Germany
Shashank R S	Pilot training
Shibam Saha	IAS
Shreyas B S	University of pavia, italy
Srikanth G	IAS
Suraj K	IAS
Surya Shankar Bhat B	University of Hamberg, Germany
Tony Rosset A	University of pavia, italy
Uttej Ainapur	University of pavia, italy

Student Testimonials

I have been placed in SUN ELECTRIC. Since its inception, the placement cell in SET-JAIN has helped students a lot in the accomplishment of being recruited in various esteemed companies. This was the first interview, I appeared for and got placed. The feeling is incomparable. THANK YOU JAIN!

-R.Santosh G Patil
Sun Electric, Bengaluru

It's been a privilege to be a part of this esteemed University. It's impeccable in its own way with its caring faculty members. Mechanical department seems unmatched. The teaching along with non-teaching staff cares a lot about all its students and their overall development.

-Sadanada V Giraddi
Higher studies, university of Hamberg, Germany

I have been fortunate to be a part of JAIN. JAIN prepares its students to become experts in subject matter by building in them versatile skill-sets required in management and leadership. As a proud alumnus of JAIN, I owe my professional success to my alma mater; its strong value system and an unwavering commitment to excellence.

-Arjun E L
SLK Software Services Pvt. Ltd, Bengaluru.

PHOTO GALERY

