

A

S  
S  
O  
C  
I  
A  
T  
I  
O  
N

o  
f

R

O  
Y  
A  
L

M

E  
C  
H  
A  
N  
I  
C  
A  
L

S

T  
U  
D  
E  
N  
T  
S

# INGENIUM

Volume 3, Issue 1, July – September, 2021

Department Newsletter

## Department of Mechanical Engineering



**AJ Institute of Engineering and Technology**

(A unit of Laxmi Memorial Education Trust ®)

NH-66, Kottara Chowki, Mangaluru - 575006



[www.ajiet.edu.in](http://www.ajiet.edu.in)



[ajenggcollege@gmail.com](mailto:ajenggcollege@gmail.com)



0824-2862200

# DEPARTMENT NEWSLETTER

## Message from Editor's Desk:

Welcome to the third volume, first issue of Newsletter from the Department of Mechanical Engineering. This newsletter is a digital way for us to communicate with our students, faculty members, alumni and industrial partners. It aims to showcase the glimpse of the departmental activities and achievements. It enlightens the readers about the latest happenings in the department, focusing about different activities like placement, industry-academia, club activities, student and faculty achievements.

### Chief Patron:

#### Mr. Prashanth Shetty

(Vice President, Laxmi Memorial Education Trust)

### Patron:

#### Dr. Shantharama Rai C

(Principal, A. J. Institute of Engineering and Technology)

### Chief Editor:

#### Dr. Rajesh Rai P

(Head, Department of Mechanical Engineering  
A. J. Institute of Engineering and Technology)

### Editorial Committee:

Dr. Sreejith B K  
Mr. Harold J D'Souza  
Mr. Prasad B G  
Mr. Sudheer Kini K  
Mr. Harshith Shetty

## HOD's Message



Welcome to the first issue of the Mechanical Engineering Department Newsletter - 'IGENIUM' in its volume 3 series. It is about looking back and summing up every prestigious moment in the department. This newsletter is a bridge for us to communicate with our students, faculty members, alumni and industrial partners. It aims to showcase their achievements by which make them proud and self-motivated. We take the readers for a voyage of the latest incidence and happenings in the department. Any feedback will be greatly appreciated for the improvement of the next issue of the Newsletter.

### Dr. Rajesh Rai P

Head, Department of Mechanical Engineering  
A. J. Institute of Engineering and Technology

# DEPARTMENT NEWSLETTER

## VISION

To create globally competent and self-reliant mechanical engineers adaptive to an interdisciplinary environment contributing to society through development, authority and entrepreneurship.

## MISSION

- To offer high-quality graduate programme in the fields of Mechanical Engineering with value education to the students and make them responsive to societal needs.
- To nurture the students with a global outlook for a sustainable future with high moral and ethical values.
- To strengthen collaboration with industries academia and research organizations to enrich learning environment, thus enhance research and entrepreneurship culture.
- To create awareness about the need of interdisciplinary applications through alumni industry-institution interactions.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

**PEO1:** Prepare graduates with mathematical, scientific and engineering skills to design and develop energy efficient systems for sustainable development.

**PEO2:** Excel graduates with high level of technical competency combined with research and complex problem solving ability to generate innovative solutions in Mechanical and multi-disciplinary areas.

**PEO3:** Equip students with modern tools, technology and advanced software's for deliberating engineering solutions.

**PEO4:** Inculcate graduates with strong foundation in academic excellence, soft skills, leadership qualities, professional ethics, and social concerns and understand the need for lifelong learning for a successful professional career

## PROGRAM OUTCOMES (POs)

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

# DEPARTMENT NEWSLETTER

**11. Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

**PSO1:** Apply the knowledge of modern engineering tools to design and Analyse the products and processes related to mechanical engineering system.

**PSO2:** Develop technical and interpersonal skills pertinent to mechanical and allied engineering for careers in industry, academia and government organisations.

## RESEARCH

Domain Name	Domain Co-coordinator	Domain Members
MANUFACTURING	Dr. Rajesh Rai P	Mr. Prashanth D A, Mr. Nithin Shet, Mr. Prasad B G
THERMAL	Dr. Vighnesha Nayak	Dr. Sreejith B K, Mr. Prakhyath, Mr. Karthik A V
DESIGN	Mr. Sunil Kumar S	Mr. Sudheer Kini, Mr. Harold J D'Souza

## WORKSHOPS/WEBINAR

### Webinar on “PTC GTTC-COE Awareness” by Mr. Adhikar L. Mahale and Mrs. Shailaja M. V Government Tool room Training Centre (GTTC), Mangaluru.

Department of Mechanical Engineering in association with Government Tool room Training Centre (GTTC), Mangaluru organized a webinar on “PTC GTTC-COE Awareness” on 24/07/2021 at 10 AM. Mr. Adhikar L. Mahale and Mrs. Shailaja M. V, Engineers, Design Tech Systems were the speakers for the webinar. Mr. Srinivas Gopal, Head, Design Tech and G. K. Mruthyunjaya Gouda, Principal, GTTC Mangaluru also joined the webinar.

This webinar was organized for 2<sup>nd</sup> and 3<sup>rd</sup> Year Mechanical Engineering students. 64 students attended the webinar. Mr. Harold Dsouza, Assistant professor, Department of Mechanical Engineering welcomed the guests.

To start with, an introduction about PTC and Design Tech was given by Mr. Srinivas Gopal, Head, Design Tech. Mr. Adhikar L. Mahale and Mrs. Shailaja M V gave a brief presentation on the various facilities available for students to undergo training, its benefits and the concept behind these technologies.

Also information regarding the fee structure and duration of training period (Internship) was also provided. Queries of students were answered by the speakers and guests. Mr. Prakhyath Jain, Assistant professor, Mechanical Engineering proposed the vote of thanks.



**A. J. Institute of Engineering and Technology**  
(A Unit of Laxmi Memorial Education Trust)  
NH-66, Kottara Chowki, Mangaluru -575006

Department of Mechanical Engineering  
in  
association with GTTC, Mangalore is  
organising a

**WEBINAR ON  
" PTC GTTC- COE  
AWARENESS "**

**Speakers:**  
**Mr. Adhikar L. Mahale**  
Engineer, Technical Services  
Design Tech Systems  
**Mrs. Shailaja M. V**  
Engineer, Technical Services  
Design Tech Systems

**Date: 24-07-2021**      **Time: 10 AM**

Google meet Link : [meet.google.com/tto-tjfg-uzi](https://meet.google.com/tto-tjfg-uzi)

Mr. Harold Dsouza  
Mr. Prakhyath Jain  
(Co-venors)

Dr. Rajesh Bai P  
Head  
Department of Mechanical Engineering

Dr. Shanthrama Bai C  
Principal

### Webinar on “Introduction to robotics and its Applications” by Dr. Soumya. S, Assistant professor, School of Robotics Defence institute of advanced technology, Pune.

Webinar on “Introduction to robotics and its Applications” by Dr. Soumya. S, Assistant professor, School of Robotics Defence institute of advanced technology, Pune was organized on 24-07-2021 at 12:00 AM-1:15 PM through Google meeting platform. The session began by welcoming the resource person by Ms. Bhoomi Suvarna from 3<sup>rd</sup> year ECE. Students from 2<sup>nd</sup>, 3<sup>rd</sup> and final year students acknowledged the event. The speaker shared Basic knowledge & guidance on Insight to Robotics and its applications. Later he briefed about Law of Robotics. Also Design, kinematics of machines and degree of freedom. The session was concluded by giving the vote of thanks by Mr. Rolan Lobo for 3<sup>rd</sup> year ECE.

## STUDENT PROJECTS

Sl. No	Batch	USN	Students Name	Guide	Project Title
1	B1	4JK18ME044	VIGHNESH R PAI	Dr. Vighnesha Nayak	Electricity generation from Hydrodynamic behaviour of floating substances in directional seas
2		4JK18ME014	DEEPA A S		
3		4JK18ME018	HARSHITH SHETTY		
4		4JK19ME402	MANISH K ANCHAN (TL)		
5	B2	4JK19ME405	SHRAVAN K	Mr. Prakhyath	Experimental and computational analysis of co-centric tube heat exchanger with pin-fin
6		4JK18ME026	PAVAN KUMAR (TL)		
7		4JK18ME036	SHARAN CHANDRAHAS		
8		4JK18ME038	SHRAVAN P C		
9	B3	4JK18ME050	VASANTHKUMAR T S	Mr. Sunil Kumar S	A novel plastic waste management system to control Air-pollution
10		4JK18ME047	YOJITH K (TL)		
11		4JK18ME051	RAKSHITH ACHARYA		
12		4JK18ME039	SHRAVANRAJ KAMBALI		
13	B4	4JK18ME028	PRANAV T V	Dr. Sreejith	Fire extinguisher using sound waves
14		4JK18ME032	SARANG C M (TL )		
15		4JK18ME049	ABHISHEK SASIDHARAN		
16		4JK18ME027	PRANAV A P		
17	B5	4JK18ME003	ADITH AJITH KUMAR	Mr. Harold J D'Souza	Mechanical response of elastomers subjected to degrading environment
18		4JK18ME015	DHARMIK ATTAVAR		
19		4JK18ME040	SHRUJAN J RAI (TL)		
20		4JK19ME403	MANISH M P		
21	B6	4JK18ME048	SHREEJESH K	Mr. Sudheer Kini K	Development of disinfection robot using UV light and sanitisation
22		4JK18ME052	VISHNU V NAIR (TL)		
23		4JK18ME041	SRAVAN CHANDRASEKHARAN		
24		4JK18ME043	VENKITESH RAGHAV R		

# DEPARTMENT NEWSLETTER

25	B7	4JK18ME021	LESTON LOBO	Mr. Prakhyath	Multi-purpose inspection robot
26		4JK18ME009	ASHISH H		
27		4JK18ME045	VIGNESH (TL)		
28		4JK18ME013	DEEKSHITH		
29	B8	4JK17ME028	KAVAN K	Mr. Nithin Shet	Design and fabrication of AeroLeaf wind turbine
30		4JK18ME029	PRATHEEK B V		
31		4JK18ME031	ROSHAN DSOUZA (TL)		
32		4JK18ME016	DHEERAJ		
33	B9	4JK19ME404	MOHAMMED FAYAZ	Mr. Karthik A V	Design and development of Remote controlled coconut tree digging and fertilizer pouring machine
34		4JK19ME406	VISHWAJEETH ARUN NAIR		
35		4JK19ME401	JAYAPRAKASH B N		
36		4JK18ME020	KAPOOR SAHIL (TL)		
37	B10	4JK17ME011	ASHIN (TL)	Mr. Prasad B G	Road sign recognition and speed variation system
38		4JK17ME023	ISMAIL EBRAHIM		
39		4JK17ME017	EMIL WILLIAM MAVEETIL		
40		4JK17ME034	MOHAMMED ABSHAR		
41		4JK17ME013	BASIL T BABY		
42	B11	4JK18ME007	AKHILRAJ E S (TL)	Mr. Prashanth D A	production of fuel from waste plastic material through injection moulding process
43		4JK18ME002	ABRAHAM MATHEW		
44		4JK18ME006	AKHIL K S		
45		4JK18ME053	ANIRUDH K		
46	B12	4JK18ME030	RITVIK P SHETTY	Dr. Rajesh Rai P	Automated wheelchair cum Stretcher
47		4JK18ME033	SARVESH S		
48		4JK18ME019	HARSHITH V SHETTY		
49		4JK18ME035	SHANTHANU SUDHAS		
50	B13	4JK18ME004	AJAYRAJ M J (TL)	Mr. Sunil Kumar S	Smart drilling machine
51		4JK17ME067	MOHAMMAD SANEEN		
52		4JK18ME034	SAURAV C PADMASHALI		
53		4JK18ME042	VAISHNAV BALIGA (TL)		

# DEPARTMENT NEWSLETTER

## FUNDS and GRANTS

Sl. No.	Innovation Name	Students	Guide	Funding Agency (If any)	Amount
1	MECHANICAL POCKET MANURING	Mr. Shailesh V Aithal, Mr. Rahul. P. Suvarna Mr. Vikas. P Mr. Bhuvanesh. R. Mallya	Dr. Vighnesha Nayak	Karnataka State Council for Science and Technology (KCST)	Rs. 5000/-
2	AUTOMATIC SOLAR-POWERED RAILWAY TRACK CRACK DETECTING VEHICLE	Mr. Likith S Amin, Mr. Jacob Antony Mr. Jatin Kuckian, Ms. Neha S Jain	Dr. Sreejith B K	Karnataka State Council for Science and Technology (KCST)	Rs. 5000/-

## FDP/WEBINAR/SEMINARS/TRAINING

Mr. Sunil Kumar S has participated and successfully completed online training on “Material Science and Nano Simulation” Conducted jointly by VTU, Belagavi & DHIO Research and Engineering Pvt Ltd., Bangalore from 05-08-2021 to 06-08-2021

Mr. Sunil Kumar S has participated in and successfully completed the 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by the All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Sudheer Kini K has participated and successfully completed the 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Harold D’Souza K has participated and successfully completed the 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Prakyath Jain K has participated and successfully completed the 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Prasad B G has participated and successfully completed the 5-day online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

# DEPARTMENT NEWSLETTER

Mr. Prashantha D A K has participated and successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Dr. Vighnesha Nayak has participated and successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Nithin Shet K has participated and successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Sunil Kumar S has participated and successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Dr. Sreejith B K has participated and successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Mr. Karthik A V has participated and successfully completed the 5-day online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education(AICTE) from 13 September, 2021 to 17 September, 2021.

Dr. Vighnesha Nayak has participated and successfully completed VTU - Visualizing Engineering training has been scheduled from 2nd August 2021 to 4th October 2021.

Mr. Karthik A V has participated and successfully completed VTU - Visualizing Engineering training has been scheduled from 2nd August 2021 to 4th October 2021.

Dr. Sreejith B K has participated and successfully completed VTU - Visualizing Engineering training has been scheduled from 2nd August 2021 to 4th October 2021

Mr. Sudheer Kini K has participated and successfully completed VTU - Visualizing Engineering training has been scheduled from 2nd August 2021 to 4th October 2021

Mr. Prasad B G has participated and successfully completed VTU - Visualizing Engineering training has been scheduled from 2nd August 2021 to 4th October 2021

Mr. Harold D'Souza has participated and successfully completed VTU - Visualizing Engineering training has been scheduled from 2nd August 2021 to 4th October 2021

Mr. Sudheer Kini K attended the National Workshop on Solid Waste Management on July 30-31, 2021 organized by DELHI RESEARCH IMPLEMENTATION AND INNOVATION.

## ACADEMIC TOPPERS



CHARAN RAJ SHETTY of 8<sup>th</sup> Semester has scored a SGPA of 9.3 in July-August 2021, Sem End Examination



RAHUL P SUVARNA of 8<sup>th</sup> Semester has scored a SGPA of 9.3 in July-August 2021, Sem End Examination



VIKAS P of 8<sup>th</sup> Semester has scored a SGPA of 9.3 in July- August 2021, Sem End Examination



SHAILESH V AITHAL of 8<sup>th</sup> Semester has scored a SGPA of 9.3 in July-August 2021, Sem End Examination



ADRIEL SAVIO MIRANDA of 8<sup>th</sup> Semester has scored a SGPA of 9.3 in July- August 2021, Sem End Examination



KEERTHAN KUMAR of 8<sup>th</sup> Semester has scored a SGPA of 9.3 in July-August 2021, Sem End Examination

# DEPARTMENT NEWSLETTER



ANIL RAJ T V of 8<sup>th</sup> Semester has scored a SGPA of 9.25 in July- August 2021, Sem End Examination



CHIRAG S POONJA of 8<sup>th</sup> Semester has scored a SGPA of 9.15 in July- August 2021, Sem End Examination



DEEPA A S of 6<sup>th</sup> Semester has scored a SGPA of 9.0 in July- August 2021, Sem End Examination



HARSHITH SHETTY of 6<sup>th</sup> Semester has scored a SGPA of 9.0 in July- August 2021, Sem End Examination



SHRAVAN K of 6<sup>th</sup> Semester has scored a SGPA of 9.0 in July- August 2021, Sem End Examination



SHARVARI of 6<sup>th</sup> Semester has scored a SGPA of 8.71 in July- August 2021, Sem End Examination



RISHI JOSHI of 6<sup>th</sup> Semester has scored a SGPA of 8.58 in July- August 2021, Sem End Examination

# Department of Mechanical Engineering



**A. J. Institute of Engineering and Technology**

(A unit of Laxmi Memorial Education Trust ®)

NH-66, Kottara Chowki, Mangaluru - 575006



[www.ajiet.edu.in](http://www.ajiet.edu.in)



[ajengcollege@gmail.com](mailto:ajengcollege@gmail.com)



0824-2862200