

**DEPARTMENT OF MECHANICAL
ENGINEERING**



EDITORIAL STUDENT MEMBERS:

Mr.V.Rohit
Mr.S.Vignesh
Ms.R.Vinosa

EDITORIAL FACULTY MEMBERS:

Mr.S.N.Vijayan , AP/Mech

INSTITUTIONS VISION AND MISSION:

VISION:

- To impart quality technical education emphasizing innovations and research with social and ethical values.

MISSION:

- Establishing state-of-the-art infrastructure, effective procedures for recruitment of competent faculty and innovative teaching practices.
- Creating a conducive environment for nurturing innovative ideas and encouraging research skills.
- Inculcating social and ethical values through co-curricular and extra-curricular activities.



MoU Signed With M/s, Design Galaxy Engineering Service and Training, Coimbatore on December 08, 2022.



HOD's MESSAGE:

- Mechanical Engineering is the largest of the engineering disciplines and a large number of mechanical engineers go into manufacturing of computer and electronic products, machinery and transportation equipments.
- The department cares for student support, mentoring, tutoring, study skills workshops and career development.
- Mechanical Engineering students culminate their studies with a year-long capstone project requiring design problem solving, creative thinking, project planning and teamwork.
- A broad selection of technical electives encourages students to pursue special interests in design and manufacturing, energy and environmental issues, thermal and fluid sciences materials, dynamics & controls and robotics.

DEPARTMENT VISION AND MISSION:

VISION:

- To create innovative, entrepreneurial and socially committed Mechanical Engineers to meet industrial demands.

MISSION:

- Developing core competency in Mechanical Engineering through state-of-the-art facilities and effective teaching practices.
- Encouraging and nurturing research potential and promoting entrepreneurial endeavors.
- Instilling social and ethical values through extension activities.

ASSOCIATION INAUGURATION MECHNOVATORZ

- Mechanical Engineering Student's Association (MECHNOVATORZ) has been inaugurated on 17.09.2022 (Saturday) between 10.00 to 11.00 AM at B-Block seminar hall. The association would be inaugurated by Er.H.Aswin, Regional Head-CRM, Elite Elevators, Chennai. All are cordially invited.
- Our Mechnovatorz president D.Denesh kumar has opened the inauguration ceremony. The Chief Guest Er.H.Aswin, Regional Head-CRM, Elite Elevators, Chennai, Principal Dr. P Manimaran, Vice Principal Dr. D. Bhanu, Dean Dr. V.J. Arul karthick, Head of the Department Dr.A.Saiyathibrahim and Faculty coordinator of the Association Mr.A.J.Infant Jegan Rakesh have present in the function. Er.H.Aswin is a proud alumni of Karpagam Institute of Technology who shared his inspirational and motivational thoughts to our beloved students. Also, he delivered a strategic plan to take the association to the next level.
- Finally, he launched the first event, a Blood Donation Camp, of the Mechnovatorz in association with Rotaract club of Karpagam Institute of Technology and YRC will be conducted on 17.09.2022 in Karpagam Medical college Hospital. The main objective of the function is to motivate our young and upcoming engineers to involve in activities related to technical development of students by organizing seminars, workshops and other activities and also to improve non technical abilities of students by engendering good communication skills, managerial abilities, presentation skills and team work. Our Association secretary M P Mano Bharath has ended up the function with vote of thanks

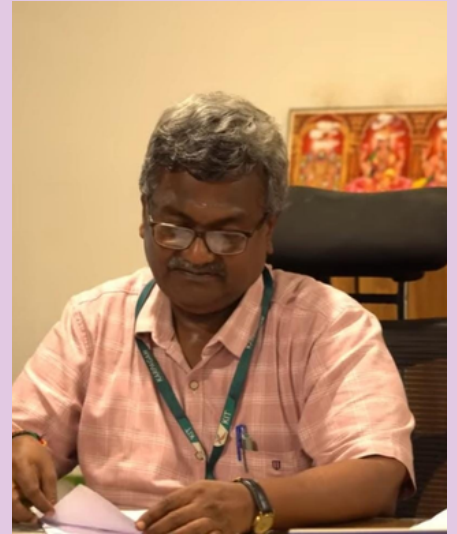
LIST OF FACULTY MEMBERS:

- Dr.P.Manimaran , Prof & Principal
- Dr.A.Saiyathibrahim , HoD/Mech
- Dr.S.Goshteeswaran , Prof/Mech
- Mr.S.N.Vijayan , AP/Mech
- Mr.K.P.Harshavardhan , AP/Mech
- Mr.P.Prakash , AP/Mech
- Mr.R.Ramesh Babu , AP/Mech
- Mr.A.J.Infant Jegan Rakesh , AP/Mech
- Mr.M.Pradeep , AP/Mech
- Mr.R.Murali krishnan , AP/Mech
- Mrs.K.Thriveni, AP/Mech
- Mr.S.Rajendran , AP/Mech
- Mr.K.Logeshkumar , AP/Mech



FACULTY PUBLICATIONS

- P Manimaran, et.al., “Extraction and characterization of natural lignocellulosic fibres from Typha angustata grass”, International Journal of Biological Macromolecules, 222, Part B, 2022, 1840-1851 <https://doi.org/10.1016/j.ijbiomac.2022.09.273>.
- N.Nagaprasad, V.Vignesh, N.B.Karthik Babu, P.Manimaran, B.Stalin, Krishnaraj Ramaswamy, “Effect of green hybrid fillers loading on mechanical and thermal properties of vinyl ester composites”, Polymer Composites, 2022,43(11), 7928-7939, <https://doi.org/10.1002/pc.26925>.



Dr.P.Manimaran



Mr.S.N.Vijayan

- Atilla Uygar Sönmez, Vijayan S. N, “Numerical Analysis of Frictional Drag Reduction of Watercraft Using Water Lubrication Technique”, Engineering and Technology Quarterly Reviews, Vol.5, No.2, 18-29, [10.5281/zenodo.6965512](https://doi.org/10.5281/zenodo.6965512).
- S. N. Vijayan, et.al., “Numerical analysis of impact behaviour of LM26/ZrB2 composite using finite element method”, AIP Conference Proceedings 2527, 020007 (2022); <https://doi.org/10.1063/5.0108205>.
- S. Syath Abuthakeer, S. N. Vijayan, Samson Jerold Samuel Chelladurai, A. Saiyathibrahim, and J.Nashreen, “Compressive Behavioural Analysis of LM26/ZrB2 Composite Using Finite Element”, Lecture Notes in Mechanical Engineering, Springer, 2022. S. N. Vijayan, et.al., “Numerical analysis of impact behaviour of LM26/ZrB2 composite using finite element method”, AIP Conference Proceedings 2527, 020007 (2022); <https://doi.org/10.1063/5.0108205>.

- Rajkumar Velu, R Sathishkumar, A Saiyathibrahim, “Perspective Chapter: Multi-Material in 3D Printing for Engineering Applications”, Open Access Peer-reviewed Chapter, intechopen, doi: 10.5772/intechopen.102564. Accessed 2022-10-02
- S. Syath Abuthakeer, S. N. Vijayan, Samson Jerold Samuel Chelladurai, A. Saiyathibrahim, and J.Nashreen, “Compressive Behavioural Analysis of LM26/ZrB₂ Composite Using Finite Element”, Lecture Notes in Mechanical Engineering, Springer, 2022. N.Nagaprasad, V.Vignesh, N.B.Karthik Babu, P.Manimaran, B.Stalin, Krishnaraj Ramaswamy, “Effect of green hybrid fillers loading on mechanical and thermal properties of vinyl ester composites”, Polymer Composites, 2022,43(11), 7928-7939, <https://doi.org/10.1002/pc.26925>.



Dr.A.Saiyathibrahim

FACULTY ACHIEVEMENTS



Mr.R.Ramesh Babu

- Mr.R.Ramesh Babu, Assistant Professor, completed 8 week (July-September 2022) NPTEL course and scored 53% in the course of Robotics.

- Mr.P.Prakash, Assistant Professor, completed 8 week (July-September 2022) NPTEL course and scored 51% in the course of Robotics.



Mr.P.Prakash

STUDENT ACHIEVEMENTS

- Second year mechanical engineering student Mr.R.Gokul completed 8 week (Aug-Oct 2022) NPTEL course and scored 56% in the course of Advanced Machining Processes.
- Third year mechanical Engineering student Mr.Elaganesan K R completed 8 week (July-September 2022) NPTEL course and scored 72% in the course of Steam Power Engineering.
- Third year mechanical Engineering student Mr.Manojkumar M completed 8 week (July-September 2022) NPTEL course and scored 61% in the course of Steam Power Engineering.
- Third year mechanical Engineering student Mr.Vignesh S completed 8 week (July-September 2022) NPTEL course and scored 57% in the course of Steam Power Engineering.
- Third year mechanical Engineering student Mr.Rohith V completed 8 week (July-September 2022) NPTEL course and scored 57% in the course of Steam Power Engineering.
- Third year mechanical Engineering student Mr.Bharathram P completed 8 week (July-September 2022) NPTEL course and scored 60% in the course of Steam Power Engineering.



GUEST LECTURE ORGANIZED

Guest lecture on “Design and Modeling- An Innovative Approach” was conducted on September 02, 2022 (Friday) at 3.00 pm. The session was handled by Er.Jayaganesh Subburaj, Design Engineer, Design Galaxy, Coimbatore. The innovative approaches of design and modeling was discussed during the session.

KARPAGAM INSTITUTE OF TECHNOLOGY
Engineering, Technology, Innovation
Knowledge, Skills and Attitude Development

KIT - Institution's Innovation Council (IIC) & Department of Mechanical Engineering
Jointly Organises

Guest Lecture on
Design and Modelling - An Innovative approach

SEP 02 2022
03:00 pm to 04:30 pm

Resource person
Er. Jayaganesh Subburaj
Design Galaxy Engineering Services and Training, Coimbatore.

Dr. P. MANIMARAN, Principal
Dr. D. BHANU, Vice-Principal
Convener: Dr. A. SATHYABRAHIM, HOD/MECH
Coordinators: Mr. S. N. VIJAYAN, AP/MECH, Mr. R. MURALI KRISHNAN, AP/MECH

Registration Link: <https://forms.gle/5zy6GUm7N1MAG8>

Venue: A - Block Seminar Hall

SP No. 247, 248 & T By pass Road, Eicheranai Post, Coimbatore - 641005 | Phone: 0422 - 2980011 - 15 | www.karpagamtech.ac.in

KARPAGAM INSTITUTE OF TECHNOLOGY
Engineering, Technology, Innovation
Knowledge, Skills and Attitude Development

KIT - Institution's Innovation Council (IIC) & Department of Mechanical Engineering
Jointly Organises

Webinar on
Scope in the IT Sector

SEP 16 2022
03:30 pm

Resource person
Mr. A. Hari Sankar
Software Engineer
Softpillar Technology Pvt. Ltd.

Dr. P. MANIMARAN, Principal
Dr. D. BHANU, Vice-Principal
Convener: Dr. A. SATHYABRAHIM, HOD/MECH
Coordinators: Mr. A. J. INFANT JEGAN RAKESH, AP/MECH, Mr. R. VIGNESHWARAN, AP/MECH

Registration Link: <https://forms.gle/UFqj7g7CHHJUMV7>

Google Meet Link: <http://meet.google.com/vkd-hazy-ekg>

SP No. 247, 248 & T By pass Road, Eicheranai Post, Coimbatore - 641005 | Phone: 0422 - 2980011 - 15 | www.karpagamtech.ac.in

A webinar on “Scope in the IT Sector” was conducted on 16th September 2022. The session was handled by Mr.A.Hari Sankar, Software Engineer, Softpillar Technology Pvt.Ltd, Chennai. The future scope of mechanical engineering in the field of IT sector was discussed.

Guest Lecture on “An Innovative Approach of Modelling with Simulation” was conducted on September 15, 2022 and the session was handled by Mr.Abdullah J, Chief Technical Officer at Coimbatore Cad Solutions Pvt Ltd, Coimbatore. In this session innovative approaches introduced in the modeling software related to product simulation was discussed.

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Knowledge, Skills and Attitude Development

KIT - Institution's Innovation Council (IIC) & Department of Mechanical Engineering
Jointly Organises

Guest Lecture on
An Innovative Approach of Modelling with Simulation

SEP 15 2022
03:30 pm to 04:30 pm

Resource person
Mr. Abdullah J
Chief Technical Officer at Coimbatore Cad Solutions Pvt Ltd, Coimbatore.

Dr. P. MANIMARAN, Principal
Dr. D. BHANU, Vice-Principal
Convener: Dr. A. SATHYABRAHIM, HOD/MECH
Coordinators: Mr. S. N. VIJAYAN, AP/MECH, Mr. R. KATHERAVAN, AP/MECH

Registration Link: <https://forms.gle/45DQajT00xbRCpu76>

Venue: A - Block Seminar Hall

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GUEST LECTURE ORGANIZED

KARPAGAM INSTITUTE OF TECHNOLOGY
KIT - Institution's Innovation Council (IIC) & Department of Mechanical Engineering
Jointly Organises

Webinar on
Innovative way to success

AUG 05 2022
11:00 am to 12:00 pm

Resource persons
Mr.V.Nagarajan
NALCO Government of India
Assistant Engineer

Convenors
Dr.P.MANMURAN
Principal
Dr.D.BHANU
Vice-Principal
Dr.A.SAYATHIBRAHM
HOD/MECH
IC Convenor
Dr.K.MUTHUKUMAR
HOD/EE

Coordinators
Mr.S.N.VIJAYAN, AP/MECH
Mr.R.RAMESH BABU, AP/MECH

Registration Link
<https://forms.gle/qJcQ7RTq54v5VWAw5>

Google meet link:
<https://forms.gle/fq2NFIA9V59UKMbc8>

SP No. 247, 248 L & T By pass Road, Eechaneri Post, Coimbatore - 641105 - 15 | Phone: 0422 - 2980011 - 15 | www.karpagamtech.ac.in

A webinar on “Innovative Way to Success” was conducted on August 05, 2022 and the session was handled by Er.V.Nagarajan, Assistant Engineer, NALCO Government of India. In this session, various strategies and ideas were shared with the students to crack GATE exams and how to grab central government jobs.

A webinar on “The Art of Startup” was conducted on September 03, 2022 (Saturday) at 03.30 pm. The session was handled by Mr.S.Kalyanakumar, Entrepreneur, SPS Kalyan Enivro power, Coimbatore. In this session resource person discussed about how to start startup and what are the various supports available from the funding agency and government.

KARPAGAM INSTITUTE OF TECHNOLOGY
KIT - Institution's Innovation Council (IIC) & Department of Mechanical Engineering
Jointly Organises

Webinar on
The Art of Startup

SEP 03 2022
03:00 pm to 04:30 pm

Resource person
Mr.S.Kalyanakumar
Entrepreneur
SPS Kalyan Enivro power

Dr.P.MANMURAN
Principal
Dr.D.BHANU
Vice-Principal
Dr.K.MUTHUKUMAR
HOD/EE
IC Convenor
Dr.A.SAYATHIBRAHM
HOD/MECH
Convenors
Mr.M.PRADEEP, AP/MECH
Mr.A.J.INFANT JEGAN RAKESH,
AP/MECH

Coordinators

Registration Link
<https://forms.gle/GFuugdRMfhtgkv6>

Google Meet Link
<meet.google.com/vmcs-uvny-jkk>

SP No. 247, 248 L & T By pass Road, Eechaneri Post, Coimbatore - 641105 | Phone: 0422 - 2980011 - 15 | www.karpagamtech.ac.in

KARPAGAM INSTITUTE OF TECHNOLOGY
KIT - Institution's Innovation Council (IIC) & Department of Mechanical Engineering
Jointly Organises

Webinar on
Avenues To Entrepreneurial Success

SEP 05 2022
11:20 am to 12:20 pm

Resource person
R.Sudhan
Proprietor
KSR cash & carry and juicio the quencher

Dr.P.MANMURAN
Principal
Dr.D.BHANU
Vice-Principal
IC Convenor
Dr.K.MUTHUKUMAR
HOD/EE
Convenors
Dr.A.SAYATHIBRAHM
HOD/MECH
Coordinators
Mr.P.PRAKASH, AP/MECH
Mr.R.RAMESH BABU, AP/MECH

Registration Link
<https://forms.gle/7xykz6m86Kt49cM7>

Google Meet Link
<meet.google.com/bsg-tduk-bil>

SP No. 247, 248 L & T By pass Road, Eechaneri Post, Coimbatore - 641105 | Phone: 0422 - 2980011 - 15 | www.karpagamtech.ac.in

A webinar on “Avenues to Entrepreneurial Success” was conducted on September 5, 2022 and the session was handled by Er R.Sudhan Proprietor KSR cash & carry and juicio the quencher. In this session resource person explained about how to sustain and success as an entrepreneur.

INDUSTRIAL VISIT

Students of second year mechanical engineering visited Mettur Thermal Power Plant on 05.11.2022 to study about the power generation process and distribution.



Third year mechanical engineering students visited the Thermal Power Station – I on 04.11.2022 to learn the working cycle of Thermal Power Station also visited one small scale model of equipment used in the Thermal Power Station - I. In Boiler and Turbine Section students could learn about the water feeding mechanism, reheating and regeneration concept of thermal power plant. Components of FD fan, ID fan, PA fan, boiler furnace area and other auxiliary devices essential for boiler operation are clearly understood.

The department of mechanical engineering has joined as life corporate member in Indian Welding Society from November 16, 2022, to facilitate exchange of ideas, information, development work etc. by organizing lectures, workshops, seminars, symposia, conferences and also to learn advancement of Welding, Cutting, Reclamation, Hard Facing and related technologies for the benefit of students.



ALUMINI TALK



I remember when I was entering my first year of engineering, I was extremely excited but at the same time extremely nervous. Reflecting back on the whole experience now, I would encourage incoming students to recognize that like anything in life, you'll face both ups and downs throughout your engineering experience. The important thing to remember is to always try your best and not let the instances where you may have fallen short hold you back from continuing to work hard and reach your full potential. Take these next few years to really make the most of it.

By,
Nagarajan V

STUDENT ARTICLES



OpenAI – New Expertise

OpenAI is a nonprofit organisation that conducts research in artificial intelligence. Without regard to the requirement to make a profit, our objective is to improve digital intelligence in a way that is most likely to be helpful to all human beings. We may concentrate more intently on a beneficial human impact because our study is unrestricted by financial responsibilities. We believe AI should be an extension of individual human wills and, in the spirit of liberty, as broadly and evenly distributed as possible. The outcome of this venture is uncertain and the work is difficult, but we believe the goal and the structure are right. We hope this is what matters most to the best in the field. AI systems today have impressive but narrow capabilities. It seems that we'll keep whittling away at their constraints, and in the extreme case they will reach human performance on virtually every intellectual task. It's hard to fathom how much human-level AI could benefit society, and it's equally hard to imagine how much it could damage society if built or used incorrectly.

By,
Mr.K.Vengatesh (721221114045)

STUDENT ARTICLES



Machine Learning in Mechanical Engineering

The Industry 4.0 revolution, driven by AI and ML, is transforming manufacturing and mechanical engineering by optimizing production layouts, supply networks, and equipment maintenance. AI has significantly improved operations, such as reducing supply chain forecasting errors by 50% in 2018 and achieving 90% accuracy in defect identification through ML-based quality testing. Predictive maintenance, a critical application of ML, enables manufacturers to monitor equipment data, anticipate failures, and reduce costs associated with routine maintenance, enhancing efficiency across industries, including airlines, where delays caused by mechanical failures can incur heavy fines. As manufacturers adopt technologies like robotic process automation, AI, and ML to enhance product quality, reduce time-to-market, and scale operations, mechanical engineers must upskill to remain relevant in an increasingly automated and technology-driven landscape.

By,
S.Kiran (721221114020)

STUDENT ARTICLES



New Concepts in Engineering

Engineering advances to explore new concepts and solutions because engineers have a natural interest about why and how things operate. Engineers had to quickly build, integrate, and scale the digital technology and components needed to satisfy new global demands, though, as the globe transitioned collectively toward a more digital way of life amid COVID-19 lockdowns. As engineers conceived designs remotely, the digital world of the pandemic integrated with the wave of new technologies from the fourth industrial revolution—digital twins, which were already a significant time- and resource-saving technique before 2020. Retrofitting legacy equipment and systems is becoming increasingly challenging as a result of the growing gap between old and new technologies. Although a second degree in software engineering is not required, it will be important to bridge the gap between the old and the new with current programming skills and a strong grasp of advanced mathematics. Additionally, mechanical engineers will be responsible for the design of many of the parts used in these systems. As engineering becomes more cross-functional, having a solid understanding of materials, robotics, and mechatronics as well as the capacity to collaborate with electrical and software engineers will be essential.

By,
V.Rohith (721220114021)

STUDENT ARTICLES



The Real Goat Cristiano Ronaldo

Cristiano Ronaldo dos Santos Aveiro (born February 5, 1985, in Funchal, Madeira, Portugal) is widely regarded as one of the greatest football players of his generation. Overcoming a heart condition at 15, he began his career with Club Desportivo Nacional and later Sporting Lisbon, making his debut for their first team in 2002. Ronaldo's rise to stardom began with Manchester United in 2003, where he became an instant sensation, winning the 2008 Champions League and earning his first FIFA World Player of the Year award. In 2009, he transferred to Real Madrid for a record £80 million, where he set scoring records, won multiple Ballon d'Or awards, and secured numerous La Liga and Champions League titles. Moving to Juventus in 2018, Ronaldo continued his success with two league titles and domestic trophies before returning to Manchester United in 2021. After a challenging second stint at United, he joined Saudi Arabian club Al Nassr in December 2022, continuing his illustrious career across continents.

By,
Harishkumar H (721221114015)

STUDENT CORNER



A Day in My Life

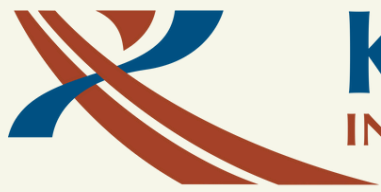
Before wake up mine,
The entire night will be full of quietness,
The day I woke up with full of giggling sound,
The quarrels of person made me angry.

But , when I start my regular activities,
A smile from a person made,
Everyone happy and gives me more energy,
The person is no one but she is my mom

The time when I start my meditation,
The sound of my birds, make me more peaceful,
It is the best relaxing therapy in the world,
No other therapy in the world make my mind
more peaceful.

At the time, when I went to morning walk in my
greenish garden,
A sound from my mom, I get off from my bed,
Then,I started to make myself ready for work,
After, I realized that it was my dream.

By,
Vinosha R (721221114049)



KARPAGAM
INSTITUTE OF TECHNOLOGY
Inspiring Innovation

**Nothing is too
wonderful to be true
if it be consistent
with the laws of
nature**

