



**K. RAMAKRISHNAN
COLLEGE OF ENGINEERING**

(Autonomous) | Approved by AICTE | Affiliated to Anna University, Chennai
Accredited by NAAC with 'A' Grade | NBA Accredited Departments



DEPARTMENT OF
**MECHANICAL
ENGINEERING**

— *Frontier* —

• PERSISTENCE TOWARDS PASSION •



Vol. II Issue 6



Newsletter 2023-24

K. RAMAKRISHNAN
COLLEGE
OF
ENGINEERING

KR
K R C E



— *Together We Engineer The Future* —



DEPARTMENT OF MECHANICAL FRONTIER

Persistence towards Passion



K. RAMAKRISHNAN
COLLEGE OF ENGINEERING

Vol. II Issue 6

Newsletter 2023-24

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B.E. Mechanical Engineering

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III Year
B.E. Mechanical Engineering

“

A newsletter is a reflection of the department's achievements, innovations, and aspirations. Through this publication, we celebrate academic excellence, research contributions, student accomplishments, and the collective efforts of our Mechanical Engineering family.

”

DEPARTMENT OF MECHANICAL ENGINEERING

Frontier – Persistence Towards Passion



LEADERSHIP MESSAGES



CHAIRMAN MESSAGE

The Department of Mechanical Engineering at K. Ramakrishnan College of Engineering is dedicated to shaping innovative and skilled engineers through quality education, practical exposure, and research excellence. The department strives to empower students with technical knowledge, professional ethics, and leadership skills to meet global industrial challenges and contribute effectively to society.



Dr. K. RAMAKRISHNAN
CHAIRMAN – KR Group



EXECUTIVE DIRECTOR'S MESSAGE

The Department of Mechanical Engineering at K. Ramakrishnan College of Engineering is committed to academic excellence, innovation, and industry-oriented learning. With advanced laboratories, experienced faculty, and a strong research culture, the department prepares students to become competent mechanical engineers with technical expertise, ethical values, and leadership skills to excel in their careers and serve society.



Dr. S. KUPPUSAMY
EXECUTIVE DIRECTOR –
KR Group



★ LEADERSHIP MESSAGES ★



PRINCIPAL'S MESSAGE

The Department of Mechanical Engineering at K. Ramakrishnan College of Engineering plays a vital role in shaping technically proficient and innovative engineers. The department focuses on delivering quality education through modern laboratories, experienced faculty, and research-driven learning. It strives to equip students with technical knowledge, practical skills, and ethical values to meet industrial challenges and emerge as successful professionals who contribute meaningfully to society.



Dr. D. SRINIVASAN
PRINCIPAL - KRCE



Dr. H. RAMAKRISHNAN
HoD / MECHANICAL

HOD'S MESSAGE



Welcome to the Department of Mechanical Engineering. Our mission is to bridge the gap between academic excellence and industrial requirement. Through our state-of-the-art laboratories and robust industry partnerships, we ensure our students gain the technical proficiency and practical experience necessary for a successful career. We take pride in our commitment to developing disciplined, competent, and ethical professionals who contribute meaningfully to the engineering community and society at large.



QUALITY
EDUCATION



RESEARCH &
INNOVATION



INDUSTRY
COLLABORATION



STUDENT
EXCELLENCE

K. Ramakrishnan College of Engineering (KRCE) is a private autonomous engineering institution established in 2008 near Samayapuram, Tiruchirappalli, affiliated with Anna University and approved by AICTE, with NAAC “A” grade accreditation and NBA accreditation for selected departments; the college offers undergraduate and postgraduate programs including CSE, AI & Data Science, IT, ECE, EEE, Mechanical Engineering, MBA, and M.E., and is known for its decent infrastructure, hostel facilities, digital library, placement training, technical clubs, and industry-oriented activities on its roughly 30-acre campus. KRCE is generally considered a mid-tier but improving engineering college in Tamil Nadu, particularly stronger in CSE/IT-related placements compared to core branches, with recruiters mainly from IT and service companies, while maintaining a comparatively strict academic and attendance system; the institution also promotes research through faculty publications and patents and is viewed as a reasonable option for students seeking affordable engineering education with good placement support in the Trichy region.

VISION & MISSION OF THE COLLEGE

VISION

- ❖ To achieve a prominent position among the top technical institutions

MISSION

- ❖ To bestow standard technical education par excellence through state of the art infrastructure, competent faculty and high ethical standards.
- ❖ To nurture research and entrepreneurship skills among the students in cutting edge technologies.
- ❖ To provide education that can be used as a tool to transform the students.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering was established in 2008 and currently offers undergraduate and postgraduate programs, namely B.E. Mechanical Engineering and M.E. Engineering Design. The department has an intake of 180 students for UG and 24 students for PG. It is an NBA-accredited department and has been recognized as an Anna University approved research centre with Ph.D. supervisors for both full- time and part-time research scholars. The department achieved NAAC “A” grade accreditation and holds autonomous status from the academic year 2020–2021 onwards. It is also recognized under UGC 2F & 12B status and certified with ISO 9001:2015 and ISO 14000 standards. The department is equipped with ten well-established laboratories along with a state-of-the-art Material Testing Laboratory. It also has advanced facilities such as Turnitin plagiarism detection software and an SAE garage for automotive innovation and student competitions. The faculty members are highly experienced, with an average experience of 8.9 years, and many hold doctoral degrees with strong research publications in reputed journals. The department promotes active student involvement in SAE activities such as BAJA, Auto Sports, Mega ATV, QBDC, SUVC, E-CART, Go-KART, and EFFI-CYCLE competitions. The department focuses on producing competent, ethical, and employable mechanical engineers with strong technical, professional, and soft skills. It aims to prepare graduates who can contribute effectively to industry and society through innovation and engineering excellence.

VISION

- ❖ To provide eminent mechanical engineers to the industries and society through quality education.

MISSION

- ❖ To impart quality professional education through state-of-the-art infrastructures.
- ❖ To motivate students and faculty to undertake research and development activities in the thrust areas of mechanical engineering.
- ❖ To carry out collaborative projects with industries and academics.

PROGRAM EDUCATIONAL OBJECTIVES

The PEOs of the programme are

PEO 1: Have a successful career in industry or opt for higher studies/research.

PEO 2: Analyze, synthesize and design mechanical & allied products addressing societal issues.

PEO 3: Exhibit technical expertise, communication skills and teamwork with Professionalism and ethical values.

PROGRAM SPECIFIC OUTCOMES

PSO1: Identify, formulate and solve engineering problems in three core streams of Mechanical Engineering, i.e., design engineering, thermal and fluids engineering and manufacturing engineering.

PSO2: Design, develop, test and implement energy efficient systems for required engineering applications.

FACULTY ACHIEVEMENTS:

JOURNAL PUBLICATIONS:

- ❖ Ismail Hossain, M. Aruna, A. Mohana Krishnan, S. Prabakaran, R. Venkatesh, C B Priya, V. Mohanavel & A. H. Sheikh Md Abul Kalam” semisolid stir processing of az91/tio nanocomposite analysis with sic exposure: behavior measures” 8th March 2024 - International Journal of Cast Metals Research
- ❖ Ismail Hossain, M. Aruna, A. Mohana Krishnan, S. Prabakaran, R. Venkatesh, C B Priya, V. Mohanavel, A.H. Sheikh & Md Abul Kalam” silicon carbide nanoparticles featured az63/bn alloy nanocomposite made by using liquid stir vacuum die cast: characteristics study” 8th March 2024 - International Journal of Cast Metals Research

- ❖ Mohana Krishnan Amarnath Sachin Sumathy Raj Karthigairajan Marimuthu, Priya Chathapuram Balasubramanian Venkatesh Rathinavelu Murugan Sakthivel, Manzoore Elahi M. Soudagar Sami Al Obaid Sulaiman Ali Alharbi” synth
- ❖ esis and characteristics study of epoxy composites made with various stacking of jute fiber through hand layup route” 1st April 2024 The International Journal of Advanced Manufacturing Technology. <https://doi.org/10.1007/s00170-024-13497-9>
- ❖ Sakthivel Perumal Mohana Krishnan Amarnath, Karthigairajan Marimuthu Prabakaran Subramaniam Venkatesh Rathinavelu, Duraisamy Jagadeesh” titanium carbonitride-coated cbn insert featured turning process parameter optimization during aa359 alloy machining” 12th April 2024” The International Journal of Advanced Manufacturing Technology. <https://doi.org/10.1007/s00170-024-13583-y>
- ❖ James, D. J. D., Ramakrishnan, H., Pandiyan, G. K., Bharath, M., Gokul, P., Akash, G., & Arun, R. (2024). Experimental Investigation and Optimization by Evaluation Based on Distance from Average Solution Approach for Wire Electrical Discharge Machining of Super Duplex Stainless Steels. *Journal of Materials Engineering and Performance*, 33(3), 1424-1434.
- ❖ Raghunathan, V., Ayyappan, V., Dhilip, J. D. J., Sundarrajan, D., Rangappa, S. M., & Siengchin, S. (2024). Influence of alkali-treated and raw Zanthoxylum acanthopodium fibers on the mechanical, water resistance, and morphological behavior of polymeric composites for lightweight applications. *Biomass Conversion and Biorefinery*, 14(19), 24345-24357.

- ❖ Srinivasan, D., Fakkir, M., Lenin, K., James, D. J. D., & Pandiyan, G. K. (2024). Evaluation of Wire Electrical Discharge Machining Performance Features on EN AW-6082 T6 Aluminum Alloy and Optimization of Machining Characteristics. *Journal of Materials Engineering and Performance*, 33(7), 3546-3558.
- ❖ Dhilip, J. D. J., Raghunathan, V., Mohan, R., Ayyappan, V., Rangappa, S. M., & Siengchin, S. (2024). Mechanical and flammability properties of ultrasonically processed silane-treated areca-banana fiber-reinforced epoxy composites for lightweight applications. *Biomass Conversion and Biorefinery*, 1-14.
- ❖ G, K. P., Daniel James D, J., T, P., & Sivalingam, V. (2024). Synthesis, characterisations and applications of boron nitride based hybrid metal matrix composites. *Advances in Materials and Processing Technologies*, 1-24.
- ❖ N. Karthikeyan, P. Pradeepa, Pradeep Kumar Verma, Vijay Kumar Pandey, R. Venkatesh, Melvin Victor De Poures, S. Selvarani, A. H. Seikh, and A. Iqbal published the research article titled “Effect of Collective Parameters Green Hydrogen Production Using Corn Cob and Assessment of Performance, Combustion and Emission Characteristics in Agricultural Diesel Engine” in *Environment, Development and Sustainability* in 2024.
- ❖ N. Karthikeyan, Karthigairajan M., S. Prabakaran, Lokesh Selvam, R. Venkatesh, C. B. Priya, Sami Al Obaid, Sulaiman Ali Alharbi, and M. A. Kalam published the research article titled “Blending Action of Pyrolysis Oil/Diesel Fuel Featured with Hydrogen on Compression Ignition Engine Performance and Emission Analysis” in *Petroleum Science and Technology* in 2024.

- ❖ Venkatesh R, Ramakrishnan H, Karthigairajan M, Subramaniam P, Priya C B, Melvin Victor D, Ismail H, Asiful Hossain S & Md Abul Kalam,' Effect of steam gasification parameters on hydrogen extraction from indirect land use change crops, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. (2023). <https://doi.org/10.1080/15567036.2023.227266>. SCI (Q2).
- ❖ R, Venkatesh, Agrawal, Amit, Malarkodi, K., Ramakrishnan, H., Priya, C, Alothman, Asma, Ghosh. A "Features of nano TiO₂ on metallographic and optical performance of polyvinyl alcohol nanocomposite film", Optical and Quantum Electronics, 56(5), (2024).
- ❖ Jafrey Daniel James D, Ganesh N, Pandiyan Karthik G (2022). Machinability Analysis and Optimization by the Taguchi-gra-pca Approach of PMEDM Process Parameters of Monel K 500. Functional Composite Materials: Manufacturing Technology and Experimental Application. Bentham Science Publishers. Accepted for publication.
- ❖ Karthik Pandiyan G, T Prabakaran and Jafrey Daniel James D. Optimization of Machining Process Parameters to Calculate Surface Finish, Metal Removal Rate, and Cutting Force on AA6061-T6 Alloy. Functional Composite Materials: Manufacturing Technology and Experimental Application. Bentham Science Publishers. Accepted for publication.
- ❖ Sakthi Balan, G., Aravind Raj, S., Jafrey Daniel James, D., & Ramesh, M. (2024). Effect of Plastic Particulate Addition on Polymer Composite Reinforced with Prosopis juliflora Fiber. Sustainable Machining and Green Manufacturing, 13-32.
- ❖ Jafrey Daniel James, D., Ramesh, M., Sakthi Balan, G., & Aravind Raj, S. (2024). Manufacturing Issues and Process Parameters of Composite

Filament for Additive Manufacturing Process. Sustainable Machining and Green Manufacturing, 115-129.

- ❖ Sivananthan, S., & Chelladurai, S. J. S. (2024). Machinability studies of Im24 aluminum alloy-zrb2-fly ash reinforced hybrid composites using response surface methodology. *Surface Review and Letters*, 2550075.
- ❖ Palanisamy, C., Parvathikumar, G., Gnanasekaran, S., Chelladurai, S. J. S., Sivananthan, S., Adhavan, B. & Tibebu, S. (2023). Study on the Behavior of Self-Cleaning Impregnated Photocatalyst (TiO₂) with Cement Mortar. *Advances in Materials Science and Engineering*, 2023(1), 3571526.
- ❖ Venkatesh, R., Sakthivel, P., Selvakumar, G., Mohana Krishnan, A., Purushothaman, P., & Priya, C. B. (2023). *Mechanical and thermal properties of a waste fly ash-bonded Al-10Mg alloy composite improved by bio ceramic silicon nanoparticles*. *Biomass Conversion and Biorefinery*.
- ❖ 22. Faisal, M. H., Mohana Krishnan, A., Prabakaran, S., Venkatesh, R., Satish Kumar, D., Christysudha, J., Seikh, A. H., Iqbal, A., & Ramaraj, E. (2023). *Optimization and prediction of CBN tool life sustainability during AA1100 CNC turning by response surface methodology*. **Heliyon**, **9**, e18571. <https://doi.org/10.1016/j.heliyon.2023.e18571>
- ❖ 23. Hossain, I., Aruna, M., Mohana Krishnan, A., Prabakaran, S., Venkatesh, R., Priya, C. B., Mohanavel, V., Seikh, A. H., & Kalam, M. A. (2024). *Semisolid stir processing of AZ91/TiO₂ nanocomposite analysis with SiC exposure: Behavior measures*. *International Journal of Cast Metals Research*, 37(2), 95–108. <https://doi.org/10.1080/13640461.2024.2327043>.

- ❖ Veeman, D., Ram, P. M. B., Ravichandran, M., & Katiyar, J. K. (2024). Tribological, mechanical, and metallurgical performance of natural fiber-reinforced composites: A comprehensive review. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 238(3), 603–631. <https://doi.org/10.1177/13506501231211625>
- ❖ Venu, H., Chairman, C. A., Ravichandran, M., Kiong, T. S., Kannan, S., Razali, N. M., et al. (2024). Analysis of mechanical properties of basalt fabric reinforced fly ash filled vinyl ester composites using multi criteria decision making technique. Thermal Science and Engineering Progress, 54, 102869. <https://doi.org/10.1016/j.tsep.2024.102869>
- ❖ David, P., Gopathy, V., Ravichandran, M., Mohanavel, V., Barve, A., Raja, T., et al. (2024). Fabrication and development of high temperature resisted bronze composites using 3D printed gate pattern through stir casting route. Thermal Science and Engineering Progress, 53, 102710. <https://doi.org/10.1016/j.tsep.2024.102710>

FDP/WORKSHOP/SEMINAR/CONFERENCE

- ❖ Successfully completed NPTEL Online Certification (Funded by the Ministry of HRD, Govt. of India - IIT-Guwahati) course “Fundamentals of Convective Heat Transfer,” on Jul – Oct 2023 (12 Week Course).
- ❖ Dr. K. Lenin, Mr. Manimaran. M and Mr. S. Raghuvaran participated in the scheme of SPARC sponsored Workshop on “Advanced Materials for Thermal Energy Applications”, NIT-Trichy from 11th to 15th December 2023.
- ❖ N. Karthikeyan attended the Five-Day Faculty Development Program (FDP) on “Composite Additive Manufacturing” conducted from 18.12.2023 to 22.12.2023 at National Institute of Technology

Tiruchirappalli.

- ❖ N. Karthikeyan successfully completed the Introduction to Composites course in 2023, achieving Pass with Elite certification (62%).
- ❖ H. Ramakrishnan attended the Faculty Development Program (FDP) on “Smart Manufacturing” conducted at SRM Institute of Science and Technology from 18.12.2023 to 23.12.2023.
- ❖ Mr. S. Raghuvaran completed the AICTE Online UHV-II FDP conducted by All India Council for Technical Education for 6 days from 16.10.2023 to 21.10.2023.
- ❖ Mr. S. Raghuvaran attended the FDP on “Advanced Materials for Thermal Energy Applications” conducted at National Institute of Technology Tiruchirappalli for 5 days from 11.12.2023 to 15.12.2023.
- ❖ H. Ramakrishnan attended the Faculty Development Program (FDP) on “Additive Manufacturing Advancements in Different Applications” conducted at SRM Institute of Science and Technology from 26.12.2023 to 31.12.2023.
- ❖ H. Ramakrishnan attended the Faculty Development Program (FDP) on “3D Printing” conducted at SASTRA Deemed University from 25.06.2024 to 29.06.2024.
- ❖ Dr. Jafrey Daniel James attended the FDP on “Applications of Artificial Intelligence in Mechanical Engineering Systems” conducted for 5 days from 05.02.2024 to 09.02.2024 at Karunya Institute of Technology and Sciences.
- ❖ Dr. D. Jafrey Daniel James actively participated in the 6-Day Faculty Development Programme on "Futuristic Research in Mechanical

Engineering" conducted by SRM Institute of Science and Technology from 08.08.2023 to 13.08.2023.

- ❖ Dr. D. Jafrey Daniel James participated in the 5-Day FDP on "Advanced Modelling and Simulations for Engineers" conducted by NIT Puducherry from 18.12.2023 to 22.12.2023.
- ❖ Dr. D. Jafrey Daniel James attended the 5-Day FDP on "Applications of Artificial Intelligence in Mechanical Engineering Systems" organized by Karunya Institute of Technology and Sciences from 05.02.2024 to 09.02.2024.
- ❖ Mr. Manimaran. M participated in the scheme of SPARC sponsored Workshop on "Advanced Materials for Thermal Energy Applications", NIT-Trichy from 11 th to 15 th December 2023.
- ❖ Mr. A. Mohanakrishnan attended a 5-Day Faculty Development Programme on "3D Printing" organized by SASTRA Deemed University, Thanjavur, from 22.06.2024 to 27.06.2024.
- ❖ The Department of Mechanical Engineering proudly records that 67 Final Year students published their research papers in the IEI-TLC Sponsored International Conference on Emerging Trends in Engineering Science and Technology (ICEETEST-2024) held at K. Ramakrishnan College of Engineering on 23-24 May 2024. The conference proceedings were published with ISBN: 978-93-94293-54-0, showcasing the students' research aptitude and commitment to academic excellence.

NPTEL COURSE BY FACULTY

- ❖ R. Naveenkumar successfully completed the NPTEL Online Certification (Funded by the Ministry of Education, Govt. of India – IIT Madras) course "Non-

conventional Energy Resources” during Jan–Apr 2024 (12-week course) with 55% (Successfully Completed).

- ❖ Jafrey Daniel James D successfully completed the NPTEL Online Certification (Funded by the Ministry of Education, Govt. of India – IIT Roorkee) course “Manufacturing Guidelines for Product Design” during Jan–Mar 2024 (8-week course) with 70% (Elite).
- ❖ N. Karthikeyan successfully completed the NPTEL Online Certification (Funded by the Ministry of Education, Govt. of India – IIT Roorkee) course “Mechatronics” during Feb–Apr 2024 (8-week course) with 49% (Successfully Completed).
- ❖ M. Manimaran successfully completed the NPTEL Online Certification (Funded by the Ministry of Education, Govt. of India – IIT Guwahati) course “Thermal Engineering: Basics and Applied” during Jan–Apr 2024 (12-week course) with 70% (Elite).



Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to
MANIMARAN M
for successfully completing the course

Thermal Engineering: Basics and Applied

with a consolidated score of **70** %

Online Assignments	20.16/25	Proctored Exam	49.5/75
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Total number of candidates certified in this course: **61**

Jan-Apr 2024
(12 week course)



Prof. T. V. Bharat
Head, Centre for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



FREE ONLINE EDUCATION
swayam
The Education Revolution

Roll No: NPTEL24ME62S1268600794

To verify the certificate 

No. of credits recommended: 3 or 4

- ❖ S. Rajaram successfully completed the NPTEL Online Certification (Funded by the Ministry of Education, Govt. of India – IIT Kharagpur) course “Product Engineering and Design Thinking” during Jan–Mar 2024 (8-week course) with 73% (Elite).

- ❖ S. Nandha Gopan successfully completed the NPTEL Online Certification (Funded by the Ministry of Education, Govt. of India – IIT Roorkee) course “Mechatronics” during Feb–Apr 2024 (8-week course) with a consolidated score of 57% (Successfully Completed).



Huge congratulations to Jafrey Daniel James D for being officially recognized as an NPTEL Discipline Star (Jan-Apr 2024) in Mechanical Engineering! To earn this recognition, a candidate must complete over 50 weeks of learning in the same discipline and maintain a final score of 55 in each subject. That

takes an incredible amount of dedication, consistency, and hard work. Here's to your academic excellence and dedication to continuous learning. Wishing you the absolute best in all your future engineering endeavors!

EVENTS ORGANIZED

- ❖ Dr. K. Lenin organized the Cybercrime Awareness Program held for 1 day on 19.03.2024 at K. Ramakrishnan College of Engineering, with Mr. Ganesh Kumar, Consultant Cyber Forensic Analyst, as the resource person.
- ❖ Dr. K. Lenin organized the One Day Awareness Program on Tamil Nadu Public Service Commission (TNPSC) on 19.02.2024 at K. Ramakrishnan College of Engineering, with Mr. Ramamoorthy, Founder and Education Director, Viswa IAS Academy, Trichy as the resource person.
- ❖ Dr. K. Lenin organized the One Day Awareness Program on Union Public Service Commission (UPSC) on 20.02.2024 at K. Ramakrishnan College of Engineering, with Mr. P. T. Arun IPS, Founder and Academic Director, Pathways Academy, Trivandrum as the resource person.
- ❖ Dr. K. Lenin organized the Cybercrime Awareness Program held for 1 day on 19.03.2024 at K. Ramakrishnan College of Engineering, with Mr. Ganesh Kumar, Consultant Cyber Forensic Analyst, as the resource person.

FACULTY CONTRIBUTIONS AS RESOURCE PERSONS

- ❖ The Department proudly congratulates Dr. K. Lenin for serving as a Resource Person on “The Future of Welding Technology: Advancements, Trends and Implications” at Adhi College of Engineering and Technology, Chennai, on 16 April 2024. His session highlighted future directions and innovations in welding technology.



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Samayapuram, Tiruchirappalli – 621 112, Tamil Nadu, India.



DEPARTMENT OF MECHANICAL ENGINEERING



Hearty Congratulations
to our esteemed faculty member

Dr. K. Lenin

for serving as a Resource Person on
**“The Future of Welding Technology:
 Advancements, Trends and Implications”**
 at Adhi College of Engineering and Technology,
 Chennai,
 on **16 April 2024.**

His session highlighted future directions
and innovations in welding technology.

**RESOURCE
PERSON**



ADHI
COLLEGE OF ENGINEERING
& TECHNOLOGY

We appreciate his valuable contribution to academic excellence!

- ❖ The Department congratulates Dr. D. Jafrey Daniel James for serving as a Resource Person on “Additive Manufacturing” at Kendriya Vidyalaya School, Tiruchirappalli, on 17 May 2024. His session introduced students to emerging manufacturing technologies and their industrial applications.



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DEPARTMENT OF MECHANICAL ENGINEERING



Hearty Congratulations
to our esteemed faculty member

Dr. D. Jafrey Daniel James

for serving as a Resource Person on
“Additive Manufacturing”
 at Kendriya Vidyalaya School,
 Tiruchirappalli,
 on **17 May 2024.**

His session introduced students to emerging
manufacturing technologies and their industrial applications.

**RESOURCE
PERSON**



**KENDRIYA VIDYALAYA
SANGATHAN**

We appreciate his valuable contribution to academic excellence!

- ❖ The Department proudly acknowledges Mr. S. Sivananthan for delivering a session on “AR/VR Technology” at Kendriya Vidyalaya School, Tiruchirappalli, on 27 May 2024. His presentation provided participants with valuable exposure to augmented and virtual reality technologies and their future applications.



- ❖ The Department of Mechanical Engineering proudly appreciates Mr. S. Nandha Gopan for serving as a Resource Person on “3D Printing” at Kendriya Vidyalaya School, Tiruchirappalli, on 11 June 2024. His session provided valuable insights into additive manufacturing technologies and their industrial applications.

PLACEMENT DETAILS

The Department of Mechanical Engineering proudly congratulates **Mr. Naveen Arokiyaraj J., Mr. Ajith Pandiyan P., and Mr. Sundara Karthick K.** for securing placements at **Anand Engineering Company** with an attractive

annual package of ₹1,80,000. Their achievement is a testament to their hard work, perseverance, and technical excellence. The department appreciates the efforts of the students, faculty mentors, and placement team in making this success possible. We wish them a prosperous professional journey and continued growth in their careers. **May they achieve greater milestones and bring further laurels to the institution.**



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 Samayapuram, Tiruchirappalli – 621 112, Tamil Nadu, India.



DEPARTMENT OF MECHANICAL ENGINEERING

Heartily Congratulations
 the following students for being successfully placed in



ANAND ENGINEERING COMPANY

WITH AN ATTRACTIVE PACKAGE OF / ₹ 1,80,000 PER ANNUM

 Naveen Arokiyaraj J MECHANICAL ENGINEERING	 Ajith Pandiyan P MECHANICAL ENGINEERING	 Sundara Karthick K MECHANICAL ENGINEERING
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We wish them a successful and prosperous career ahead!

The Department of Mechanical Engineering proudly congratulates Mr. Deva R. and Mr. Panneer Selvam S. for securing placements at Rane Group with an attractive annual package of ₹3,00,000. Their achievement reflects their dedication, perseverance, and strong technical competencies developed throughout their academic journey. The department appreciates the continuous support of the faculty members and placement team in guiding the students toward success. We wish them a bright and rewarding professional career filled with growth, innovation, and excellence. May they continue to achieve greater milestones and bring laurels to the institution.



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DEPARTMENT OF MECHANICAL ENGINEERING

**ACADEMIC YEAR
2023 – 2024**

Heartily Congratulations

the following students for being successfully placed in



Expanding Horizons
RANE GROUP

WITH AN ATTRACTIVE PACKAGE OF ₹ 3,00,000 PER ANNUM



Deva R

MECHANICAL
ENGINEERING



Panneer Selvam S

MECHANICAL
ENGINEERING

We wish them a successful and prosperous career ahead!

The Department of Mechanical Engineering proudly congratulates **Mr. Kumar G.** for securing placement at **Renault Nissan** with an attractive annual package of **₹4,25,000**. This remarkable achievement reflects his dedication, perseverance, and strong technical abilities cultivated throughout his academic journey.



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DEPARTMENT OF MECHANICAL ENGINEERING

**ACADEMIC YEAR
2023 – 2024**

Heartily Congratulations

the following student for being successfully placed in



RENAULT NISSAN

WITH AN ATTRACTIVE PACKAGE OF ₹ 4,25,000 PER ANNUM



Kumar G

MECHANICAL ENGINEERING

We wish him a successful and prosperous career ahead!

The department appreciates the support and guidance provided by the faculty members and placement team in achieving this success. We wish him a bright and prosperous professional career filled with continuous learning, growth, and excellence.

May he achieve greater milestones and bring further laurels to the institution.

K. RAMAKRISHNAN COLLEGE OF ENGINEERING
— An Autonomous Institution —
Permanently Affiliated to Anna University Chennai
Approved by AICTE New Delhi | ISO 9001:2015 Certified Institution
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Samayapuram, Tiruchirappalli – 621 112, Tamil Nadu, India.

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR
2023 – 2024

Heartily Congratulations
the following students for being successfully placed in

RENAULT
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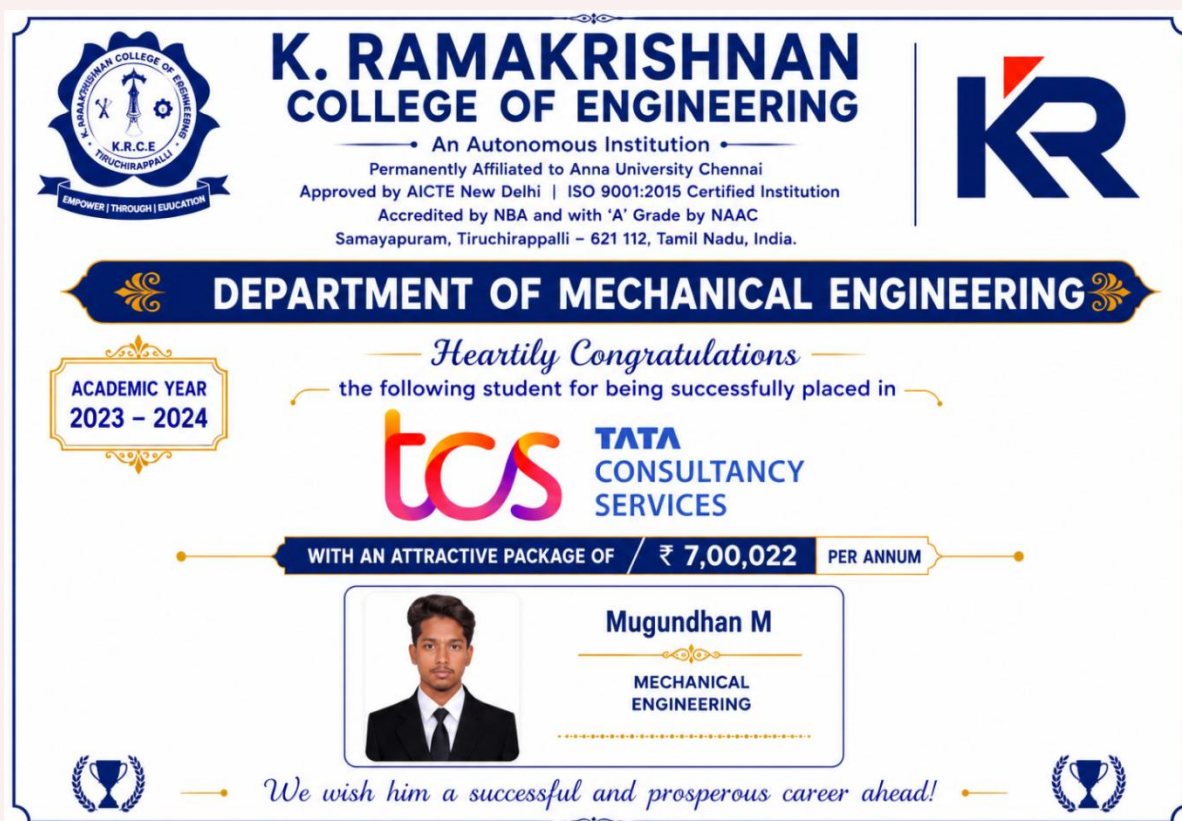
Aathithyan N
MECHANICAL ENGINEERING

Gokul D
MECHANICAL ENGINEERING

Sundar V
MECHANICAL ENGINEERING

We wish them a successful and prosperous career ahead!

The Department of Mechanical Engineering proudly congratulates **Mr. Aathithyan N., Mr. Gokul D., and Mr. Sundar V.** for securing placements at **Renault Automotive** with an attractive annual package of **₹4,25,000**. Their success is a testament to their hard work, perseverance, and technical excellence throughout their academic journey. The department appreciates the continuous support of the faculty members and placement team in guiding the students toward this achievement. We wish them a rewarding professional career filled with growth, innovation, and success.



The Department of Mechanical Engineering proudly congratulates **Mr. Mugundhan M.** for securing placement at **Tata Consultancy Services (TCS)** with an impressive annual package of **₹7,00,022**. This remarkable achievement reflects his dedication, perseverance, and strong technical capabilities developed throughout his academic journey. The department appreciates the continuous support of the faculty members and placement team in guiding him toward success. We wish him a rewarding professional career filled with innovation, growth, and excellence.

May he continue to achieve greater milestones and bring pride to the institution.

PATENT PUBLICATIONS:

- ❖ Harsath, S., Raghuvaran, S., & Ramakrishnan, H. (2024). Semi-Automated Coconut Husk Peeler Machine (South African Patent Application No. 2023/06471). Granted January 31, 2024.

- ❖ Ajay Senthilkumar, Karpaga Harish Senthil Kumar, Karthi Jeeva, Veluchamy Balakrishnan, and Venkat Raman R K are the inventors of the patent titled “Grain Dehydration and Collecting Machine”, registered under Patent No. 2024/06447 on 22-08-2024 at K. Ramakrishnan College of Engineering, Department of Mechanical Engineering.
- ❖ Dr. D. Srinivasan, P. Ragul, K. Kaarthick, H. Ramakrishnan, and A. Albert Francis are the inventors of the Patent “A Tree Climbing System for Coconut Harvesting”, registered under Application No. 202241059719, granted on 26-04-2024 at KRCE.
- ❖ Dr. D. Srinivasan, D. Bhuvanendran, P. Ragul, K. Kaarthick, H. Ramakrishnan, and A. Albert Francis are the inventors of the Patent “An Automated Ceiling Fan Blade Cleaning Machine”, registered under Application No. 202241059717, granted on 26-04-2024 at KRCE.
- ❖ M. Jayachandran, K. Vinith, S. Susthiga, N. Mathivanan, H. Ramakrishnan, and K. Chellamuthu are the inventors of the Patent “Adjustable Back Rest Support for Commuter Type Two Wheeler Riders”, registered under Application No. 202241042692, granted on 02-02-2024 at KRCE.
- ❖ Naveenkumar, R., Ravichandran, M., Venkatesan, K. S. P., Sanjay, V. J., Ram Kumar, S., & Sudharson, R. (2024). A Modified Solar Water Heater Integrated with Parabolic Trough Collector and Phase Change Material (Indian Patent Application No. 202441011388; Publication No. 10/2024). Published March 8, 2024.
- ❖ Srinivasan, D., & Albert Francis, A. (2024). A Dent Removal Device (Indian Patent Application No. 202441012739; Publication No. 11/2024). Published March 15, 2024.
- ❖ Srinivasan, D., & Ragul, P. (2024). Rope Car with Advanced Safety

Features (Indian Patent Application No. 202241042694; Publication No. 05/2024). Published February 2, 2024.

- ❖ Ramesh, M., Kishore, U., Lohit Shriram, T., Manikandan, P., & Nandhakumar, P. (2024). Integrated Welding Fixture (Indian Patent Application No. 202241042695; Publication No. 05/2024). Published February 2, 2024.
- ❖ Muruganantham, T., Nagarajan, N. R., Karthick, M., Ragul, P., Dheepak, S., Karthik, S., Thameem Raja, S., & Diwakar, M. (2024). System to Filter Waste from River Water (Indian Patent Application No. 202241042693; Publication No. 05/2024). Published February 2, 2024.
- ❖ Srinivasan, D., Ragul, P., & Kaarthick, K. (2024). An Automatic Wall Cleaning System with Advanced Features (Indian Patent Application No. 202241070815; Publication No. 24/2024). Published June 14, 2024.
- ❖ Ragul, P., Pushparaj, P., & Kaarthick, K. (2023). An Automatic Wall Cleaning System with Advanced Features (German Patent Application No. 20 2023 103 462.4). Granted July 4, 2023.
- ❖ Sabreshwar, S., Raveendhran, M., & Prakash, B. (2024). Virtual Reality Based Drone Driven Painting and Inspection System (South African Patent Application No. 2023/06476). Granted January 31, 2024.

NPTEL COURSE

- ❖ Congratulations to **Naveenkumar T** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Arun R** for achieving **Elite Certification** in the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.

- ❖ Congratulations to **Sanjay R** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Kamalesh N** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **S. Mohamed Uvais** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Murali R. B.** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Ajay S** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Jaganath N** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Karthi J** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Sundharamoorthy R** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Ilavaenil M** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Karpaga Harish S** for successfully completing the NPTEL course "**Manufacturing Process Technology I & II**" on 27 April 2024.
- ❖ Congratulations to **Ahamed A** for achieving **Elite Certification** in the NPTEL course "**Quality Design and Control**" on 20 April 2024.

- ❖ Congratulations to **Hari Khara Sudhan B** and **Harishankar S** for achieving **Elite Certification** in the NPTEL course "**Welding Processes**" on 21 April 2024.
- ❖ Congratulations to **Ashfaq A, Praveenkumar R, Muthu Thirupathi M, S. Naveen, and Karthikeyan V** for successfully completing the NPTEL course "**Welding Processes**" on 21 April 2024.

INTERNSHIP DETAILS

- ❖ Mr. B. Harish, Mr. T. Madhavaprasanth, and Mr. R. Nitheeshwaran, Final Year Mechanical Engineering students, successfully completed a Six-Month Internship at Jagannathan Engineering Works from March to September 2024.
- ❖ Mr. D. Samjoshuva, Mr. R. Hariharan, and Mr. J. Edwin Santhosh, Final Year Mechanical Engineering students, successfully completed a Two-Month Internship at Acoustics India Private Limited from January to March 2024.
- ❖ Mr. G. Aravindh, Final Year Mechanical Engineering, successfully completed a Four-Month Internship at Rinex Technologies Private Limited from 19 February 2024 to 19 June 2024. The internship offered valuable industry exposure, practical training, and skill development opportunities, strengthening his technical expertise and professional competencies.
- ❖ Mr. A. Kavin Joel Theodore, Final Year Mechanical Engineering, for successfully completing an internship programme at QEagle Assurance Pvt. Ltd. from 05 February 2024 to 06 May 2024.
- ❖ The Department of Mechanical Engineering proudly congratulates Mr. A. Ibrahim Shafi, Final Year Mechanical Engineering, for successfully

completing an internship programme at the Institute of Inspection Technology from 07 February 2024 to 07 April 2024. Through this internship, he gained hands-on experience in inspection techniques, quality control practices, and industrial testing procedures, enhancing his technical knowledge and professional competencies.

- ❖ Mr. S. N. Thanmai successfully completed an internship at Brakes India Private Limited from 19.02.2024 to 19.06.2024, acquiring practical exposure to manufacturing and industrial operations.
- ❖ Mr. R. Abdul Bashith successfully completed an internship at TTIS NDT from 06.02.2024 to 06.05.2024, gaining hands-on experience in Non-Destructive Testing and quality inspection methodologies.
- ❖ Mr. G. Kumar, Final Year Mechanical Engineering, successfully completed a Six-Month Internship at Renault Nissan Technology & Business Centre India from 18 January 2024 to 18 July 2024. The internship provided valuable exposure to the automotive industry, practical engineering experience, and professional skill development, strengthening his technical and career competencies.
- ❖ Ms. R. P. Jaanagi, Final Year Mechanical Engineering, successfully completed a Two-Month Internship at GET Drafting and Tooling from 04 April 2024 to 04 June 2024. The internship provided valuable industry exposure, practical training, and skill development opportunities, strengthening her technical expertise and professional competencies.
- ❖ Mr. Nirmal and Mr. Naveen, Final Year Mechanical Engineering students, successfully completed a Two-Month Internship at ZF Commercial Vehicle Control Systems India Ltd. from 01 March 2024 to 02 May 2024. The internship offered valuable industry exposure,

practical training, and technical skill development, enhancing their professional competencies and career readiness.

- ❖ Mr. J. Balakarthikeyan and Mr. P. Jerome Sebastian, Mechanical Engineering students, successfully completed an In-Plant Training Programme at Southern Railways, Tiruchirappalli Division, from 24.06.2024 to 29.06.2024. The programme provided valuable industrial exposure to railway operations, maintenance systems, and engineering practices, enriching their practical knowledge and technical skills.

Heartiest Congratulations!



K. RAMAKRISHNAN COLLEGE OF ENGINEERING
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Tiruchirappalli – 621 112

DEPARTMENT OF MECHANICAL ENGINEERING



MSME
MICRO, SMALL & MEDIUM ENTERPRISES
सूक्ष्म, लघु एवं मध्यम उद्यम

Congratulations!

Hearty congratulations to our talented students for their outstanding achievement in

MSME IDEA HACKATHON 3.0

SANCTIONED AMOUNT

₹ 13,50,000 /-

for the invention entitled

"SMART PAINTING TECHNOLOGY"



TEAM MEMBERS : JAANAGI R P | DEVA R
MENTOR : Mr. M. MANIMARAN M.E / AP - Mech.

TEAM MEMBERS

1. JAANAGI R P
2. DEVA R

MENTOR

Mr. M. MANIMARAN
M.E / AP - Mech.

Proud of your achievement!
Keep Innovating.
Keep Inspiring!

YOUR INNOVATION. OUR PRIDE. A STEP TOWARDS A BETTER INDIA!

The Department of Mechanical Engineering, K. Ramakrishnan College of Engineering, congratulates **Ms. Jaanagi R. P.** and **Mr. Deva R.** (IV Year

Mechanical Engineering) for securing **₹13.50 Lakhs** in **MSME Idea Hackathon 3.0** for their innovative project **“Smart Painting Technology.”**

The project was successfully mentored by **Mr. M. Manimaran, M.E., Assistant Professor, Mechanical Engineering.**

We are proud of your outstanding achievement and wish you greater success in your future innovations.

Your Innovation, Our Pride!

Heartiest Congratulations!



The Department of Mechanical Engineering proudly congratulates our **FKDC 2023 Team** for their outstanding participation in the **Formula Kart Design Challenge 2023**. Your innovation, teamwork, dedication, and engineering excellence have brought great pride to the institution.

May you continue to accelerate towards greater achievements and inspire future engineers.

Keep Innovating, Keep Racing, Keep Winning!

Your Passion. Your Engineering. Our Pride.

Heartiest Congratulations!

PATENT RECORD:

The Management, Principal, Faculty, and Students of **K. Ramakrishnan College of Engineering** extend their warmest congratulations on achieving recognition in the **India Book of Records** for the remarkable accomplishment of securing the **maximum number of national and international patents along with other students of a college.**





This prestigious achievement reflects an unwavering commitment to innovation, research excellence, and intellectual creativity. Your dedication and pioneering spirit have brought immense pride and honor to the institution and serve as an inspiration to aspiring innovators.

May this milestone be the beginning of many more accomplishments in your journey of research, invention, and nation-building.

Congratulations on this extraordinary feat! Keep innovating, inspiring, and creating a better future.

"Innovation is not just an achievement; it is a legacy that inspires generations."