

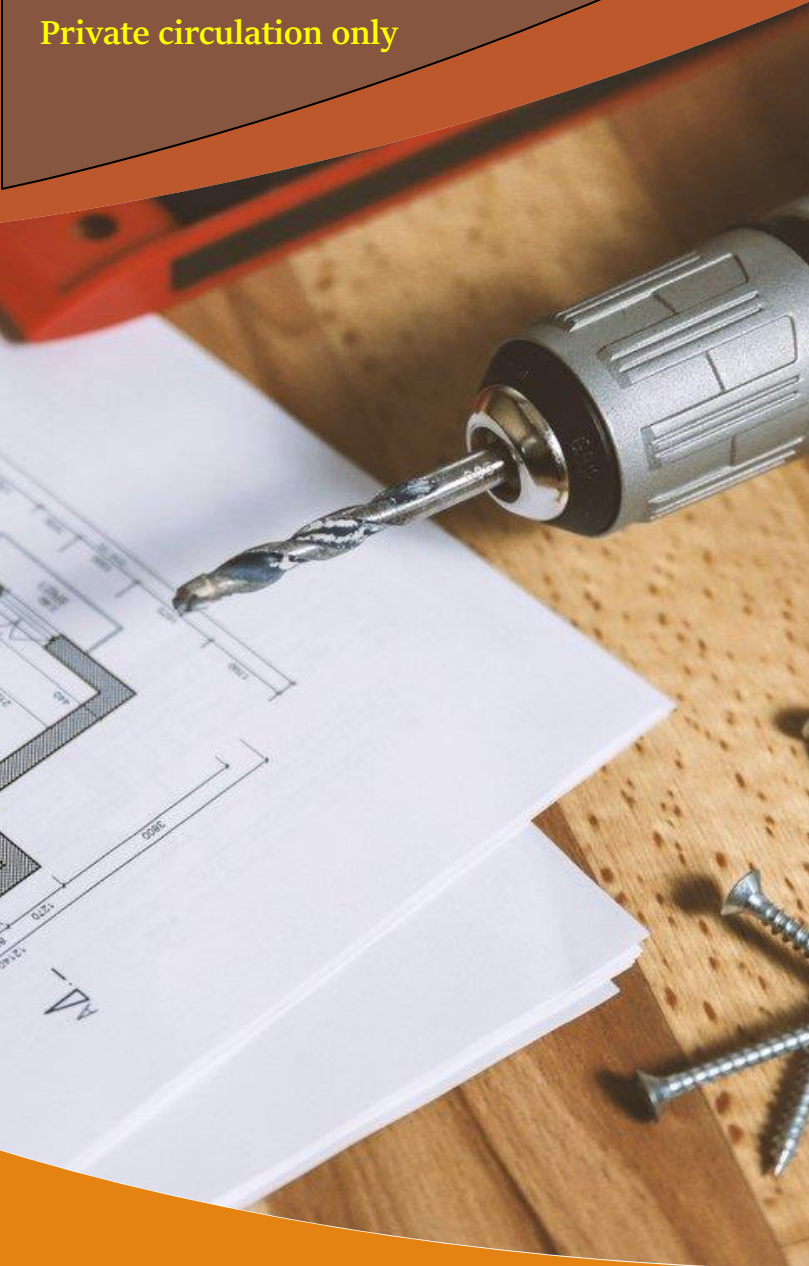
# RESONANCE

Newsletter for Mechanical Engineering



Volume 3 | Issue 2 | January 2022

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## Department Vision

To impart knowledge to our students in an ambience of Humanity, Wisdom, Intellect, Creativity of Innovation, in order to nurture them culturally and ethically rich professionals with bright future.

## Department Mission

1. To impart quality education to produce mechanical engineers and enhance their skills to become world renowned professionals.
2. To establish Centers of Research Excellence to inculcate research acumen in faculty and students on the areas like, machining, biomechanics, biofuels, composites, and energy.
3. To provide state-of-the-art education and training programs to the faculty and student fellowship.

Department of Mechanical Engineering, SRMIST, Kattankulathur.

<https://www.srmist.edu.in/engineering/department-of-mechanical-engineering/about-the-department>

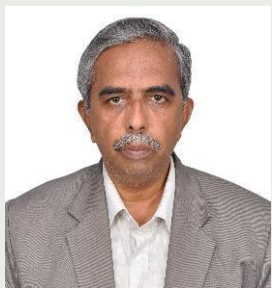
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## About the Department

The Department of Mechanical Engineering is one of the pioneering departments of SRM IST with a faculty strength of 115. As of now, there are 55 faculty members with PhD qualifications and the remaining are pursuing their research. The department is functionally divided into three broad areas of specialization: (i) Design (ii) Manufacturing and (iii) Thermal Engineering. The National Board of Accreditation (NBA) had accredited the B.Tech - Mechanical Engineering program for Six Year from 2021-22 to 2026-27. The B.Tech - Mechanical Engineering program at Kattankulathur campus is accredited by Accreditation Board for Engineering and Technology (ABET), USA. The department also offers M. Tech and Doctoral programs in various specializations with excellent stipends.

## Message from the Chairperson, School of Mechanical Engineering



**Dr. D. Kingsly Jeba Singh**  
Professor & Chairperson

I am happy to note that the next newsletter is ready in spite of the present pandemic situation. In the last six months, the Department of Mechanical Engineering has organized many webinars, faculty development programs, symposiums, etc. A few MoUs are also signed. I hope this effort will definitely enrich our environment with academic rigour required to teach the students of 21st century. The department has initiated steps to develop / teach a few courses through online platform. To make our students industry-ready, the department has collaborative activities with industries, institutions, and professional bodies in addition to the intense academic curriculum with the state-of-the-art laboratories and research facilities. Industry sponsored

laboratories and industry grade machineries make it easy for the students to get training and do laboratory exercises in industry-like environment. In the coming years, the School of Mechanical Engineering wish to place the UG and PG programs as one among the leading academic programs of our country by embracing modern pedagogy and professional practices. With our research focussed faculty members, the department will continue to carry out activities with direct social impact (renewable energy, energy storage, smart materials, and electric vehicle technology) and promote translational research. I wish all the best for the academic, research and developmental activities in the department to achieve greater heights.

## Message from the Head, Department of Mechanical Engineering



**Dr. M. Cheralathan**  
Professor & Head

I am very pleased to note that our department's official newsletter 'RESONANCE' is appreciated very well. The newsletter invites a wider readership in the Institution. My heartfelt congratulations to the editorial team. The odd semester of 2021-22 has been full of exciting activities for the students, faculty, and staff in the Department of Mechanical Engineering at the SRM IST. The name and fame of the department and the institution depend on the calibre and achievements of the students and faculty members. We continued to excel in teaching, research, and service activities. Two of our inventions got the patent granted, two of our projects got funding from SERB, DST. We also published a good number of quality papers in high impact factor

international journals, performed good consultancy work and also involved in joint collaborative projects to strengthen research in diverse areas. I wish to record my hearty congratulations to those who have brought laurels to the department, appreciate all of you for working together as a team. Let this newsletter be a forum to exhibit the potential of students and faculty members with their literary skills and innovative ideas. I extend best wishes for the success of this endeavour.

### Ph.D., Awarded

1. **Mr. S. Balaji** successfully completed his Ph.D. public viva-voce oral examination on 3rd August 2021 at Vellore Institute of Technology, Chennai. Title: Development of an HHO gas generation system and utilization of HHO gas in a dual fuel CI engine.
2. **Mr. V. Rajasekar** successfully completed his Ph.D. public viva-voce oral examination on 8th August 2021 at SRM Institute of Science and Technology, Kattankulathur, Chennai. Title: Study on the Reduction of Nitric Oxide and Smoke Emissions in Jatropha Biodiesel Fuelled CI Engine using various techniques.
3. **Mr. D. Kumaran** successfully completed his Ph.D. public viva-voce oral examination on 09th August 2021 at Anna University, Chennai. Title: Experimental study on the influence of ball milling and surface treatment
4. **Mr. D. Premnath** successfully completed his Ph.D. public viva-voce oral examination on 22nd September 2021 at SRM Institute of Science and Technology, Kattankulathur, Chennai. Title: Heat Transfer Enhancement Studies in a Spherical Capsule During Solidification Process for Cool Thermal Energy Storage Applications.
5. **Mr. J. Santhakumar** successfully completed his Ph.D. public viva-voce oral examination on 10<sup>th</sup> January 2022 at SRM Institute of Science and Technology, Kattankulathur, Chennai. Title: Effect of various tool path strategies on the performance parameters in milling process.

### Funded Research and Consultancy Projects Accepted

1. **Prof. U. Mohammed Iqbal (PI)** and **Dr. R. Murugesan (CO-PI)** received a grant for the project titled “*A novel SPD Technique for processing Magnesium-Gadolinium rare earth alloy for aerospace applications*” from **SERB under Core Research Grant**. Total Fund Granted: **Rs. 10,83,500** & duration – 3 years. Sanctioned on: 24th November 2021. Project Number: CRG/2021/000499.



**Prof. U. Mohammed Iqbal, Manufacturing Division Head**, in the Department of Mechanical Engineering, SRM IST, Kattankulathur. **Project outline:** This research aims to improve the mechanical properties of Mg-Gd rare earth alloy processed by the Multi-channel angular twist extrusion process for aerospace applications. The current approach is divided into three main task areas, Viz. design and fabrication of die, experimental work (extrusion and cryo-rolling), microstructural analysis, and mechanical property testing. The outcome of this project will help suggest a novel defect-free material processed by a novel process suitable for aerospace applications.

2. **Dr. V. Thirunavukkarasu (PI)** and **Prof. M. Cheralathan (CO-PI)** received a grant for the project titled “*Study on design optimization of receiver for a solar parabolic dish concentrator*”, from **SERB under Core Research Grant**. Total Fund Granted: **Rs.16,64,000** & duration – 3 years. Sanctioned on: 24th November 2021. Project Number: CRG/2021/008389.



**Dr. V. Thirunavukkarasu, Assistant Professor** in the Department of Mechanical Engineering, SRM IST, Kattankulathur. **Project outline:** Solar receiver has a major role in solar thermal energy conversion in parabolic dish concentrator systems. The design of the receiver should be proper to receive the concentrated solar radiation and convert it to thermal energy with minimum heat loss. The project is aimed to perform experimental studies to develop an efficient cavity receiver for a 16m<sup>2</sup> Scheffler-type concentrator. The effect of various design parameters and the operating parameters will be studied in detail by carrying out energy and exergy analysis.



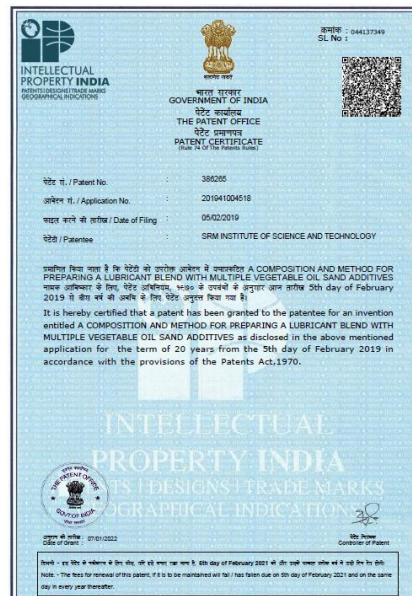
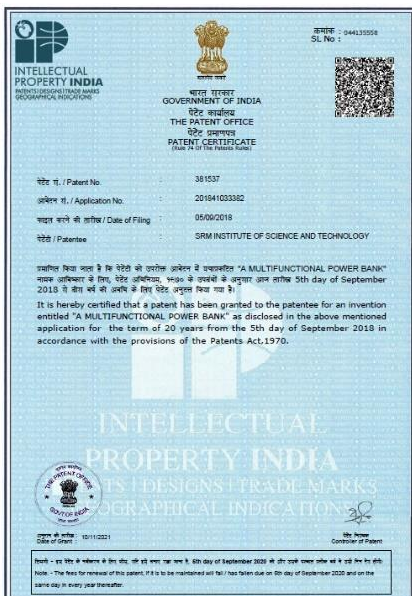
3. **Prof. P. Nandakumar, Dr. V. Magesh, Mr. D. Raja** received **Rs. 81,000/-** for the project titled “Design Optimization of the underframe for Rail Borne Maintenance Vehicle”, from OVIS Equipment Pvt Ltd, Hyderabad – a leading manufacturer of railway equipments. Duration – 2 months

## Funded Research Project Proposals Submitted

1. **Dr. S. Prabhu** as the Principal Investigator and **Dr. R. Ambigai** as the Co- Investigators submitted a project titled “Experimental Investigation on FGM based Cu-CNT Nano electrode for EDM Machining applications” under Collaborative Research Schemes Indira Gandhi Centre For Atomic Research (IGCAR) and UGC-DAE Consortium For Scientific Research, Indore Centre. project number: 2021/CRS/33/50/20 on 16th Aug 2021.
2. **Dr. R. Ambigai** as the Principal Investigator and **Dr. S. Prabhu** as the Co- Investigators submitted a project proposal under SERB-Power Grant, titled “Development of Copper based Functionally Graded CNT Electrode for EDM process”, for Total cost of Rs.27,24,000/- on 29th September 2021, File Number: SPG/2021/002438. (Duration 3 years)
3. Dr. Moola Mohan reddy, Curtin University, Malaysia as a PI, **Dr. S. Prabhu** & **Dr. R. Ambigai**, Sujana Debanath, Lim chye Ing, as a Co-PI Submitted the collaborative research work titled “Experimental Investigation on machining of Functionally Graded Al-CNT Composites for Automotive Engines” under Fundamental research grant scheme (FRGS), Ministry of Higher education, Malaysia, Total Cost of Rs. 30,00, 000/-(RM 165000) for the period of 3 years from June 2022 to May 2025. Application ID:427071.
4. **Dr. V. Mathanraj** (PI) submitted a project proposal titled “A Hybrid standalone Hydrogen Generation system” to DST. [Fund: INR- 33 lacks; Duration-3 years]. Status: Submitted.

## Patent Granted (Faculty and Students)

1. **Dr. S. Manikandan**, Priyanshu Tripathi, and Abhinav Srivastava, “A Multifunction Power Bank”. **Indian Patent Number: 381537** (Awarded on: 10-11-2021). Patentee: SRMIST. **Status: Granted.**
2. Shubrajit Bhaumik, **Prof. Shubhabrata Datta**, Behanan Roy Mathew (M.Tech CIM - Alumnus), “A Composition and Method for Preparing a Lubricant Blend with Multiple Vegetable Oil Sand Additives”. **Indian Patent Number: 386265** (Awarded on: 07-01-2022). Patentee: SRMIST. **Status: Granted.**



### Patent Published (Faculty and Students)

1. Dr. A. N. Reddy, Dr. K. Annamalai, Dr. Suresh D. Mane, Dr. K. Vasumathi, **Dr. G. Kasiraman**, Dr. P. Shanmugam, Dr. M. Rajeshwaran, Mr. V. R. Chincholi, Dr. A. Haiter Lenin, Mr. A. Joseph Arockiam, "Algae Oil Biofuel for Agricultural Machinery", Application Number: 202141032142A. Published on: 13-08-2021. Patentee: SRMIST. **Status: Published.**
2. Steve James, **Dr. R. Ambigai, Dr. S. Prabhu**, "An apparatus for Detecting Presence of Defects in a Pipeline", Application Number: 202241000424. Published on: 14-01-2022. Patentee: SRMIST. **Status: Published.**

### Awards/Recognitions (Faculty and Students)

1. **Prof. Shubhabrata Datta** is featuring the **Top 2% Most Cited Scientists**, as per the Elsevier - Stanford University's Oct 2021 survey report.



**Dr. Shubhabrata Datta**, presently *Research Professor* in the Department of Mechanical Engineering, and *Coordinator of Centre for Composites and Advanced Materials* at SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, did his Bachelors, Masters and PhD in Engineering from Indian Institute of Engineering Science and Technology, Shibpur, India (previously known as B.E. College Shibpur) in the field of Metallurgical and Materials Engineering. Dr. Datta has 30 years of teaching and research experience. *His research interest is in the domain of materials informatics and composites. Dr. Datta has published more than 150 papers in journals and peer-reviewed conference proceedings, with one authored and three edited books. Eleven of his graduate students have been conferred with PhD degree.* He was bestowed with the Exchange Scientist Award from Royal Academy of Engineering, UK and worked in the University of Sheffield, UK. He also worked Dept of Materials Science and Engineering, Helsinki University of Technology, Finland, Dept of Materials Science and Engineering, Iowa State University, Ames, USA and Heat Engineering Lab, Dept of Chemical Engineering, Åbo Akademi University, Finland as Visiting Scientist. He is a Fellow of Institution of Engineers (India), Associate Editor, Journal of the Institution of Engineers (India): Series D, and editorial board member of several international journals.

2. **Dr. R. Senthil** is featuring the **Top 2% Most Cited Scientists**, as per the Elsevier - Stanford University's Oct 2021 survey report.



**Dr. R. Senthil** is working as *Associate Professor*, in the Department of Mechanical Engineering, SRM Institute of Science and Technology, Chennai. He obtained B.E from the University of Madras in 1997, M.E from Anna University in 2000, and Ph.D. from SRM University (2017). He has two decades of experience and his research area is Solar Energy Conversion and Storage. He authored **70 articles in reputed international journals with a Scopus h-index of 17 & i-10 index of 23 with Scopus citations of about 600.** He reviews for 45 reputed international journals. He has delivered 26 Expert Talks on "*Solar Energy, Energy Storage*", "*Project-based Learning*" & "*National Education Policy 2020*". He completed 25 MOOCs. He is a member of ISES, SESI, IEI, IEEE, ISCA and ISTE. He serves as an Academic Expert, PhD DC Member, Thesis evaluator, Conference Chair, Keynote Speaker, etc.

3. Mr. J. Muthukumaran (Ph.D. Full-time Scholar), has received Rs. 50,000/- Ph.D. incentive for the year 2021 from Govt of Tamil Nadu to carry out his research in August 2021. This is the second incentive of the five years research incentives scheme. Guide: **Dr. R. Senthil.**
4. **First Prize:** R.V. Nanditta, Nagulash RB, Sattwik Harichandan, Rohan Mitra, Abdul Rahim IR won the **first prize** (Cash Award: **INR. 15000/-**) in the theme “Renewable Energy: Affordable Solar Cookers for Rural Households” at the **National Level Smart e-Hackathon Sustainable Rural Development (SH-SRD 2021)**, organized by **UBA-SRMIST** in association with **UBA RCI - IIT Madras** and **UBA NCI – IIT Delhi** on October 22, 2021. Mentor: **Dr. R. Senthil**, Mechanical/SRMIST.





5. **Dr. Jitendra Kumar Katiyar** was appointed as Editorial Board Member in the Journal of Modern Industry and Manufacturing, & Tribology Materials, Surfaces and Interfaces (Taylor & Francis Journal).
6. **First Prize:** Team **Juran Juran, SRMIST** won **First place** in the **Intercollegiate Quiz Competition on Total Quality Management (TQM)**. The team won a cash prize of Rs. 7500 & Mr. Niranjan Oommen won a special prize of Rs. 2500 for his excellent performance. The competition was organized by the Indian Society for Quality (ISQ) to celebrate the 121<sup>st</sup> Birthday of Dr. William Edwards Deming. A total of 72 teams registered and 31 teams were shortlisted. The final was conducted on 12-October-2021. Team members: Mr. Pulkit Mathur (RA1811002010239); Mr. Niranjan Oommen (RA1811002010426); Mr. Saurav Shankarnarayan (RA1811002010452). Faculty Coordinator: **Dr. E. Vijayaragavan**.

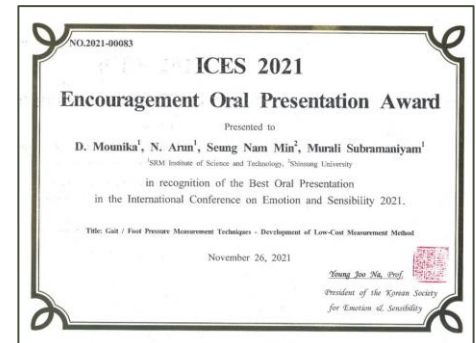
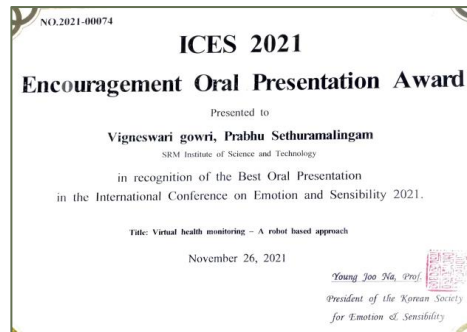


7. **Award:** IUCEE: Indo Universal Collaboration for Engineering Education award for successfully completing Stage 2 (a major milestone) of Problem Based Learning on real-world challenges titled *“Toys for Autistic Kids”*. Received **GRADE A**. Team members: Mr. Santhosh Kumar R (RA1911004010585), Mr. Abhishek Sarkar (Jadavpur University), Mr. Suriyadevalan AR (RA1911002010176), Mr. Pushpal Das (RA1911004010565) under the guidance of **Dr. E Vijayaragavan**.
8. **Award:** IUCEE: Indo Universal Collaboration for Engineering Education award for successfully completing Stage 2 (a major milestone) of Problem Based Learning on real-world challenges titled *“Toys for Autistic Kids”*, Received **GRADE B**. Mr. Swagata Mandal (RA1911004010652), Mr. Agnit Gupta (RA1911005010169), Mr. Ankita Aasika (RA1911002010215) under the guidance of **Dr. E Vijayaragavan**.

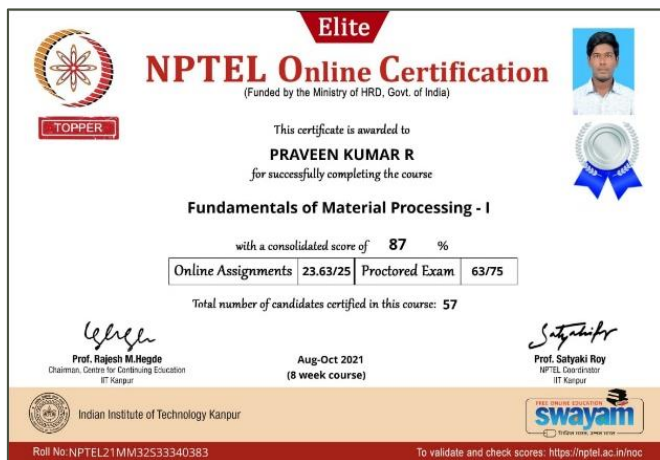




9. **First Best Oral Presentation Award:** **V. Magesh** and P. Harikrishnan. Finite element analysis of different debonding methods in Orthodontics, International conference on Emotion and Sensibility, Organized by Korean Society for Emotion & Sensibility, November 26, 2021.
10. **Encouragement Award:** Vigneswari Gowri [Second Year M. Tech Robotics], **S. Prabhu**, "Virtual health monitoring – A robot based approach", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
11. **Encouragement Award:** D. Mounika [Second Year M. Tech Robotics], **N. Arun**, Seung Nam Min, **Murali Subramaniyam**, "Gait / Foot Pressure Measurement Techniques - Development of Low-Cost Measurement Method", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.



12. **Top ranking in NPTEL course:** Mr. R. Praveen Kumar (RA1911002010033) successfully completed NPTEL online course at the SWAYAM platform, Aug-Oct 2021. **Course:** Fundamentals of Materials Processing – 1. Type of Score: **Elite Certificate**.
13. **Top ranking in NPTEL course:** Ms. Isha Debashish Nandi (RA1911002010195) successfully completed NPTEL online course at the SWAYAM platform, Aug-Oct 2021. **Course:** Advanced Machining Processes. Type of Score: **Elite Certificate**.



## Journal Publication [Faculty and Students]

1. Navakrishnan, S., E. Vengadesan, **R. Senthil**, and Samiappan Dhanalakshmi. "An experimental study on simultaneous electricity and heat production from solar PV with thermal energy storage." *Energy Conversion and Management* 245 (2021): 114614. [IF: 9.709]
2. Janakiraman, S., **T. Lakshmanan**, and P. Raghu. "Experimental investigative analysis of ternary (diesel+ biodiesel+ BIO-ETHANOL) fuel blended with metal-doped titanium oxide nanoadditives tested on a diesel engine." *Energy* (2021): 121148. [IF: 7.147]
3. Geetha, A., **J. Santhakumar**, K. Mohana Sundaram, S. Usha, TM Thamizh Thentral, C. S. Boopathi, R. Ramya, and Ravishankar Sathyamurthy. "Prediction of hourly solar radiation in Tamil Nadu using ANN model with different learning algorithms." *Energy Reports* 8 (2022): 664-671. [IF: 6.870]
4. Muthukumaran, Jayaraman, and **R. Senthil**. "Experimental performance of a solar air heater using straight and spiral absorber tubes with thermal energy storage." *Journal of Energy Storage* 45 (2022): 103796. [IF: 6.583]
5. Punniakodi, Banumathi Munuswamy Swami, Nehal Shah, Varun Kumar Rathore, and **R. Senthil**. "Numerical study on melting of phase change material in a horizontal container using multi heat transfer tubes." *Journal of the Taiwan Institute of Chemical Engineers* 131 (2022): 104214. [IF: 5.876]
6. **R. Senthil**, Rajvikram Madurai Elavarasan, Rishi Pugazhendhi, Manoharan Premkumar, Elumalai Vengadesan, Subramanian Navakrishnan, Md Rabiul Islam, and Sendhil Kumar Natarajan. "A holistic review on the integration of heat pipes in solar thermal and photovoltaic systems." *Solar Energy* 227 (2021): 577-605. [IF: 5.742]
7. Venkatesh, Telugu, **S. Manikandan**, **C. Selvam**, and Sivasankaran Harish. "Performance enhancement of hybrid solar PV/T system with graphene based nanofluids." *International Communications in Heat and Mass Transfer* 130 (2022): 105794. [IF: 5.683]
8. Vengadesan, E, and **R. Senthil**. "Experimental study on the thermal performance of a flat plate solar water collector with a bifunctional flow insert." *Sustainable Energy Technologies and Assessments* 50 (2022): 101829. [IF: 5.353]
9. **Vinoth, A.**, Swati Dey, and **Shubhabrata Datta**. "Designing UHMWPE hybrid composites using machine learning and metaheuristic algorithms." *Composite Structures* 267 (2021): 113898. [IF: 5.4]
10. Subramanian, Guru Kumar Manjappara, M. Balasubramanian, and **A. Arul Jeya Kumar**. "A review on the mechanical properties of natural fiber reinforced compressed earth blocks." *Journal of Natural Fibers* (2021): 1-15. [IF: 5.232]
11. **A. Arul Jeya Kumar**, Aditya Soundarapandian, and Rahul Kumar. "Dynamic Mechanical Behavior of Basalt/aramid Hybrid Fiber Reinforced UHMWPE Light Weight Composite." *Journal of Natural Fibers* (2021): 1-13. [IF: 5.232]
12. Balaji, T., Sharan Rajendiran, **C. Selvam**, and D. Mohan Lal. "Enhanced heat transfer characteristics of water-based hybrid nanofluids with graphene nanoplatelets and multi walled carbon nanotubes." *Powder Technology* 394 (2021): 1141-1157. [IF: 5.134]
13. **Jitendra Kumar Katiyar**, and Abdul Samad Mohammed. "Physical, tribological and mechanical properties of polymer composite coating on silicon wafer." *Tribology International* 165 (2022): 107307. [4.872]
14. **Sundaram, P.**, and A. Kalaiselvane. "Effect of different additives on freezing characteristics and stability of GnP-aqueous-based PCM for cold thermal storage." *Journal of Thermal Analysis and Calorimetry* (2021): 1-13. [IF: 4.626]
15. **Praveena, V.**, M. Leenus Jesu Martin, and V. Edwin Geo. "Combined effects of various strategies to curtail exhaust emissions in a biomass waste fueled CI engine coupled with SCR system." *Engineering Science and Technology, an International Journal* (2021): 101085. [IF: 4.36]

16. Attia, Mohammed El Hadi, Saravanan Kaliyaperumal, Gunasekar Thangamuthu, Ilango Rengaraju, Suman Mann, **J. Santhakumar**, and Suma Christal Mary Sundararajan. "Impact of water depth on thermal efficiency, exergy efficiency, and exergy losses of finned acrylic solar still: an experimental study." *Environmental Science and Pollution Research* (2021): 1-12. [IF: 4.223]
17. Vengadesan, Elumalai, and **R. Senthil**. "Experimental thermal performance and enviroeconomic analysis of serpentine flow channeled flat plate solar water collector." *Environmental Science and Pollution Research* (2021): 1-19. [IF: 4.223]
18. Matharu, Raunak Singh (B.Tech - Mechanical), Shaik Subhani (M.Tech -Alumni), and **R. Senthil Kumar**. "Numerical study on square enclosure with a hot cylinder accompanied by circular bluff bodies." *The European Physical Journal Plus* 136, no. 10 (2021): 1-25. [IF: 3.911]
19. Singh, Shardul Vikram, Praneeti Mitra, and **Pankaj Kumar**. "A study of flow interference and heat transfer between two-cylinders at different orientations." *Journal of Ocean Engineering and Science* (2021). [IF: 3.408]
20. **S. Oliver Nesa Raj**, and **S. Prabhu**. "Experimental Investigation of AWJ Slicing of Single Crystal Silicon Using Fuzzy Grey Relational Analysis (FGRA)." *Silicon* (2022): 1-22. [IF: 2.670]
21. **Aatthisugan, I.**, and **R. Murugesan**. "Influence of Silicon Addition on Mechanical Properties and Wear Behaviour of AZ91D Magnesium Alloy Using Stir Casting Method." *Silicon* (2022): 1-8. [IF: 2.670]
22. Srinivasan, R., **M. Kamaraj**, D. Rajeev, S. Ravi, and N. Senthilkumar. "Plasma Spray Coating of Aluminum–Silicon-MWCNT Blends on Titanium Grade 5 Alloy Substrate for Enhanced Wear and Corrosion Resistance." *Silicon* (2022): 1-13. [IF: 2.670]
23. **D. Siva Krishna Reddy**, **Pankaj Kumar**, Jai Makhija, Amjad Ali Pasha, and Abdul Zubar Hameed. "CFD of Flow Dynamic and Heat Transfer Characteristics of Dual Step Cylinders at Re= 2100." *Arabian Journal for Science and Engineering* 46, no. 12 (2021): 12667-12683. [IF: 2.334]
24. Govindan, P., **A. Arul Jeya Kumar**, and **A. Lakshmankumar**. "Wear and Morphological Analysis on Basalt/Sisal Hybrid Fiber Reinforced Poly lactic acid Composites." *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications* (2021): 14644207211067657. [IF: 2.311]
25. **P. Susai Manickam**, **Sandipan Roy**, and Gautam M. Shetty. "Biomechanical evaluation of a novel S-type, dynamic zero-profile cage design for anterior cervical discectomy and fusion with variations in bone graft shape: a finite element analysis." *World Neurosurgery* 154 (2021): e199-e214. [IF: 2.1]
26. **P. Susai Manickam**, **Sandipan Roy**, and Gautam M. Shetty. "Biomechanical evaluation of a novel S-type, dynamic zero-profile cage design for anterior cervical discectomy and fusion with variations in bone graft shape: a finite element analysis." *World Neurosurgery* 154 (2021): e199-e214. [IF: 2.1]
27. **Rajasekaran, T.**, K. Palanikumar, and B. Latha. "Investigation and analysis of surface roughness in machining carbon fiber reinforced polymer composites using artificial intelligence techniques." *Carbon Letters* (2021): 1-13. [IF: 1.917]
28. Vignesh, S., and **U. Mohammed Iqbal**. "Application of tri-hybridized carbonaceous nanocutting fluids in an end milling operation by the minimum quantity lubrication technique." *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology* (2021): 13506501211043859. [IF: 1.674]
29. Sinha, Nitish, Arun Kumar Singh, Vinit Gupta, and **Jitendra Kumar Katiyar**. "Adhesive and normal stress-dependent dynamic friction of a gelatin hydrogel." *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology* (2021): 13506501211044650. [IF: 1.674]
30. Jakkula, Raja Venkata Sai Kiran, and **S. Prabhu**. "Study of the heat transfer and analysis of the surface characteristics of robot spray painting by using Taguchi method and ANOVA analysis." *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering* (2021): 09544089211067680. [IF: 1.620]



31. **P. Susai Manickam**, and **Sandipan Roy**. "The biomechanical effects of S-type dynamic cage using Ti and PEEK for ACDF surgery on cervical spine varying loads." The International Journal of Artificial Organs 44, no. 10 (2021): 748-755. [IF: 1.59]
32. **P. Susai Manickam**, and **Sandipan Roy**. "The biomechanical study of cervical spine: A Finite Element Analysis." The International Journal of Artificial Organs (2021): 0391398821995495. [IF: 1.59]
33. **P. Susai Manickam**, and **Sandipan Roy**. "The biomechanical effects of S-type dynamic cage using Ti and PEEK for ACDF surgery on cervical spine varying loads." The International Journal of Artificial Organs 44, no. 10 (2021): 748-755. [IF: 1.59]
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### Book / Book Chapter Published [Faculty and Students]

1. **Shubhabrata Datta** and J. Paulo Davim as editors have published a Book titled "Machine Learning in Industry" published by Springer. ISBN: 978-3-030-75847-9

2. **Vinoth A** and **Shubhabrata Datta**. (2022) Fundamentals of Machine Learning. In: Datta S., Davim J.P. (eds) Machine Learning in Industry. Management and Industrial Engineering. Springer, ISBN: 978-3-030-75847-9
3. Hemalata Jena, **Jitendra Kumar Katiyar** and Amar Patnaik, Tribology of Polymer and Polymer Composites for Industry 4.0, Springer Singapore. ISBN: 978-981-16-3903-6
4. T.V.V.L.N. Rao, Salmiah Binti Kasolang, Guoxin Xie, **Jitendra Kumar Katiyar**, Ahmad Majdi Abdul Rani as editors have published a Book titled “Green Tribology Emerging Technologies and Applications” published by CRC Press. ISBN 9780367688608
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10. **Jitendra Kumar Katiyar**, Mir Irfan Ul Haq, Ankush Raina, S. Jayalakshmi, and R. Arvind Singh, as editors have published a Book titled “Tribology and Sustainability” published by CRC Press. ISBN: 9781003092162
11. **Jitendra Kumar Katiyar**, Jaafar Al Hammad, and Abdul Samad Mohammed. "Tribological properties of light metal matrix composites." (2021): 389-401, Encyclopedia of Materials: Composites, Elsevier. ISBN 9780128197318
12. Ashok Raj J, Santosh Kumar B H, L. Arulmani and **Jitendra Kumar Katiyar**, (2021) “Surface Coatings for Automotive Applications, In: Catalin I. Pruncu, Amit Aherwar, Stanislav Gorb (eds) Tribology and Surface Engineering for Industrial Applications, CRC Press, ISBN: 9781003097082
13. **Jitendra Kumar Katiyar** and Hemalata Jena, “Study of the Manufacturing Process of Polymer Spur Gear: A Light Weight Gear Material” in the book of Lightweight Materials, ISTE UK & Willey Publisher.
14. Desavale, R. G., **Jitendra Kumar Katiyar**, and T. Jagadeesha. "The Diagnostic Analysis of the Rolling Element Bearings for the Machine Tool Applications Using Dimension Theory." In Recent Advances in Manufacturing, Automation, Design and Energy Technologies, pp. 711-718. Springer, Singapore, 2022.
15. Desavale, R. G., **Jitendra Kumar Katiyar**, and T. Jagadeesha. "Vibrations Characteristics Analysis of Rotor-Bearings System Due to Surface Defects Based in CNC Machines." In Recent Advances in Manufacturing, Automation, Design and Energy Technologies, pp. 705-710. Springer, Singapore, 2022.
16. **Pankaj Kumar**, and R. Bala Anand. "Numerical Investigation of Cavitating Flow over S-Blade in Acoustic Field." In Fluid Mechanics and Fluid Power, pp. 383-390. Springer, Singapore, 2021.
17. Jena, Hemalata, and **Jitendra Kumar Katiyar**. "Study of Tribo-Corrosion in Materials." In Advances in Engine Tribology, pp. 239-256. Springer, Singapore, 2022.



18. Debrup Chakraborty and **Sumit Pramanik**, "Lightweight Metallic Nanocomposites in Energy Applications". In: Singh S.P., Agarwal A.K., Kumar K., Srivastav S.K. (eds) Metal Nanocomposites for Energy and Environmental Applications. Energy, Environment, and Sustainability. Springer, Singapore. Chapter 2, pp.7-47, (2022).

### International Conference Paper Presentation [Faculty and Students]

1. **M. Prakash** "Testing and Characteristic analysis of Wheat gluten/Bagasse/Coconut coir biodegradable composite for industrial applications in International Conference on Energy and Materials Technologies (ICEMT-2021)", organised by Department of Mechanical Engineering at SSN college of Engineering from 20/8/2021 to 21/8/2021.
2. **I. Infanta Mary Priya** "Comparative Performance of Graphite, Nitride, MoS4 coated End mill with dry milling of Aluminium alloy" in Virtual national Conference on Advanced Research in mechanical Sciences organized by Department of Mechanical Engineering, SRMIST, Vadapalani Campus, Chennai from 6.8.2021 to 7.8.2021.
3. **Sasikumar. S**, "Compressive Behaviour of Aluminum Foams Stabilized by Oxide Particles Via Melt Route," organised by IIM Jamshedpur chapter from 13th to 15th November 2021 at Virtual mode (Poster)
4. BMS Punniakodi, **R. Senthil**, "Effect of the Vertical and Horizontal Orientation of Heat Transfer Tube on Charging of Phase Change Material in a Cylindrical Container", in 2nd International Congress on Advances in Mechanical and Systems Engineering (CAMSE 2021) organized by National Institute of Technology Jalandhar, Punjab, on 18.07.2021.
5. M. Praveen Kumar, and **G. Balaji**, "INFLUENCE OF MILEAGE BOOSTERS IN TWO WHEELERS", International Conference on Energy and Materials Technologies, SSN, Chennai, Tamil Nadu.
6. U. Kaaviya Priya, **R. Senthil**, "Influence of Greeneries in controlling Urban Heat stress in Tropical Regions at the International Conference on Retro Futurism of Skills in Architecture, Design, Planning and Innovation, 29 September 2021, organized by Symbiosis International University, Pune.
7. **Pankaj Kumar, Sathiyamoorthy K**, "Numerical Analysis Of Vertical Axis Wind Turbine Using Curved Omni Directional Gated Vane", FMFP 48th National Conference, BITS Pilani, Pilani Campus, Rajasthan, India.
8. D. Bhanu Priya [Full-time Scholar], **Murali Subramaniyam**, "Muscle Activity and Postural Analysis while using Smartphone, Humanizing Work and Work Environment (HWWE 2021) International Ergonomics Conference, IIT Guwahati, India, 1st - 3rd December 2021.
9. D. Bhanu Priya [Full-time Scholar], **Murali Subramaniyam**, "Biomechanical Analysis of Cervical Spine (C1-C7) due to prolonged Flexion - A Review Study", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
10. D. Bhanu Priya [Full-time Scholar], **Murali Subramaniyam**, "Digital Devices and Visual Fatigue – Development of Low-Cost Measurement Methodology", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
11. D. Mounika [Second Year M.Tech Robotics], N. Arun, Seung Nam Min, **Murali Subramaniyam**, "Gait / Foot Pressure Measurement Techniques - Development of Low-Cost Measurement Method", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
12. M. Ramnaath [Second Year M.Tech Robotics], Seung Nam Min, **Murali Subramaniyam**, "Interface Pressure Measurement of Wheelchair Users: A Rapid Review", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
13. **V. Magesh** and P. Harikrishnan, "Finite element analysis of different debonding methods in Orthodontics ", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.

14. Vigneswari Gowri [Second Year M. Tech Robotics], **S. Prabhu**, "Virtual health monitoring – A robot based approach", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
15. **M. Prakash**, "Influence of mineral based nano dust particles from grinding of the automobile brake-pad on Physical and Thermal Properties of Polyimide/Basalt fiber composites", International Conference on Advanced Materials Characterization 2021 (ICAMMC 2021), SRMIST, Kattankulathur, Chennai, December 02 – 04, 2021.
16. **Sasikumar S** and **G. S. Vinodkumar**, "Aluminum Foams for Crash-energy Absorbing Applications in International conference on Advanced materials and mechanical characterization," International Conference on Advanced Materials Characterization 2021 (ICAMMC 2021), SRMIST, Kattankulathur, Chennai, December 02 – 04, 2021.
17. Ayyanar C and **Sumit Pramanik**, "Effect Of Porous Ceramic Capsule On Polydimethylsiloxane Elastic Modulus For Different Self-Healing Applications", International Conference on Advanced Materials Characterization 2021 (ICAMMC 2021), SRMIST, Kattankulathur, Chennai, December 02 – 04, 2021.
18. Kamalendra Vikram and **Sumit Pramanik**, "Effect of GF on Tribological and Mechanical Properties of PA6 Matrix Composites", International Conference on Advanced Materials Characterization 2021 (ICAMMC 2021), SRMIST, Kattankulathur, Chennai, December 02 – 04, 2021.
19. Palani Karthikeyan and **Sumit Pramanik**, "Enhancement Of H13 Tool Steel Performance For Die-Casting", ICAMMC 2021, SRMIST, Kattankulathur, Chennai, December 02 – 04, 2021.
20. **I Aatthisugan** and **R.Murugesan**, "Optimization of Influencing Parameters on Friction and Wear Behaviour of AZ91D–B4C–Gr Hybrid Composite under Dry Sliding Conditions" 2nd Virtual International Tribology Research Symposium (ITRS 2021) organized by SRMIST, Kattankulathur, 8th – 10th December 2021.
21. **R. Ambigai** and **S. Prabhu**, "Optimization of the Tribological behavior of Al-CNT-Si3N4 based Nano and Hybrid composite" 2nd Virtual International Tribology Research Symposium (ITRS 2021) organized by department of mechanical engineering, SRMIST, Kattankulathur, India, 8th – 10th December 2021.
22. **I Aatthisugan**, **R.Murugesan**, and T.V.V.L.N. Rao, "Influence of Boron Carbide Content on Dry Sliding Wear Performances of AZ91D Magnesium Alloy" 2nd Virtual International Tribology Research Symposium (ITRS 2021), 08th – 10th December 2021.
23. **I. Aatthisugan**, and **R. Murugesan**, "Influence of Graphite content on dry sliding wear performances of AZ91D-B4C composites" in International Conference on Materials, Energy, and Mechanical Engineering (ICME2 - 2021) organized by department of mechanical engineering, Madanapalle Institute of Technology & Science, Madanapalle-517325, India, 17th and 18th December 2021.
24. **S Arokya Agustin**, S.Shravankumar and **A. Arul jeya Kumar**, "Analysis Of Limiting Load Capacity And Stiffness Coefficients Of Porous-Bump-Recess Foil Journal Bearing" XVI Vibration Engineering & Technology of Machinery Conference VETOMAC 2021 December 16 - 18, 2021, B.M.S. College of Engineering, Bengaluru, India.

### Guest lecture delivered by our faculty

1. **Dr. A. Arul Jeya Kumar** delivered a technical talk titled "Wire Cut Electric discharge machining process - UCMP" in Sri Sairam Engineering College, Chennai Organized by Mechanical department in association with SAEINDIA on 27.07.2021
2. **Prof. Shubhabrata Data** delivered a talk titled "Machine Learning for Composite Research" in the Six-days Faculty Development Program on "Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers" organized by the Department of Mechanical Engineering, SRMIST on 09th August 2021.

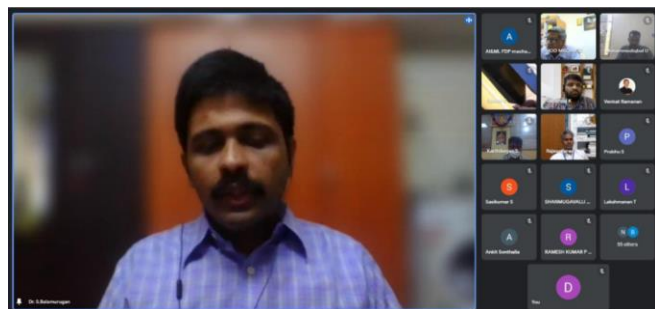
3. **Prof. S. Prabhu** delivered a talk titled “Multi-physics and Multi-Objective Optimization Problems” in the Six-days Faculty Development Program on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” organized by the Department of Mechanical Engineering, SRMIST ” on 10th August 2021.
4. **Dr. R. Senthil Kumar** delivered a talk titled “Multi-physics and Multi-Objective Optimization Problems” in the Six-days Faculty Development Program on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” organized by the Department of Mechanical Engineering, SRMIST ” on 10th August 2021.
5. **Dr. A. Vijaya** delivered a talk titled "Rubrics as Assessment Tool for evaluating HOTS" in the Examination Reforms workshop Organized by CET, SRMIST on July 12, July 30<sup>th</sup>, and Aug 14<sup>th</sup>, 2021.
6. **Dr. V. Praveena** delivered the lecture in the topic "SIMPLE ALGORITHM" through Online training program on Computational fluid dynamics at SRMIST on 3rd and 6th September 2021.
7. **Prof. S. Prabhu** delivered a talk titled “Regression analysis using Machine Learning Technique” in the Six-days FDP on “Research Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training organized by the Department of Mechanical Engineering, SRMIST ” from 18<sup>th</sup> – 23<sup>rd</sup> October 2021.
8. **Mr. D. Selwyn Jebadurai** delivered a talk titled “Hands of Training using MINITAB Software” in the Six-days FDP on “Research Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training organized by the Department of Mechanical Engineering, SRMIST ” from 18<sup>th</sup> – 23<sup>rd</sup> October 2021.
9. **Mr. I. Aatthisugan** delivered a talk titled “Hands of Training using MINITAB Software” in the Six-days FDP on “Research Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training organized by the Department of Mechanical Engineering, SRMIST ” from 18<sup>th</sup> – 23<sup>rd</sup> October 2021.
10. **Mr. R. Saravanakumar** delivered a talk titled “Hands of Training using MINITAB Software” in the Six-days FDP on “Research Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training organized by the Department of Mechanical Engineering, SRMIST ” from 18<sup>th</sup> – 23<sup>rd</sup> October 2021.
11. **Dr. Jitendra Kumar Katiyar** delivered an invited talk on “Advance Composite Materials Their Uses in Aerospace Application” at Shree Digamber Institute of Technology, Dausa, Rajasthan, on 28.10.2021.
12. **Dr. S. Manikandan** delivered the lecture in the topic “Advances in Solar Photovoltaic Energy Conversion Systems” through online webinar in the VIT, Vellore on 21-10-2021.
13. **Dr. R. Senthil** delivered a Guest Lecture in the Online Webinar on “Solar Powered Electric Vehicle” at Mahindra Institute of Technology, Namakkal on 30.10.2021.
14. **Dr. I. Infanta Mary Priya** delivered a technical talk titled "Gender sensitization and awareness in College campus" in Mahendra Institute of Technology, Tiruchengode, Namakkal, organized by Women Empowerment Cell and Computer Science and Engineering on 9.11.2021.
15. **Dr. Jitendra Kumar Katiyar** delivered an lecture in a FDP on “Tribo-mechanical Investigation of Sustainable Composite Coating for MEMS Application” held at National Institute of Technology Delhi, New Delhi, on 17.11.2021.
16. **Nandakumar P** delivered an Expert Lecture on "Variational Formulation of Boundary Value Problems and Weighted Residual methods" during the six days online Anna University Sponsored Faculty Development Training Programme on “Finite Element Analysis” Organized by Dr. NGP Institute of Technology, Coimbatore, India. on 05<sup>th</sup> January 2022.
17. **Prof. S. Prabhu** delivered a talk titled “Robot Programming” in the AICTE-ATAL Sponsered Five Day FDP on “Recent trends in industrial robot programming and applications with hands-on training” on 07-December-2021.
18. **Mr. V. Manoj Kumar** delivered a talk titled “Robot Programming – Hands on Training” in the AICTE-ATAL Sponsered Five Day FDP on “Recent trends in industrial robot programming and applications with hands-on training” on 07-December-2021.



19. **Dr. A. Vijaya** delivered a talk titled "Assessment Rubrics" in the Examination Reforms workshop (Batch 14) Organized by CET, SRMIST on 17<sup>th</sup> December 2021.
20. **Dr. R. Senthil** delivered a Guest Lecture on the topic of "Solar Energy Systems" in the One Week AICTE – ISTE Sponsored Induction/Refresher Program on Innovative Practices in Energy Management, Organized by Agnel Institute of Technology and Design, Goa, India, on 13th January 2022."
21. **Jitendra Kumar Katiyar** delivered a lecture on "Investigation of Solid Fillers Reinforced Friction Materials for Automotive Application" during the Five Days Faculty Development Programme on Automotive Friction Materials, Department of Automobile Engineering, SRMIST, 14-December-2021.
22. **Jitendra Kumar Katiyar** delivered a lecture on "Fundamentals of Surface engineering and its applications" during the Five Days AICTE-ATAL Academy Sponsored FDP, Department of Mechanical Engineering, Visvesvaraya National Institute of Technology, Nagpur, 14-December-2021.
23. **Jitendra Kumar Katiyar** delivered a keynote address on "Sustainable Composite Coating for MEMS Application" during the International Conference on Materials, Energy and Mechanical Engineering 2021 (ICME2 - 2021), Department of Mechanical Engineering, MITS, Andhra Pradesh, 17-December-2021.
24. **Dr. S. Manikandan** delivered a Guest Lecture on the topic of "Exergy analysis of energy system" in the One Week AICTE – ISTE Sponsored Induction/Refresher Program on Innovative Practices in Energy Management, Organized by Agnel Institute of Technology and Design, Goa, India, on 19th January 2022."

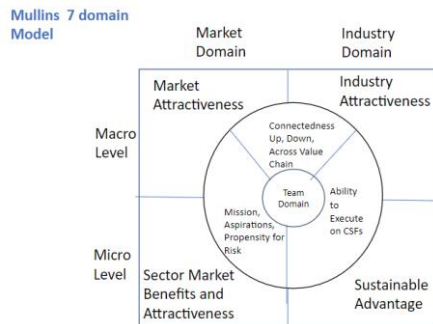
### Events organized in the department

1. Six-day FDP (virtual mode) on "**Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers**" was organized from 09 - 14th August 2021 by the Manufacturing division of the Department of Mechanical Engineering in association with the Mechanical Engineering Association (MEA), The Institute of Engineers (India) - Kattankulathur Local Centre. **Coordinators: Prof. S. Prabhu; Dr. M. Kamaraj; Dr. S. Murali; Dr. R. Senthil Kumar. Organizing Committee: Dr. M. Prakash; Dr. A. Arul Jeya Kumar; Dr. V. Magesh; Dr. R. Murugesan. Resource persons:** Dr. S. Balamurugan, AEER Labs, Coimbatore; Prof. Shubhabrata Datta, SRMIST; Dr. Pramalatha Vasudevan, St. Joseph College of Engineering, Chennai; Prof. S. Prabhu, SRMIST; Dr. R. Senthil Kumar, SRMIST; Mr. Vasudeva Rao, Rane Brakes Lining Ltd., Chennai; Mr. Venkadesan Velu, Logfuze Technologies Pvt Ltd., Chennai; Dr. V. Sreedevi, NIT Warangal; Mr. Prabhu Shankar, DXC Technology, Chennai; Mrs. Swathika Balusamy, Wipro; Dr. Srihari Dodla, IIT-Bhu; Mr. Karthikeyan Jagadeesan, AT&T, Bangalore; Dr. Jeevanandam Jotheeswaran, GLA University, Mathura.

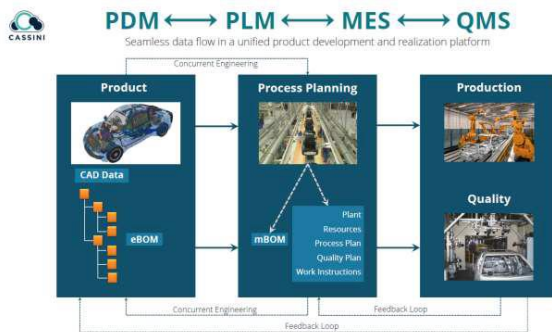


2. Six Days Workshop on "**Entrepreneurship Boot Camp**" was organized from 23 – 28 August 2021, by Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering, SRM innovation and Incubation and Entrepreneurship Centre (SIIEC) in association with Intellectual Property Facilitation Centre (IPFC) – Chennai.

**Coordinator:** **Dr. E. Vijayaragavan.** **Resource persons:** Dr. Shantanu Patil, IIEC; Mr. Sudhir Tiku, VP BOSCH & TEDx Speaker; Dr. Ramakrishnan Ramani, SoDT; Mr.V. Ramakrishnan, SoDT; Dr. Panneerselvam Ramaswamy, MSME TDC; Dr. Ananth Kumar, IIEC; Dr. Sankara Moorthy, SRMIST; Dr. Jayshree Suresh, LIBA; Mr. Ankit Pansari, Oslash; Mr. Vimal Thiagarajan, BePositive Academy; Dr. R. Sivakumar, WABCO; Ms. Vinisha Umashankar, Innovator; Dr. Sudeedra Koushik, Innovation Director; Mr. Tamizh Inian, Frigate.



- Webinar on “**Product Lifecycle Management**” was organized on 6<sup>th</sup> September 2021 (11 AM) by Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering. **Coordinator:** **Dr. E. Vijayaragavan.** **Resource persons:** Mr. Raghuram Reddy Tera, CASSINI PLM; Mr. Pavan Rayana, CASSINI PLM; Mr. Pradeep Prabagaram, OptiCAX Technologies.



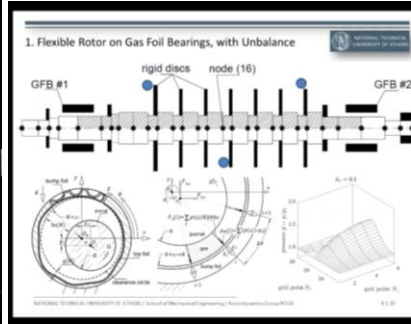
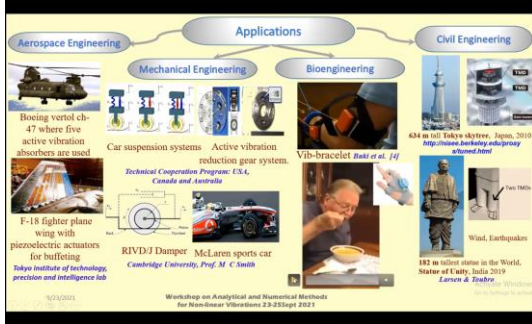
- Webinar (Alumni Talk) on “**Safety Systems in Automobiles**” was organized on 11<sup>th</sup> September 2021 (10 AM) by Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering in association with Mechanical Engineering Alumni Chapter. **Coordinator:** **Dr. E. Vijayaragavan.** **Resource persons:** Mr. Gokul Ram Rengasamy, Renault Nissan Technology & Business Centre India.



- Three Day workshop on “**Analytical and Numerical Methods for Non-linear Vibrations**” was organized from 23 – 25<sup>th</sup> September 2021, by the Design division of the Department of Mechanical Engineering. **Convenors:** **Prof. P. Nandakumar** and **Dr. C. Shravankumar.** **Resource persons:** Prof. S. K. Dwivedy, IIT



Guwahati; Dr. Athanasios Chasalevris, NTU Athens; Dr. Vinyas Mahesh, NIT Silchar; Prof. TVVLN Rao, MITS Madanapalli; Dr. Anindya Malas, NIT Patna; Prof. Mayank Tiwari, IIT Patna; Dr. Salvinder Singh Karam Singh, UKM Malaysia.

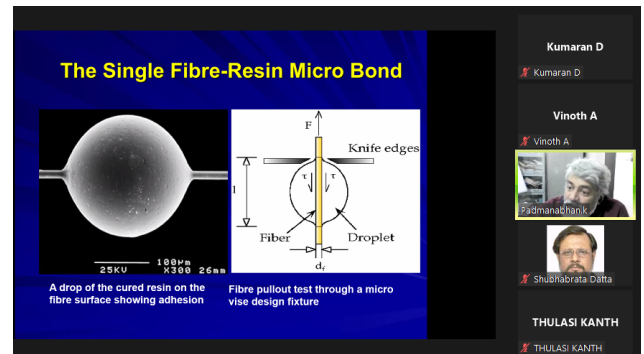
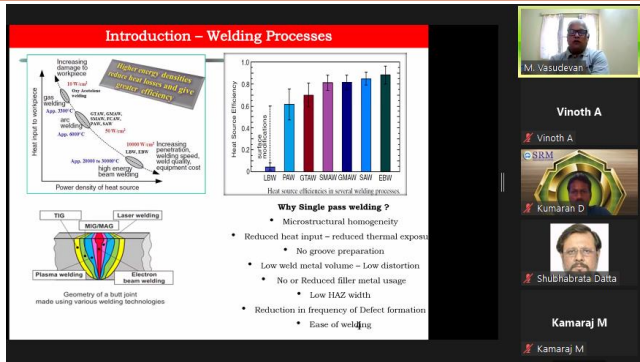


6. Six Days Workshop on "**Light Weight Design – Applications and Scope**" was organized from 20 – 25, September 2021, by the Design division of the Department of Mechanical Engineering. **Coordinators: Dr. R. Santhana Krishnan. Mr. K. Jegadeesan; Resource persons:** Dr. Arokiarajan, IIT Madras; Dr. N. Siva Shanmugam, NIT Trichy; Dr. G. Padmanaban, Thanthai Periyar Government Institute of Technology, Vellore; Mr. K. N. Balaji, Automobile Dept, SRMIST; Mr. Natarajan, ZF Wabco India Ltd, Aurangabad; Mr. V. Padmanabhan, Wheels India Ltd, Chennai; Mr. Prasad Arun Kumar, Brakes Product Development; Mr. Vijay Sankar, Mahendra; Mr. Meenaakshisundaram, Hindustan Composites Ltd., Chennai; Mr. S. Srinivasa Raghavan, Brakes India Private Limited, Padi; Mr. P. Venugopal, Brakes India, Padi, Chennai; Mr. Srikanth Muralidharan, TCS, Chennai.

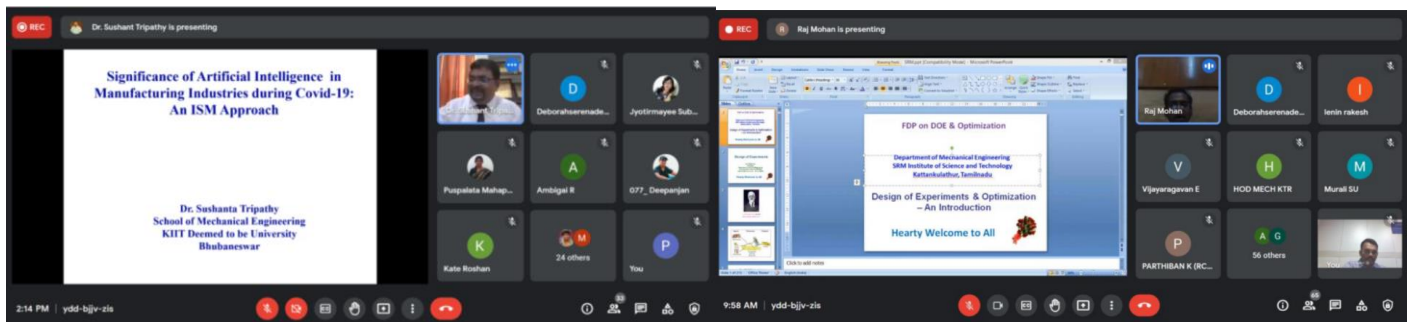


7. World Habitat Day Webinar on "**Accelerating Urban Actions for a Carbon Free World**" was organized on 04<sup>th</sup> October 2021 (3 PM) by the Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering in association with the Institution of Engineers (India), Kattankulathur Local Centre. **Coordinator: Dr. E. Vijayaragavan. Resource persons:** Ms. Priya Bobby, Aeiforia Architects, Noida.
8. Six Days Workshop on "**Recent Trends in Composites and Advanced Materials Research**" was organized from 29<sup>th</sup> September, 1<sup>st</sup> October, 4<sup>th</sup> – 6<sup>th</sup> October 2021, by the Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering. **Conveners: Prof. M. Cheralathan; Prof. Shubhabrata Datta. Coordinators: Dr. M. Kamaraj; Dr. D. Kumaran; Mr. A. Vinoth. Resource persons:** Dr. Debashish Bhattacharjee, Tata Steel; Dr. M. Vasudevan, IGCAR; Prof. Bikramjit Basu, IISc; Dr. P. Thanikaivelan, CLRI; Prof. K. Padmanabhan, VIT; Prof. R. K. Ray, SRMIST; Prof. Arya K Bhattacharya, Mahindra University; Mr. K. V. Balaji, Mahindra & Mahindra; Prof. A. K. Singh, IITK; Dr. S. Dhanalakshmi, CVRDE; Prof. R. Velmurugan, IITM; Dr. T. Ram Prabhu, DRDO.





9. Webinar on “**Uncovering Lean Six Sigma Applications**” was organized on 08<sup>th</sup> October 2021 (10 AM) by the Centre for Lean and Six Sigma (CLASS) in association with the Department of Mechatronics Engineering. **Coordinator: Dr. E. Vijayaragavan. Resource persons:** Dr. Panneerselvam Ramaswamy, MSME TDC, Agra; Mr. Aashires Duruvu (Alumnus 2019 batch), Johnson & Johnson Biosense Webster.
10. Six-day FDP (virtual mode) on “**Recent Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training**” was organized from 18 - 23rd October 2021, by the Manufacturing division of the Department of Mechanical Engineering in association with the Mechanical Engineering Association (MEA), The Institute of Engineers (India)-Kattankulathur Local Centre, ASME SRM Student Section, and ISHRAE – SRMIST Student Chapter. **Coordinators: Prof. S. Prabhu and Dr. S. Murali; Organizing Committee: Dr. R. Ambigai, Mrs. Deborah Sernate Stephen, Mr. S. Oliver Nesa Raj, Mr. D. Selwyn Jebadurai, Mr. I. Aatthisugan, Mr. R. Saravana Kumar. Resource persons:** Prof. M. Rajmohan, Anna University, CEG Campus; Prof. S. s. Mahapatra, NIT Rourkela; Prof. S. Prabhu, SRMIST; Prof. R. Jeyapaul, NIT Trichirappalli; Dr. P B Dhanish, NIT Calicut; Prof. Sushanta Tripathy, KIIT University, Bhubhaneswar; Dr. Sudhansu Sekhar, IIT Patna; Dr. Vivek D. Kalyankar, NIT Surat; Dr. Karali Patra, IIT Patna; Dr. N. Arunachalam, IIT Madras; Prof. N. Senthikumar, SIMATS, Chennai; Mr. D. Selwyn Jebadurai, SRMIST; Mr. I. Aatthisugan, SRMIST; Mr. Saravanakumar, SRMIST.

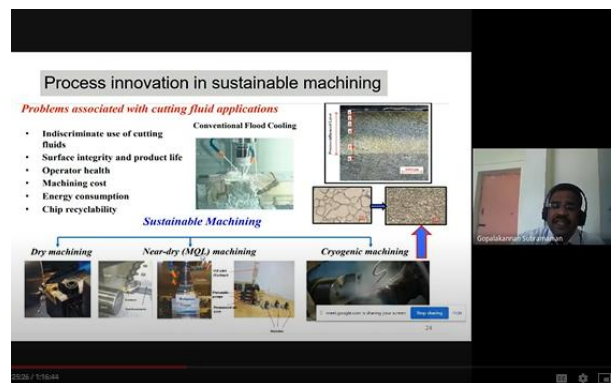


11. Six Days Workshop on “**Energy Harvesting from Vibrating Structures: Applications and Advances**” was organized from 25-30<sup>th</sup> October 2021, by the Design division of the Department of Mechanical Engineering in association with the Mechanical Engineering Association (MEA). **Coordinators: Mr. K. Jegadeesan; Dr. C. Shravan Kumar; Dr. R. Santhana Krishnan. Resource persons:** Dr. Suresh Bhalla, IIT Delhi; Dr. Vijay Kumar Gupta, IIITDM, Jabalpur; Dr. Shaikh Faruque Ali, IIT Madras; Dr. Srikanth Korla, NIT Warangal; Dr. Pandiyarasan Veluswamy, IIITDM, Kancheepuram; Dr. P. S. Balaji, NIT Rourkela; Dr. Bushara Fatma, IIT Kanpur; Dr. Satyanarayan Patel, IIT Indore; Dr. Anurekha Sharma, Kurukshetra University; Dr. K. Suresh, Government Engineering College, Karnataka; Dr. Pradeep Malaji, B.L.D.E.A, Halakatti College, Karnataka; Dr. Renold Elsen S, VIT Vellore.

12. Professional Development Programme (PDP) on “**Total Digital Transformation (TDT)**” was organized from 15<sup>th</sup> – 20<sup>th</sup> November 2021 by the Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering in association with the MSME Technology Development Centre, Agra. **Coordinator: Dr. E. Vijayaragavan.** **Resource persons:** Dr. Rajkumar Swaminathan, RANE Engine Valve Ltd.; Dr. Panneerselvam Ramaswamy, MSME TDC, Agra; Mr. Ashok Muthuswamy, TAFE; Mr. Senkathir Selvan Suriaprakasam, TCS DigiFleet; Mr. Sathyanarayanan Gopikarajan, Infosys; Mr. Nanda Kumar, PQSI; Mr. Vinothkumar Rajendran, i-Track Solutions & Co.; Dr. S. G. Selvakumar, PQSI; Prof. D. Kingsly Jeba Singh, SRMIST; Prof. K. Duraivelu, SRMIST.



13. Six Days FDP on “**An insight into Novel Research Aspects in Manufacturing Processes (NRAMP-2021)**” was organized from November 22-27, 2021, by the Manufacturing division of the Department of Mechanical Engineering in association with the Mechanical Engineering Association (MEA). **Convenors: Prof. M. Cheralathan, Prof. U. Mohammed Iqbal.** **Co-convenors: Dr. N. Harshavardhana, Dr. T. Deepan Bharathi Kannan, Mr. J. Santhakumar, Mr. S. Muralidharan.** **Resource persons:** Prof. Sujan Debnath, Curtin University, Australia; Dr. Karpagaraj, NIT Pondicherry; Mr. Santhosh Kumar, Segula Technologies India Pvt. Ltd, Chennai; Dr. V. Umesh, Tharam- Thiran, reen Energy Flow LLP; Dr. S. Gopalakannan, MVCE, Pondicherry; Dr. I.A. Palani, IIT Indore; Dr. E. Pavithra, VEL Tech. University, Chennai; Dr. V. Anandakrishnan, NIT, Trichy; Dr. Manidipto Mukherjee, CSIR- Central Mechanical Engineering Research Institute, Durgapur; Dr. K. Senthilkumaran, IIITDM Kancheepuram; Mr. Praveen Shankar, FRONIUS - India Limited; Mr. Diwakar Jha, Kemppi India Pvt Limited.



14. The **Fourth International Conference on Emotion and Sensibility (ICES2021)** was jointly organized by **SRMIST** and the **Korea Society for Emotion and Sensibility (KOSES)**, South Korea on 26<sup>th</sup> November 2021. Chairman: Prof. Seung Nam Min (Shinsung University, South Korea), **Prof. S. Prabhu (SRMIST)**. Members involved: **Dr. S. Murali, Dr. V. Magesh, Dr. M. Prakash, Dr. A. Arul Jeya Kumar**, Dr. M. Uma, Dr. D. Ashok Kumar, Dr. Varshini Karthick, Prof. A. K. Jayanthi. There were multiple presentations from SRMIST students and faculty. **Prof. T. V. Gopal, Dean CET** has given his Welcome address to the conference.



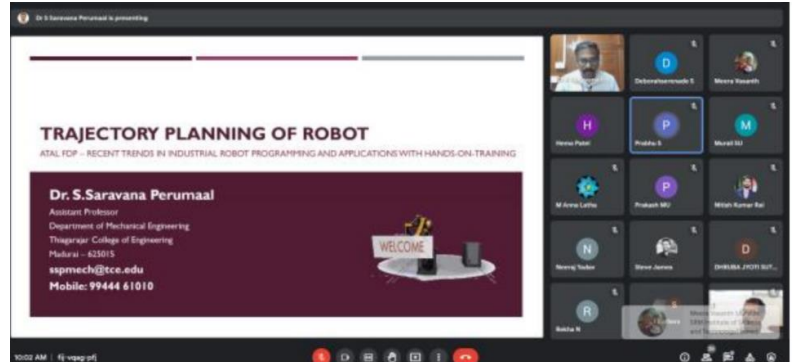
15. Invited Lecture on “How Desire Ambitions Success and Uncertainties Play role in the life of a Mechanical Engineer” was organized on 30-November-2021 by the Centre for Lean and Six Sigma (CLASS).  
**Coordinator: Dr. E. Vijayaragavan. Resource persons:** Prof. Dinesh Kumar, IIT Roorkee.
16. The **First International Conference on Advanced Materials and Mechanical Characterization (ICAMMC-2021)** in VIRTUAL mode is organized by the Department of Physics and Nanotechnology, and **Department of Mechanical Engineering** of SRM Institute of Science and Technology (SRMIST), Kattankulathur, in association with India’s leading institutes the Indian Institute of Science (IISc), Indian Institute of Technology (IIT) Madras, IIT Delhi, IIT Indore, and IIT Hyderabad, and reputed professional bodies like Indian Physics Association, Indian Ceramic Society, American Ceramic Society India Chapter, ASM International Chennai Chapter, Indian Institute of Metals Chennai Chapter, sponsored by the Science and Engineering Research Board (SERB), Ostec Arts Tools, Russia, BRUKER Corporation, USA and Industron Nanotechnology, USA, from 2nd December 2021 to 4th December 2021. The organizing team from SRMIST are: Prof. John D. Thiruvadigal, SRMIST, Prof. Pijush Ghosh, IIT Madras, Prof. Srinivasa Rao Bakshi, IIT Madras, Prof. Praveen Kumar, IISc Bangalore, Dr. R. Lakshmi Narayan, IIT Delhi, Dr. Eswar Prasad Korimilli, IIT Indore, and Dr. Rajesh Korla, IIT Hyderabad. The Convener of the conference: Dr. Kiran Mangalampalli, Department of Physics and Nanotechnology, SRMIST and Co-Convenors of the conference: Dr. Payel Bandyopadhyay, Dept. of Physics and Nanotechnology, SRMIST, **Dr. Sumit Pramanik**, Dept. of Mechanical Engineering, SRMIST and **Prof. Shubhabrata Datta**, Dept. of Mechanical Engineering, SRMIST.



17. **AICTE Training and Learning (ATAL) Academy Programme Sponsored** Five-day FDP (virtual mode) on “Recent Trends in Industrial Robot Programming and Applications with Hands-on Training” was organized from 06 – 10th December 2021, by the Robotics Laboratory of the Department of Mechanical Engineering. Sponsorship received: Rs. 93000/-; Application No.1614160603. **Coordinators: Prof. S. Prabhu and Dr. S. Murali; Organizing Committee: Dr. R. Ambigai, Mrs. Deborah Sernate Stephen, Mr. V. Manoj Kumar, Mrs. N. Rekha (Senior Technical Assistant), Ms. D. Bhanu Priya (Research Scholar), Mr. J. R. V.**



**Sai Kiran (Research Scholar).** **Resource persons:** Dr. M. Santhakumar, IIT Palakkad; Dr. M V A Raju Bahubalendruni, NIT Puducherry; Mr. Deep Singh, SRMIST Alumni & Research Scholar, IIT Madras; Dr. Sougata Karmakar, IIT Guwahati; Prof. S. Prabhu, SRMIST; Mr. V. Manoj Kumar, SRMIST; Dr. N. Arunachalam, IIT Madras; Dr. Yogesh Singh, NIT Silchar; Prof. S. Sridhar, SRMIST; Dr. Saravana Perumal, Thiagaraja Engg College; Mr. C. H. Vasanthkumar, Saveeth Engineering College; Dr. Satheesh Kumar Gopal, SSN, Chennai; Dr. Vijay Kumar Dalla, NIT Jamshedpur; Dr. D. Thiagarajan, Raghav Physiotherapy Advanced Rehabilitation & Research Centre, Chennai.



18. Webinar on “Leadership – How to influence others in a positive way?” was organized on 18<sup>th</sup> December 2021 by IEI, Kattankulathur Local Center along with Mechanical Engineering Association. **Coordinators: Dr. A. Vijaya & Prof. U. Mohammed Iqbal**
19. Short Course on “Material Testing – Destructive and Non-Destructive Testing” was organized from 08 – 10 January 2022 by the Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering. **Coordinator: Dr. E. Vijayaragavan.** **Resource persons:** Dr. Pannerselvam Ramaswamy, MSME TDC, Agra.
20. Webinar on “Career Prospects in Mechanical Engineering” was organized on 10-January-2022 by the Mechanical Engineering Alumni Association and ASME – SRM Students Section. **Coordinator: Dr. E. Vijayaragavan & Mr. S. Balamurugan.** **Resource persons:** Dr. Pannerselvam Ramaswamy, MSME TDC, Agra & Dr. Rajkumar Swaminathan, RANE Engine Valve Limited.
21. Webinar on “Graphic Design for Civil Engineers and Architects” was organized on 12th-January-2022 by the Centre for Lean and Six Sigma (CLASS) in association with The Institution of Engineers (India) – Kattankulathur Local Centre. **Coordinator: Dr. E. Vijayaragavan.** **Resource persons:** Ms. Priya Body, Aeiforia Architects, Noida.

### MOOCs and Online courses completed [Faculty]

1. Dr.R.Santhanakrishnan, completed an online course on “Design Practice – II” on NPTEL.
2. Dr.V. Magesh, completed an online course on “Biomechanics of Joints and Orthopaedic Implants” on NPTEL.
3. Dr. S. Karuppudaiyan, completed an online course on “Biomechanics of Joints and Orthopaedic Implants” on NPTEL.
4. Dr. M. Prakash completed an Online Course on "Mechanics of Materials I: Fundamentals of Stress & Strain and Axial Loading" on 26/07/2021 - 24/08/2021 conducted by Georgia Institute of Technology offered through Coursera.
5. Mr.N.Vijay Krishna completed an online course on "Electronics enclosures thermal issues" on NPTEL.
6. Mr.S.Arulkumar completed an online course on "Solar Energy Engineering and Technology" on NPTEL.
7. Mr.R.K.Barathraj completed an online course on "Solar Energy Engineering and Technology" on NPTEL.

## Placement Activity (Aug 2021 to Jan 2022)

## 1. Placement Statistics 2021 Batch

The Campus placement cycle of 2022 Batch started on 3rd June 2021. As on 24th January 2022, 373 offers were secured by the B-Tech students and 12 offers by M-Tech students during the campus placement cycle. A total of 316 B-Tech students and 21 M-Tech students enrolled for the campus placement. The highest package provided by the companies is 25 LPA and a mean package of around 5 LPA.

<b>B.TECH SUMMARY / 2022 BATCH / AS ON 24.01.2022</b>	
TOTAL STRENGTH	488
NO OF STUDENTS ENROLLED	316
NUMBER OF STUDENTS PLACED	223
TOTAL NUMBER OF OFFERS	373
CORE OFFERS	73
NON CORE OFFERS	300
NO OF COMPANIES VISITED	112
INTERNSHIP OFFERS	48
HIGHEST OFFER PACKAGE / CTC	25 LPA
LOWEST OFFER PACKAGE / CTC	3.5 LPA
LOR applications	45
<b>M.TECH SUMMARY / 2021 BATCH / AS ON 24.01.2022</b>	
NO OF STUDENTS ENROLLED	21
NUMBER OF STUDENTS PLACED	12
NUMBER OF OFFERS	12
CORE OFFERS	3
NO OF COMPANIES VISITED	32
INTERNSHIP OFFERS	1
HIGHEST OFFER PACKAGE / CTC	12 LPA
LOWEST OFFER PACKAGE / CTC	1.5 LPA

The top 10 companies offering the highest package and the number of Mechanical students of 2022 are:

<b>Company</b>	<b>No of offers</b>	<b>CTC</b>
Schlumberger	8	25 LPA
Amazon	8	18.6 LPA
Admitkard	2	10 LPA
Hewlett Packard Enterprise India Pvt Ltd (HPE)	2	12 LPA
Accenture	1	9.9 LPA
JSW Energy	4	9.5 LPA
Mars Petcare	1	8.8 LPA
Quantiphi Analytics Solutions Pvt. Ltd.	2	8.5 LPA
Reliance Industries	8	8 LPA
Morphle Labs	2	8 LPA

## 2. Induction Programs

### 1. *Townhall Meeting*

➤ The town hall meeting was organized by our Career Centre for the students of the 2023 batch for appraising the Placement Norms and Recruitment processes on 27-SEP-2021, 2.30 pm.

### 2. *AICTE Internship- 2023 Batch*

➤ The department placement coordinator, **Mr. S. Ponsankar**, was appointed as the Internship coordinator at the Mechanical Department level. It was made mandatory for Placement opted 3<sup>rd</sup>-year students to get registered into the AICTE internship portal. Internship opportunities are conveyed to third-year students via mail. The motive is to provide guidance and assistance to interested students to apply, procure internships and build their profiles for placement.

### 3. *Superset Enrolment and Verification for Even Semester- 2022 Batch*

➤ The enrolment of students in Superset, the official University recruitment platform, for 2022 Batch students who have cleared the arrears and became eligible started from 24th January 2022. The verification and approval of profiles of enrolled students also done by the Department Placement Coordinators. Date: From 24-JANUARY-2021

## 3. Connect Session Series – Alumni Interactions

*"Connect Session Series (CSS)" is a series of interactive sessions with our Alumni initiated by our department exclusively to discuss particularly with our final year students regarding the placements, higher studies, entrepreneurship, government job preparations, defense exam preparations, etc. to help the students to start their career. Alumni are invited to give a small motivational talk to their fellow junior students for better interaction and motivation to confidently attend the placement process. Also, Alumni share their experience and knowledge of the placement process company-wise so that the students have an edge and are well prepared for the recruitment process.*

1. **The First session of the second series of connect sessions was organized through online mode Google Meet on 14-AUG-2021, 6.00 pm.**

2. **The Second session of the second series of connect session was organized through online mode Google Meet on 20-AUG-2021, 6.00 pm.**



### Alumni Speakers



**AGUM SRIVASTAVA**  
Graduate Engineer Trainee  
Cognizant



**SAI KRISHNA**  
System Engineer  
Infosys



**ROSHAN**  
Assistant System Engineer  
TCS



**PRANEETH**  
Assistant System Engineer  
TCS

### Alumni Speakers



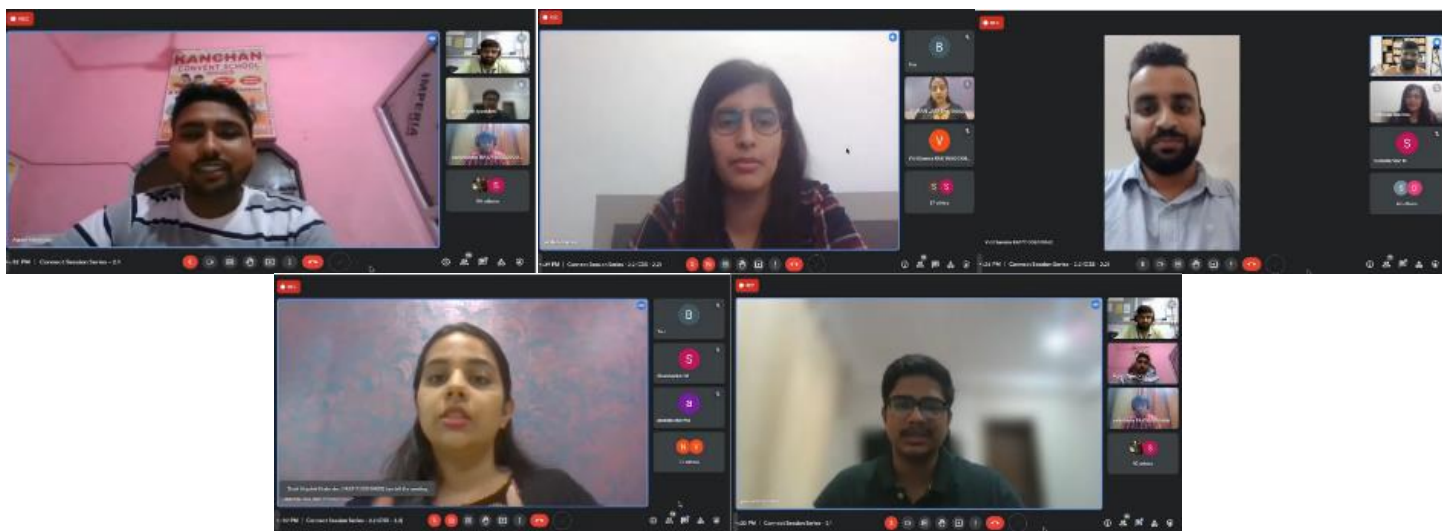
**AKSHITA SHARMA**  
Manager Operations  
Amazon, Hyderabad



**SIMRAN LABH**  
Manager Operations  
Amazon, Mumbai



**VIDIT SAXENA**  
Manager Operations  
Amazon, Delhi



## Department Semester Abroad Program (SAP) Activity

**Mr. D. Raja**, Assistant Professor acting as a department of SAP coordinator

### 1. Twinning Degree with Illinois of Technology (IIT), Chicago, USA.

- Two students from the Department of Mechanical Engineering were nominated for the Twinning Degree with Illinois of Technology (IIT), Chicago, USA and they have got their admissions in IIT, Chicago, USA.
- Mr. Nemana Mihir (RA1911002010057) & Mr. Mir Fayaz Ali (RA1911002010099)

## Events Attended by our Students

1. Jegan Jeyakumar of I year M.Tech (CAD) students got an internship from Tata Elxsi systems.
2. Mr. Sudharsanan Venkatraman (RA1911002010011) completed his internship training at TI Metal Forming Unit, Tube Investment of India Ltd., Thiruninravur, Chennai from 22<sup>nd</sup> September to 06<sup>th</sup> October 2021.
3. Mr. T. Vighnesh Karthikeyan (RA1911002010031) completed his internship training at 3G Surgical Industries Pvt Ltd., Chennai. from 21-June- 201 to 06-July-2021.
4. Mr. T. Vighnesh Karthikeyan (RA1911002010031) completed his internship training at TI Metal Forming Unit, Tube Investment of India Ltd., Thiruninravur, Chennai from 22-September-2021 to 06-October-2021.
5. Mr. T. Vighnesh Karthikeyan (RA1911002010031) completed his internship training at Budh Chainlink & Wire Netting Industry, Chennai from 29-November-2021 to 14-December-2021.
6. Ms. Isha Debashish Nandi (RA1911002010195) completed her internship cur online training at BHEL – HEP Bhopal, from 11-October-2021 to 16-October-2021.
7. Ms. Isha Debashish Nandi (RA1911002010195) participated in the “Hero Campus Challenge Season 7” organized by Hero MotoCorp Limited as Team TECH GIRLS on 01-11-2021.
8. Ms. Isha Debashish Nandi (RA1911002010195) participated in the “L'Oréal Sustainability Challenge 2021” organized by L'Oréal as Team ALL STARS on September-2021.
9. Mr. Harshit Jain (RA2111054010008) completed Online Course on "Machine Learning with Python" from 01.10.2021 to 30.11.2021 by VERZEO.
10. Mr. Harshit Jain (RA2111054010008) completed Machine Learning with Python Live Projects from CODINGZEN in association with VERZEO from 01.10.2021 to 30.11.2021.
11. Mr. PRATAP KRISHNA SALGAR (RA2111054010031) did an internship at TECH ANALOGY as Sales and Marketing operations. This internship was organised by TECH ANALOGY. 19-11-2021 to 19-12-2021.
12. Mr. Hrithvik Partap Singh Thakur attended MasterCam Online Training organised by MSME Technology Development Centre (PPDC) from 12-08-2021 to 11-09-2021
13. Mr. OHVIYA LAKSHMI K attended the international conference titled Global Rice Conference (GRC) 2021 organised by IIFPT - Indian Institute of Food Processing Technology from 24-09-2021 to 25-09-2021
14. Mr. YUVRAJ SINGH attended the quiz “e- intra collegiate maths quiz” organised by SRMIST Kattankulathur on 09-10-2020
15. Mr. VIGNESHWARAN K attended the quiz “HERO CAMPUS CHALLENGE” organised by Hero motor corporation limited 01-11-2021.
16. R.V. Nanditta [RA1811002010002, B. Tech Final Year] completed her project-based internship with “Vardhan Consultancy Engineering (VCE) on the topic “Waste to Energy” from Jul 2021 – Sept 2021.
17. R.V. Nanditta [RA1811002010002, B. Tech Final Year] completed her project-based internship with “Vardhan Consultancy Engineering (VCE) on the topic “EV Techno Commercial Analysis” from Jul 2021 – Sept 2021.
18. Nagulash B Rahul [RA1811002010032, B. Tech Final Year] completed his project-based internship with “Vardhan Consultancy Engineering (VCE) on the topic “Waste to Energy” from Jul 2021 – Sept 2021.
19. R.V. Nanditta [RA1811002010002, B. Tech Final Year] completed her project-based internship with “Ather Energy” from Jul 2021 – Sept 2021.
20. R.V. Nanditta [RA1811002010002, B. Tech Final Year] completed her internship in the domain of Solar Energy with “Solar Secure” from Sept 2021 – Oct 2021.
21. Nagulash B Rahul [RA1811002010032, B. Tech Final Year] completed his internship in the domain of Solar Energy with “Solar Secure” from Sept 2021 – Oct 2021.

22. R.V. Nanditta [RA1811002010002, B. Tech Final Year] served as a Team Lead for Materials and Structures in an organization named “Space Advancement and Research Cell (SARC)” from May 2021 – Sept 2021.
23. Nagulash B Rahul [RA1811002010032, B. Tech Final Year] completed his internship as Project intern on li-ion cell sizing, welding, calculation and motor sizing for electric vehicles at “Decibel Labs” from Nov 2021 – Dec 2021.
24. R. Gowtham [RA1811002010056, B. Tech Final Year] completed his internship as Project intern on li-ion cell sizing, welding, calculation and motor sizing for electric vehicles at “Decibel Labs” from Nov 2021 – Dec 2021.
25. N.S. Likith Charan [RA1811002010058, B. Tech Final Year] completed his internship as Project intern on li-ion cell sizing, welding, calculation and motor sizing for electric vehicles at “Decibel Labs” from Nov 2021 – Dec 2021.
26. Nagulash B Rahul [RA1811002010032, B. Tech Final Year] completed his internship at “Bhadreshwar Vidyut Pvt Ltd” from August 2021 – August 2021.
27. R.K.R. Mallolan [RA1811002010003, B. Tech Final Year] completed his internship at “Bhadreshwar Vidyut Pvt Ltd” from August 2021 – August 2021.
28. R.V. Nanditta [RA1811002010002, B. Tech Final Year] completed her Virtual Summer Program on the topic “Guide to Thesis and Article Writing” provided by Universiti Malaysia Pahang from August 2021 – August 2021
29. Atthreya Venkatesan [RA1811002010021, B. Tech Final Year] completed his internship at “Bhadreshwar Vidyut Pvt Ltd” from August 2021 – August 2021.
30. R. Gowtham [RA1811002010056, B. Tech Final Year] completed his internship at “Bhadreshwar Vidyut Pvt Ltd” from August 2021 – August 2021.
31. Harshini N. [RA1811002010241, B. Tech Final Year] completed her internship as “UAV Design and Development” at HYPSTUMA from August 2021 – August 2021.
32. R.V. Nanditta [RA1811002010002, Final Year B. Tech] completed her certification titled “Advanced Diploma Tissue Engineering” provided by ALISON on Jan 2022
33. R.V. Nanditta [RA1811002010002, Final Year B. Tech] completed her certification titled “Basics of Modelling and Simulation using Finite Element Method in Mechanical Engineering – Level 1” provided by Department of Mechanical Engineering, SRM Institute of Science and Technology (SRMIST) in August 2021.
34. S. Balasubramaniam [RA1811002010059, Final Year B. Tech] completed her certification titled “Basics of Modelling and Simulation using Finite Element Method in Mechanical Engineering – Level 1” provided by Department of Mechanical Engineering, SRM Institute of Science and Technology (SRMIST) in August 2021.
35. K.V. Bhargav Sai [RA1811002010032, Final Year B. Tech] completed her certification titled “Basics of Modelling and Simulation using Finite Element Method in Mechanical Engineering – Level 1” provided by Department of Mechanical Engineering, SRM Institute of Science and Technology (SRMIST) in August 2021.
36. Arundhathi Upadhyay [RA1811002010044, Final Year B. Tech] completed her certification titled “Basics of Modelling and Simulation using Finite Element Method in Mechanical Engineering – Level 1” provided by Department of Mechanical Engineering, SRM Institute of Science and Technology (SRMIST) in August 2021.
37. R.V. Nanditta [RA1811002010002, Final Year B. Tech] completed her specialized training on “Corporate Skills Improvement & Representation” provided by Vardhan Consultancy Engineering from Jul 2021 – Sept 2021.
38. R.V. Nanditta [RA1811002010002, Final Year B. Tech] completed her certification titled “3D Printing & Its Application” provided by Design Division, Department of Mechanical Engineering, SRM Institute of Science and Technology (SRMIST) from August 2021 - Sept 2021.
39. Nagulash B Rahul [RA1811002010032, Final Year B. Tech] completed her certification titled “Basics of Modelling and Simulation using Finite Element Method in Mechanical Engineering – Level 1” provided by Department of Mechanical Engineering in SRM Institute of Science and Technology (SRMIST) in August 2021.



40. V. Darshan [RA1811002010025, Final Year B. Tech] completed his professional certification on “Mechanical Design” provided by Dassault Systemes on Sept 2021.
41. V. Darshan [RA1811002010025, Final Year B. Tech] completed his professional certification on “Drawing Tools” provided by Dassault Systemes on Oct 2021.
42. V. Darshan [RA1811002010025, Final Year B. Tech] completed his professional certification on “Weldments” provided by Dassault Systemes on Nov 2021.
43. V. Darshan [RA1811002010025, Final Year B. Tech] completed his professional certification on “Sheet Metal” provided by Dassault Systemes on Nov 2021.

## Mechanical Engineering Association Activity

### 1. MINI-HACKATHON in collaboration with IEI

To commemorate the Engineer's Day (September 15th, 2021), a MINI HACKATHON was conducted in the Mechanical Engineering Department students in collaboration with IEI (The Institution of Engineers). Two problem statements were provided to the students to brainstorm upon and come up with potential solutions for the same.

#### Winners of the Hackathon:

##### ➤ Topic 1: Anti-collision System for Autonomous vehicle

**Team: Just Engineers** & Team members: Mr. Vashista Muralidhara (RA2011002010225), Mr. Priyanshu Rajesh Pal (RA2011002010014), Mr. Siddharth Mittal (RA2011002010068).

##### ➤ Topic 2: Atmospheric Water Generator

**Team: One Man Army** & Team member: Suriyadevalan (RA19110020101).



### 2. Logo Design Competition

The Mechanical Engineering Association in association with the Center for Composites and Advanced Materials (CCAM) in the Mechanical Engineering Department, SRM IST organized a Logo Design competition on 16th September 2021.

The two Finalists being Mr. Linsha Selin and Mr. Joy Bannerji, were asked to make few final modifications to their designs for the final round of evaluation. After deep discussion and consideration of the various design aspects of the submissions, **Mr. Joy Bannerji** was chosen as the winner and his Logo was approved to be used as the official Logo for the competition Center for Composites and Advanced Materials (CCAM).



### 3. Active Learning Quiz

The Active Learning Lab organized a Quiz on 26 September 2021, the Quiz comprised two rounds that participants undertook for its completion. The first was a preliminary evaluation held on Google Forms, while the second-the final event- was held on the Kahoot platform.

#### **Winners:**

1<sup>st</sup> place: Siddharth Mittal- 10040 pts.

2<sup>nd</sup> place: Kapil Kumar- 8315 pts.  
3<sup>rd</sup> place: Indra Sena Reddy- 8224 pts.

#### 4. Talent Search Quiz in collaboration with Material Advantage Student Chapter

The Talent Search Quiz, held in conjunction by the Mechanical Engineering Association (MEA) on 02 October 2021 and the Material Advantage Student Charter, comprised two rounds that participants needed to undertake for its completion. The first was a preliminary evaluation held on Google Forms, while the second was the final event, held on the Kahoot platform.

##### Winners:

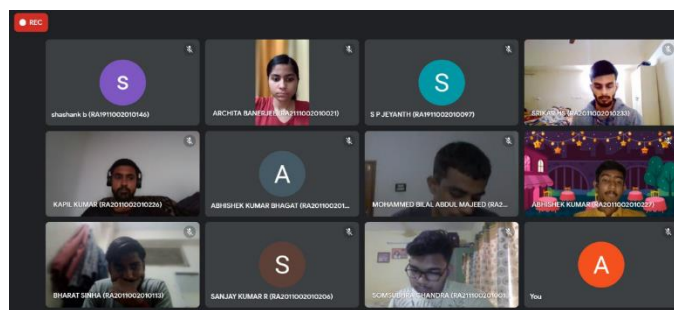
1<sup>st</sup> place: Varshini- 13678 points.  
2<sup>nd</sup> place: Harshit- 13216 points.  
3<sup>rd</sup> place: Praveen- 12241 points.

#### 5. Quiz on Fluid Dynamics

The Fluid Dynamics Quiz, conducted by the Mechanical Engineering Association on the 15th of October 2021, was conducted to enhance Mechanical Engineering students' grasp of this topic, and to better equip them to analyse and solve problems pertaining to it in the future. The MEA strives to provide an enriching experience for all its students, and in order to broaden their scopes of learning conducts a plethora of quizzes, seminars and workshops and deliver a truly multidisciplinary approach to the Engineering discipline.

#### 6. Aptitude Quiz

The Mechanical Engineering Association (MEA) conducted the Aptitude Test Quiz on the 14th of October 2021. With several students from the second and third years turning up, this was one of its most successful events thus far. The quiz aimed to strengthen students' understanding, approach, and analysis of problems in topics such as mathematical ability, logical reasoning, and pattern recognition, among others.



#### 7. Webinar on National Energy Conservation Day

The speaker **Mr. T. Sankara Narayanan** who is an **Accredited Energy Auditor, Former Regional Director at National Productivity Council, Mumbai** highlighted about the Energy Conservation Act 2001 and its Amendment 2010. He elaborated about the primary energy (Coal, Oil, gas and Nuclear materials), secondary energy (Steam, electricity, chilled water and compressed air) and how energy usage is used as an economic indicator of a nation.

Energy Usage

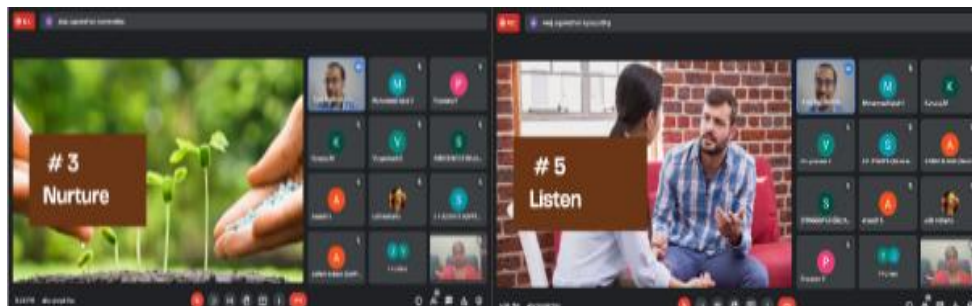
Country	Per Capita Energy ( Kwh/person/year)
China	3992
UK	4700
EU	5502
Japan	7519
Taiwan	10058
US	11730
India	> 1200

Climate , Economic Activity, Population



### 8. Webinar on Leadership “How to influence people in a positive way?”

The speaker Mr. Anuj Jagannathan, CEO, Propelurs consulting highlighted the inherent qualities of leadership and how to increase your influence on others. The audience was quite interactive with the speaker and raised queries regarding how these qualities can be addresses online mode.



## MoU Activity

### 1. Activity with Teeth “N” Jaws Center (Faculty Champion: Dr. V. Magesh)

**Journal Publication:** Harikrishnan, Pandurangan, **V. Magesh**, Arayambath Balamani, Puja Khanna, and Srinivas Kumar Karnam. "Experimental Evaluation of Torque forces During Simulated Twists from Various Orthodontic Archwires." *Trends in Biomaterials & Artificial Organs* 36, no. 1 (2022): 1-3. [SNIP: 0.049].

**Conference presentation:** **V. Magesh** and P. Harikrishnan. Finite element analysis of different debonding methods in Orthodontics, International conference on Emotion and Sensibility, Organized by Korean Society for Emotion & Sensibility, November 26, 2021. Award: **First Best Oral Presentation Award.**

### 2. MSME Technology Development Center (Faculty Champion: Dr. E. Vijayaragavan)

**Dr. E. Vijayaragavan** successfully organized a Professional Development Programme (PDP) on “**Total Digital Transformation (TDT)**” from 15<sup>th</sup> – 20<sup>th</sup> November 2021 by the Centre for Lean and Six Sigma (CLASS), Department of Mechanical Engineering in association with the MSME Technology Development Centre, Agra.

### 3. Activity with Zoller India Pvt Ltd

**Mr. J. Santhakumar** successfully completed his **Ph.D. public viva-voce oral examination** on 10<sup>th</sup> January 2022 at SRM Institute of Science and Technology, Kattankulathur, Chennai. Title: EFFECT OF VARIOUS TOOL PATH STRATEGIES ON THE PERFORMANCE PARAMETERS IN MILLING PROCESS. Facilities in the Zoller lab located in the Machine Shop, Department of Mechanical Engineering was utilized for his research purpose.

### 4. Activity with Shinsung University, South Korea (Faculty Champion: Dr. S. Murali)

#### 4.1. ICES 2021

Along with Dr. Seung Nam Min, Shinsung University organized **an International Conference on Emotion and Sensibility (ICES2021)** on 26<sup>th</sup> November 2021. This conference was joined organized by **SRMIST** and the **Korea Society for Emotion and Sensibility (KOSES)**, **South Korea**. Chairman: Prof. Seung Nam Min (Shinsung University, South Korea), **Prof. S. Prabhu (SRMIST)**. Members involved: **Dr. S. Murali, Dr. V. Magesh, Dr. M. Prakash, Dr. A. Arul Jeya Kumar**, Dr. M. Uma, Dr. D. Ashok Kumar, Dr. Varshini Karthick, Prof. A. K. Jayanthi. There were multiple presentations from SRMIST students and faculty. **Prof. T. V. Gopal, Dean CET** has



given his Welcome address to the conference.

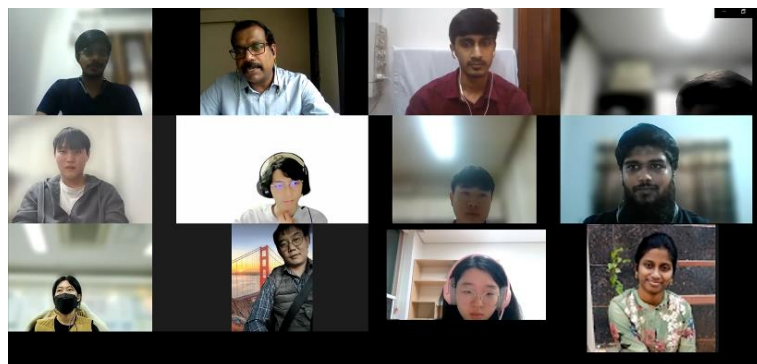
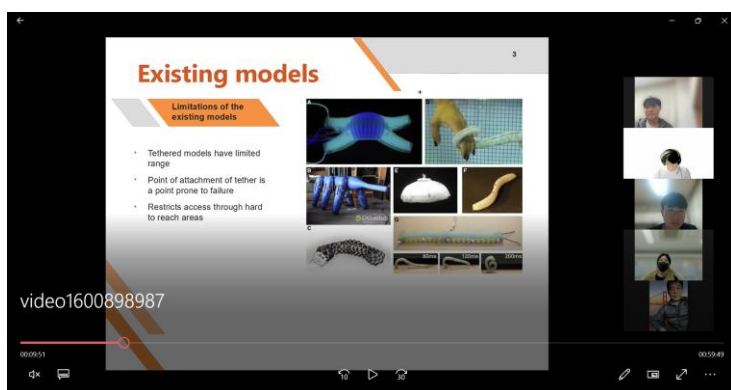
#### 4.2. Conference presentation

1. D. Mounika, N. Arun, Seung Nam Min, **Murali Subramaniyam\***, "Gait / Foot Pressure Measurement Techniques - Development of Low-Cost Measurement Method", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.
2. M. Ramnaath, Seung Nam Min, **Murali Subramaniyam\***, "Interface Pressure Measurement of Wheelchair Users: A Rapid Review", 4th International Conference on Emotion and Sensibility (ICES 2021), Korean Society of Emotion and Sensibility (KOSES), South Korea, November 26, 2021.

#### 4.3. Korea – Indian Fusion Capstone Design Competition

Korea – Indian Fusion Capstone Design Competition preparation meeting was held on 29<sup>th</sup> November 2021. A group of students from both SRMIST (8 numbers of second-year M. Tech Robotics) and Shinsung University (9 numbers of Bachelor students) presented their ideas. This CAPSTONE design event aims to mix both students as multiple teams and work for a novel idea. If the teams can be able to make a novel idea which will be filed as Patent by Shinsung university along with SRMIST.

**Topics presented were:** Locomotive robot, Finger attachment for smartphone navigation, Smart Helmet, Smart parking system for Electric bike, Spine curvature measurements.



### Events Attended by our Faculty

1. Dr. U. Mohammed Iqbal has attended a 5 days FDP on “Applications of Artificial Intelligence in Modern Manufacturing”, from 3rd August to 7th August, 2021, organized by the department of Mechanical Engineering, Karunya Institute of Science and Technology, Coimbatore, Tamil Nadu.
2. Dr. I. Infanta Mary Priya attended Six-days Faculty Development Program on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” from 9 – 14th August 2021 organized by the Department of Mechanical Engineering, SRMIST.
3. Dr. S. Murali attended Six-days Faculty Development Program on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” from 9 – 14th August 2021 organized by the Department of Mechanical Engineering, SRMIST.
4. Dr. SUMIT PRAMANIK has participated in the University Distinguished Lecture titled “Creating a Vibrant Knowledge Society - An Indian Strategy for 21st Century” delivered by Dr K Kasturirangan, Chairman, National Education Policy (NEP)-2020 and special address by Dr Audimulapu Suresh, Hon’ble Minister for Education, Andhra Pradesh. It is organized by SRM University-AP, association with India's national newspaper, "The Hindu" held on 24th JULY 2021.

5. S. OLIVER NESARAJ. attended FDP on "Unconventional Machining Processes" at Sri Sairam Engineering College held on 26.07.2021 to 02.08.2021 organized by Department of Mechanical Engineering.
6. Dr. M. Prakash attended six days FDP on "Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers" at SRMIST, Kattankulathur held on 09/08/2021 to 14/08/2021 organised by Department of Mechanical Engineering.
7. Dr. A. Arul Jeya Kumar attended six days FDP on "Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers" at SRMIST, Kattankulathur held on 09/08/2021 to 14/08/2021 organised by Department of Mechanical Engineering.
8. Dr. R. Ambigai attended six days FDP on "Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers" at SRMIST, Kattankulathur held on 09/08/2021 to 14/08/2021 organised by Department of Mechanical Engineering.
9. Dr. I. Infanta Mary Priya attended six days FDP on "Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers" at SRMIST, Kattankulathur held on 09/08/2021 to 14/08/2021 organised by Department of Mechanical Engineering.
10. Dr. R. Murugesan attended the FDP on " Applications of Artificial Intelligence and Machine Learning in Mechanical Engineering" at SRMIST, Vadapalni, held on 04.10.2021 to 08.10.2021, organised by Department of Mechanical Engineering.
11. Dr. I. Infanta Mary Priya FDP on "Applications of Artificial Intelligence and Machine Learning in Mechanical Engineering" at SRMIST, Vadapalani Campus held 04.10.2021 to 08.10.2021, organised by Department of Mechanical Engineering.
12. ABBURI LAKSHMAN KUMAR participated & completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Sustainable Green Composites: Design, Manufacturing and Characterization" from 09/08/2021 to 13/08/2021 at NIT Meghalaya.
13. Dr. U. Mohammed Iqbal has participated in the five days online FDP on 'Challenges and opportunities for research in Mechanical Engineering: Present and Future' organized by the department of Mechanical Engineering, Karunya Institute of Technology and Sciences, from 20th September 2021 to 24th September 2021.
14. Dr. M Prakash attended six days FDP/on "Recent Trends in Composites and Advanced Materials Research " held on 29.9.2021 to 6.10.2021 organised by Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur –603 203, Tamil Nadu, India.
15. Dr. SUMIT PRAMANIK attended six days FDP/on "Recent Trends in Composites and Advanced Materials Research " held on 29.9.2021 to 6.10.2021 organised by Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur –603 203, Tamil Nadu, India.
16. Mr. I. Aatthisugan attended six days FDP/on "Recent Trends in Composites and Advanced Materials Research " held on 29.9.2021 to 6.10.2021 organised by Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur –603 203, Tamil Nadu, India.
17. Dr. A. Vijaya attended six days FDP/on "Recent Trends in Composites and Advanced Materials Research " held on 29.9.2021 to 6.10.2021 organised by Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur –603 203, Tamil Nadu, India.
18. Dr. R. Ambigai attended six days FDP/on "Recent Trends in Composites and Advanced Materials Research " held on 29.9.2021 to 6.10.2021 organised by Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur –603 203, Tamil Nadu, India.

19. S. Sasikumar attended six days FDP/on "Recent Trends in Composites and Advanced Materials Research " held on 29.9.2021 to 6.10.2021 organised by Centre for Composites and Advanced Materials (CCAM), Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur –603 203, Tamil Nadu, India.
20. Dr. S. Murali attended six days FDP on Recent Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training held on 18th - 23rd October 2021 organized by the Department of Mechanical Engineering in association with Mechanical Engineering Association (MEA), The Institute of Engineers (India)- Kattankulathur Local Centre, ASME SRM Student Section, and ISHRAE – SRMIST Student Chapter
21. Dr. S. Murali attended five-day AICTE ATAL Sponsored FDP on Recent Trends in Industrial Robot Programming and Application with hands-on Training" held on 06-10th December 2021 organized by the Robotics Laboratory, Department of Mechanical Engineering, SRMIST, Kattankulathur.
22. Dr. A. Vijaya attended six days FDP on Recent Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training held on 18th - 23rd October 2021 organized by the Department of Mechanical Engineering in association with Mechanical Engineering Association (MEA), The Institute of Engineers (India)- Kattankulathur Local Centre, ASME SRM Student Section, and ISHRAE – SRMIST Student Chapter
23. Dr. A.Vijaya attended FDP on AN INSIGHT INTO NOVEL RESEARCH ASPECTS IN MANUFACTURING PROCESSES at SRMIST held on Nov 22 nd to Nov 27th , 2021 organized by the department of Mechanical Engineering, SRMIST.
24. Dr. R. Murugesan attended the Faculty Development Program on " VIRTUAL LABS" held on 06-Sep-2021 to 09-Sep-2021 organised by NITK Surathkal.
25. Dr. I. Infanta Mary Priya, Assistant Professor of SRM Institute of Science and Technology participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Nanoscience for Nano materials" from 20/09/2021 to 24/09/2021 at Manakula Vinayagar Institute of Technology.
26. Sasikumar.S attended FDP on “Advanced Materials and Additive Manufacturing Systems for Industry 4.0” at Rajarambapu Institute of Technology held on 25/10/2021 to 29/10/2021 organised by AICTE Training and Learning (ATAL) Academy
27. Sasikumar.S attended Seminar on “Effective research execution by using Mendeley” at Effective research execution by using Mendeley held on 28th OCT 2021 organised by A.P.J. Abdul Kalam Technical University
28. Mr. Abburi Lakshman Kumar, attended a Technical talk on the topic "How to write a scientific abstract" on 18-8-2021 time 7:30AM to 8:30AM organized by Research marketing APAC (Wily).
29. Dr. I. Infanta Mary Priya attended training program on "Professional Development Program on Total Digital Transformation" from 15.11.2021 to 20.11.2021 at SRM Institute of Science and Technology, Kattankulathur, Chennai, Tamil Nadu.
30. E Vijayaragavan attended an online workshop on “3 D Printing Techniques and their Application in Biomedical Devices” held at Indian Institute of Technology Guwahati on 15.7.2021.
31. N. Arun attended a course on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” held at SRMIST from 9.8.2021 to 14.8.2021.
32. M.Sachidhanandam attended a course on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” held at SRMIST from 9.8.2021 to 14.8.2021.
33. KR Arun Prasad attended a course on “Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers” held at SRMIST from 9.8.2021 to 14.8.2021.
34. K.Jegadeesan attended a three day CSI Sponsored Workshop on “Data Science with Machine Learning using R Programming” held at SRMIST from 18.8.2021 to 20.8.2021
35. E Vijayaragavan attended a six days “Entrepreneurship Boot Camp” held at SRMIST from 23.8.2021 to 28.8.2021.



36. S. Arunprasath attended a five day course on “High-Performance Materials & Applications (HPMA-2020)” held at SRMIST from 2.11.2021 to 6.11.2021.
37. E Vijayaragavan attended a one day course on “Brief History Of Strength Of Materials” held at Arjun College of Technology, Coimbatore on 24.9.2021.
38. E Vijayaragavan attended a six days workshop “Lightweight Design - Applications And Scope” held at SRMIST from 20.9.2021 to 25.9.2021
39. N Arun attended a six days workshop “Lightweight Design - Applications And Scope” held at SRMIST from 20.9.2021 to 25.9.2021.
40. M.Sachidhanandam attended a six days workshop on “Lightweight Design - Applications And Scope” held at SRMIST from 20.9.2021 to 25.9.2021.
41. E.Vijayaragavan attended a six days workshop on “Lightweight Design - Applications And Scope” held at SRMIST from 20.9.2021 to 25.9.2021.
42. M. Kamaraj attended a six days workshop on “Lightweight Design - Applications And Scope” held at SRMIST from 20.9.2021 to 25.9.2021.
43. N Arun attended a six days workshop “Recent Trends in Composites and Advanced Materials Research” held at SRMIST from 29.9.2021 to 6.10.2021.
44. S.Karuppudaiyan attended a six days workshop “Recent Trends in Composites and Advanced Materials Research” held at SRMIST from 29.9.2021 to 6.10.2021.
45. K.Jegadeesan attended a six days workshop “Recent Trends in Composites and Advanced Materials Research” held at SRMIST from 29.9.2021 to 6.10.2021
46. S.Karuppudaiyan attended a six days workshop “Recent Trends in Composites and Advanced Materials Research” held at SRMIST from 29.9.2021 to 6.10.2021
47. N Arun attended a six days workshop “Recent Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training” held at SRMIST from 18.10.2021 to 23.10.2021.
48. KR Arunprasath attended a six days workshop “Recent Trends in Design of Experiments (DOE) and Optimization Techniques with Hands-on Training” held at SRMIST from 18.10.2021 to 23.10.2021.
49. R. Santhanakrishnan attended a three day workshop on “Analytical And Numerical Methods For Non-Linear Vibrations” held at SRMIST from 23.10.2021 to 25.10.2021.
50. K.Jegadeesan attended a three days workshop on “Finite Element Method In Aerospace Structures held at SRMIST from 1.11.2021 to 3.11.2021
51. E Vijayaragavan attended a two days National Webinar on “Conceptualising Disability and Disability Studies” held at Centre for Disability Research and Training, Kirori Mal College from 27.9.2021 to 29.9.2021.
52. K.Jegadeesan attended a five days Workshop on “MATLAB & Applications” held at Department of Mechanical Engineering, Madanapalle Institute of Technology from 8.11.2021 to 12.11.2021
53. S.Arokia Agustin attended a five days Workshop on “MATLAB & Applications” held at Department of Mechanical Engineering, Madanapalle Institute of Technology from 8.11.2021 to 12.11.2021
54. M.Sachidhanandam attended a six days workshop on “Energy Harvesting from Vibrating Structures: Applications and Advances” held at SRMIST from 25.10.2021 to 30.10.2021.
55. Dr. R. Senthil participated a Elsevier Research Academy Webinar on “Fundamentals of Research Article Writing” on 29.08.2021, organized by VMKV Engineering College, Salem.
56. Mr.D.Premnath attended five day workshop on "Bio-statistics with SPSS" organised by Centre for statistics, SRMIST, kattankulathur during 09/08/2021 to 13/08/2021.
57. Mr.D.Premnath completed six days online workshop on "Examination reforms"organised by SRMIST, kattankulathur during 27/03/2021 to 01/04/2021.

58. Mr.S.Malarmannan completed six days online workshop on the title “Examination reforms” organised by the SRM IST, Kattankulathur from 27.03.2021 to 01.04.2021
59. Mr.G.Manikandaraja completed six days online workshop on the title “Examination reforms” organised by the SRM IST, Kattankulathur from 27.03.2021 to 01.04.2021
60. Mr.M.D.KathirKaman completed six days online workshop on the title “Examination reforms” organised by the SRM IST, Kattankulathur from 27.03.2021 to 01.04.2021
61. Mr.N.Vijay Krishna completed six days online workshop on the title “Examination reforms” organised by the SRM IST, Kattankulathur from 27.03.2021 to 01.04.2021
62. Dr. V.Praveena attended Online Elementary FDP on "Novel Materials" from 23/08/2021 to 27/08/2021 at SRM Institute of Management and Technology.
63. Dr.V.Praveena participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "ELECTRIC VEHICLE : CHALLENGES IN CHARGING & THEIR IMPACT ON POWER GRID" from 06/09/2021 to 10/09/2021 at COLLEGE OF ENGINEERING THALASSERY.
64. Dr. S. Manikandan attended three days skill development program on Solar PV system design" organized by National Institute of Solar Energy, MNRE, Delhi during 25-27 Aug 2021.
65. Dr.T. Lakshmanan of S.R.M. Institute of Science & Technology, Tamil Nadu has undergone Innovation Ambassador training (Foundation Level) conducted by MoE's Innovation Cell & AICTE during the period from 30th June - 30th July 2021 in online mode.
66. Dr.T.Lakshmanan atteded 2 weeks training programme on "Entrepreneurship development.Organised by SMVDU DST \_ NIMAT sponsored Project ".
67. Dr.G.Balaji attended a 6 day FDP on the title "Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers", organised by Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur “ 603203, on 09.08.2021 to 14.08.2021.
68. Mr.J.Thavamani participated in virtual short term course on “Energy management and Audit” Organized by NIT, Tiruchirappalli, Tamilnadu, on 20th to 24 th September 2021.
69. Dr. R. Senthil attended an Webinar on “Essential Tips for Publishing in High Impact Journals” on 08.09.2021, organized by Cell Press and Elsevier.
70. Dr.D. Siva Krishna Reddy attended seven days workshop on the “Examination reforms” organised by the School of mechanical engineering, SRMIST Kattankulathur.
71. Mr. S.Bharath Subramaniam attended seven days workshop on the “Examination reforms” organised by the School of mechanical engineering, SRMIST Kattankulathur.
72. Mr.P. Sundaram attended one day webinar on the title "LIQUID CHROMATOGRAPHY - MASS SPECTROSCOPY, THEORY AND ITS APPLICATIONS", by Interdisciplinary Institute of Indian System of Medicine (IIISM), Directorate of Research, SRM IST, Kattankulathur on 08.10.2021.
73. Mr. SIVASHANKAR has attended the one day webinar on "Effective research execution by using Mendeley" at AKTU, on 28 October, 2021.
74. Dr. R. Senthil Kumar attended the online workshop on Examination Reforms, organized by SRM Institute of Science and Technology, Kattankulathur, during 27-03-2021 to 01-04-2021.
75. Dr.P.Sudhakar attended one day lecture on the title “Science, Technology and Innovation Policy 2020: A Transformative S&T Agenda”• organized by SRMIST AMARAVATHI ON 30.10.21
76. Mr.J.Thavamani have participated in one day Faculty Development Program on “Solar powered Electric vehicle” Organized by department of Mechanical Engineering of Mahendra institute of technology, Namakkal, Tamilnadu. On 30 th October 2021.

77. Mr.Sivashankar attended Five-Day Online SDP on CFD using ANSYS Fluent organized by the Department of Aerospace Engineering, SRM institute of Science and Technology (SRMIST), Kattankulathur, Chennai during 25-29 October 2021.
78. Dr.V.Praveena attended 6 days PROFESSIONAL DEVELOPMENT PROGRAM ON TOTAL DIGITAL TRANSFORMATION from 15.11.2021 to 20.11.2021 Organized in association with Centre for Lean And Six Sigma (CLASS), SRM Institute of Science and Technology, Kattankulathur.
79. Dr.G.Balaji attended a faculty development workshop on the title "Design The Thinking" organised by SRM Innovation Incubation and Entrepreneurship Centre & School of Design Thinking during 31.10.2021 to 02.11.2021.
80. Mr. Ponsankar S has attended 5 days online SDP on CFD using ANSYS Fluent organized by Department of Aerospace Engineering, SRM institute of Science and Technology
81. Dr. P. Chandrasekaran attended one day webinar on the title "National Energy conservation" organised by SRM Innovation Incubation Entrepreneurship Centre and Mechanical Engineering Association SRMIST Kattankulathur on 14.2.2021.
82. Dr.G.Kasiraman had attended Five days FDP on AICTE Incorporating Human Values in Education organised by AICTE- NCCIP from 20.12.2021 to 24.12.2021.
83. Dr.G.Balaji attended a four day "Entrepreneurship Boot Camp" organized by the SRM Innovation and Incubation Entrepreneurship Centre & School of Design Thinking, on 18.11.2021 to 21.11.2021.
84. Mr. R. K. Barathraj attended 12 weeks Faculty Development Program through MOOCS on the title "Solar Energy Engineering and Technology" under NPTEL - AICTE FDP Program during July to October 2021.
85. Dr.D.Premnath attended three days Online short-term course on MATERIAL TESTING organized by the department of mechanical engineering, SRM IST, KTR campus.
86. Karthikeyan N attended FDP on "Additive Manufacturing in Industry 4.0 Strategy" at National Institute of Technology, Andhra Pradesh held on 06/12/2021 to 10/12/2021.
87. Dr. R. Ambigai participated in AICTE Training And Learning (ATAL) Academy sponsored Five-days FDP on "Processing and Applications of Functionally Graded Composite Materials" from 06/12/2021 to 10/12/2021 organised by Thiagarajar College of Engineering.
88. Dr. R. Ambigai participated in AICTE Training And Learning (ATAL) Academy sponsored Online Elementary FDP on "Novel Materials for Next-Generation Applications" from 2021-7-12 to 2021-7-16 organised by M S RAMAIAH INSTITUTE OF TECHNOLOGY.
89. Saravanakumar.R, participated "Workshop on Writing an Effective Grant Proposal", held on 17 December 2021, Organized by Department of Computational Intelligence, School of Computing, SRM Institute of Science and Technology, Kattankulathur, Chennai.
90. Dr. R. Murugesan, attended the FDP on "Automotive Friction Materials" from 13.12.21 to 17.12.21 organized by Centre for Automotive Materials, Department of Automobile Engineering, SRMIST, Kattankulathur.

### **Outreach Activities:**

1. Prof. T. Lakshmanan under his guidance Two Ph.D. Scholars completed their Viva-voce Examination at Anna University, Chennai.
2. Dr. D. Siva Krishna Reddy reviewed an article for Scopus indexed journal.
3. Dr. G. Balaji reviewed a paper for the International Journal of Green Energy; International Journal of Ambient Energy; IET Renewable Power Generation.
4. Dr. R. Senthil reviewed articles in the Energy Conversion Management, Chemical Engineering Journal, Journal of Energy Storage, Energy Reports, Journal of Engineering, Building and Environment, Energy Reports, International



Energy Journal, Journal of Building Engineering, International Journal of Ambient Energy, and Renewable Energy, Energy Conversion and Management, Desalination, Chemical Engineering Journal.

5. Dr. S. Manikandan conferred as a DC Member for Mr. Murugesan, Part-Time Ph.D with Anna University.
6. Dr. R Senthil conferred as a Co-convener in a National Level Hackathon, Smart e-Hackathon-Sustainable Rural Development (SH-SRD 2021), UBA-SRMIST and UBA NCI -IIT Madras initiative, on 22.10.2021 and 23.10.2021.
7. Few of our department faculty participated with their project students in the “SRM Project EXPO 21” hosted by the Department of Computer Intelligence in Association with SRM-IET & SRM-MTS student chapter on 10-Dec-2021. Faculty: Dr. G. Balaji (Project 1: Mitigating Emission on A CI Engine Using A Catalytic Converter & Project 2: Evaluation Of A New Low-Cost CO<sub>2</sub> Trapper Material For The Biodiesel Fuelled Diesel Engine); Dr. K. Suresh Kumar (Experimental Investigation Ona Zeolite 5a); Dr. S. Prabhu (Artificial Intelligence Based Voice Assistant); Mr. Daniel Glad Stephen (Design of Multipurpose Wear Testing Machine); Dr. E. Vijayaragavan (Toys For Autistic Kids.).
8. Mr. N. Vijay Krishna contributed as committee member in smart e –Hackathon on Sustainable rural development - 2021 (SH –SRD 2021).
9. Dr. R. Ambigai is acting as a review member for International Journal of Research and Scientific Innovation (IJRSI)
10. Prof. S. Prabhu, acted as one of the Chairman for the “4th International Conference in Emotion and Sensibility (ICES 2021), jointly organized by the Korean Society for Emotion & Sensibility (KOSES), South Korea and SRMIST, India on 26-November-2021.
11. Dr G Kasiraman acted as chair for the session on "PP6 - A CARBON NEUTRALITY" of SESBT 2021 at VIT, Chennai on 23.07.2021.
12. Dr R. Senthil acted as Board Member (Academic) for APJ Abdul Kalam Technological University, Thiruvananthapuram, Kerala, on 21.08.2021.
13. Dr. S. Manikandan has chaired the thermal session in connection with International conference on aerospace and mechanical engineering ICAME’21-conducted during 16-18 December 2021 at TKM college of engineering, Kollam, Kerala, India.

## Unnat Bharat Abhiyan Activity

### 1. National Level Competition

A national-level **Smart e-Hackathon – Sustainable Rural Development** (SH-SRD 2021) is organized by **UBA SRMIST** in association with **UBA RCI IIT Madras** and **UBA NCI IIT Delhi**. Hackathon aimed to cultivate young minds to provide innovative solutions to rural development on broad themes like renewable energy, water management, and waste management. Arts, science and engineering, and technology students can apply for this Hackathon. A team size is five students and there should be at least one female student in each team. The specific themes of SH-SRD 2021 are to design affordable solar cookers for rural households, wastewater treatment in rural applications, and Agri-tech solutions for stubble management. Nationwide enthusiastic participation has been witnessed with **120 submissions** to the Hackathon. Three winners in each theme are selected by three selection rounds. The total cash prize is INR. 90,000/-Two student volunteers from **Ms. Satabdi Bora (Third Year B.Tech – Mechanical)**, and **Ms. Mahek Dave (Third Year B.Tech – Mechanical)** are actively involved in successfully conduct the event. **Convenors:** Dr. V. Thirumurugan; Dr. Shantanu Patil; Prof. B. S. Murty (IIT Madras). **Co-conveners:** Dr. T. Deepan. **Dr. R. Senthil**

## 4th International Conference on Advances in Mechanical Engineering (ICAME 2022), 24-26 March 2022. (Virtual Mode)

### About the Conference:

The primary goal of the conference is to:

- Promote research and developmental activities in mechanical engineering.
- Promote scientific information exchange among academicians, researchers, developers, engineers, students, and practitioners working around the world.

**You are cordially invited to ICAME 2022.**

This conference focuses on a range of issues but not limited to: Solid Mechanics, Structural, Thermal, Energy, Manufacturing, Aerospace, Material Science, Mechatronics, Robotics and Control, Micro and Nano Mechanics, Automotive, Biomechanics, Bioengineering, Tribology, Multidisciplinary and Emerging Areas of Engineering



### Journal Publications:

1. Journal of Thermal Analysis and Calorimetry. IF: 4.626 (Regular issue)
2. Materials and Manufacturing Processes. IF: 4.616 (Special issue)
3. Energy Sources, part A recovery, utilization and environmental effects abbreviation. IF: 3.447. (Regular issue)
4. Heat transfer engineering. IF: 2.172 (Special issue)
5. Journal of Power and Energy. IF: 1.882 (Regular issue)
6. Journal of Engineering Tribology. IF: 1.674 (Regular issue)
7. Tribology – Materials, Surfaces and Interfaces. SNIP: 0.87 (Regular issue)
8. International Journal of Vehicle Structures & Systems. SNIP: 0.657 (Special issue)
9. Materials Today proceedings. SNIP: 0.657 (Special issue)
10. Journal of the Institution of Engineers (India): Series D. SNIP: 0.588 (Regular issue)
11. AIP Conference Proceedings. SNIP: 0.314. (Special issue)

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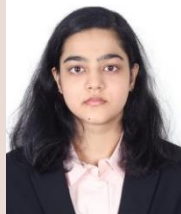
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