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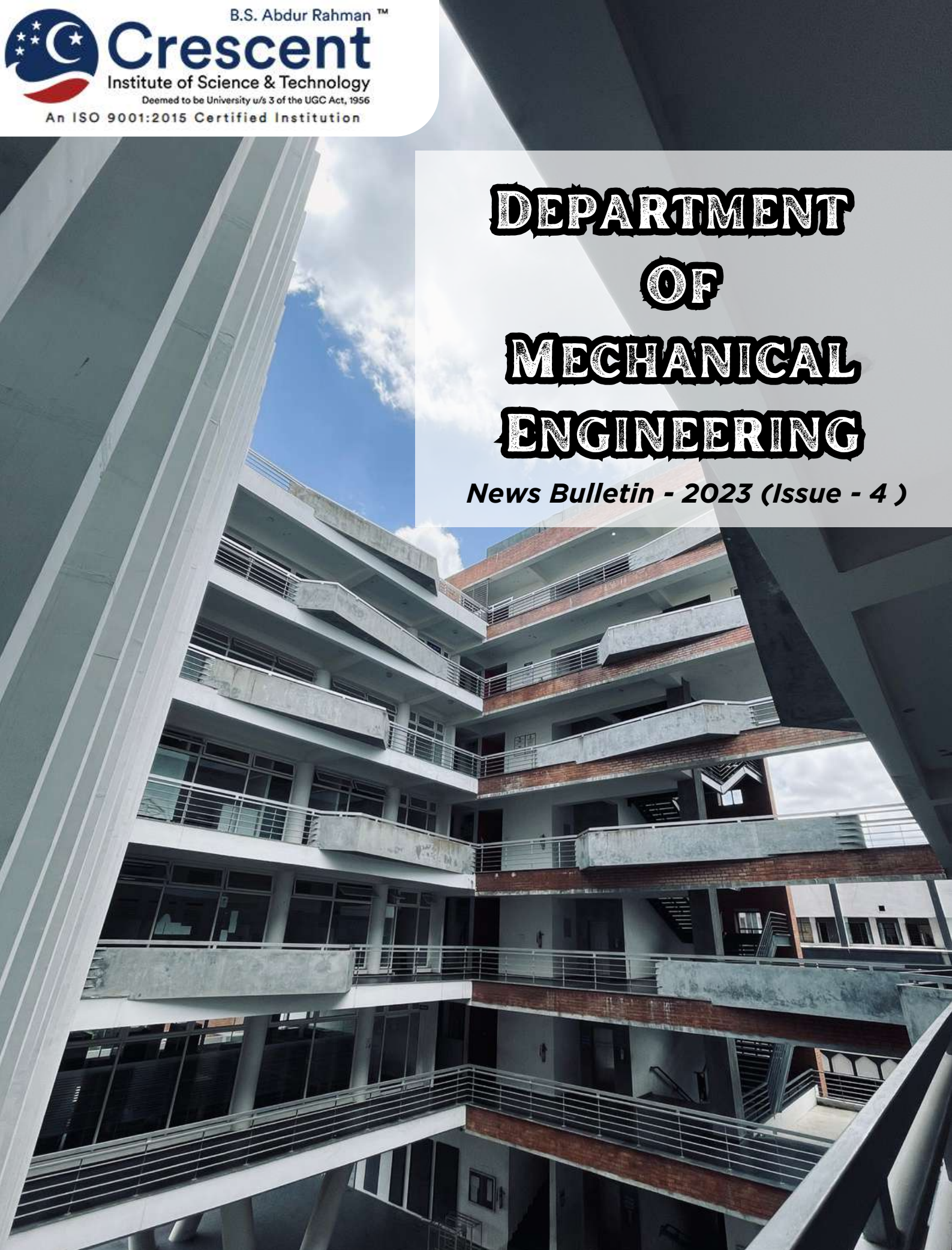
Department Of Mechanical Engineering

News Bulletin - 2023 (Issue - 4)



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ABOUT THE DEPARTMENT:

Mechanical Engineering, founded in 1984, is one of this institution's oldest departments. We provide Bachelors of Mechanical Engineering, Masters in CAD/CAM, Ph.D. by Research, and minor degree programs

We also offer Bachelors in Mechanical Engineering for the employees of Apollo Tyres and Mando Automotive Ltd. The department's program have been accredited by the National Board of Accreditation (NBA). The department has a new building that includes wifi-enabled classrooms, an air-conditioned conference hall, a seminar hall, and a department library. Modern multimedia teaching tools are utilized to supplement lectures and improve teaching quality. Modern practices such as project/activity-based learning and peer-assisted learning are used. Students can access software on a variety of subjects at any time for self-learning. The department comprises 31 faculty members, 29 of whom have doctorates while others will be completing their Ph.D. shortly. Each laboratory also has experienced technicians on hand to train the students.

ROBO Lab 4.0, Mechatronics Lab, Design Appreciation Lab, Friction Materials Lab, Surface Engineering Lab, CAD Lab, CIM Lab, Dynamics Lab, Fluid Mechanics & Machinery Lab, Machine Shop, Metrology Lab, Material Testing and Characterization Lab, Thermal Engineering Lab, and Basic Workshop are among the department's well-equipped laboratories and workshops. PTC/ Creo 7, Siemens NX 12.0, ANSYS V 2023R2 Campus solution, HYPERWORKS 2017, Mat lab V8 R 2013 a, and Lab VIEW are the key software provided.

The primary research equipment that's readily accessible are ABB Industrial (Welding) Robo, Olivetti S2 - 3D Printer, CNC Turning Centre, CNC Vertical Machining Centre, Surface Roughness Tester, Coordinate Measuring Machine, Vision System, AE with Digital Scope & GPIB interface, Ultrasonic flaw detector, Pin on Disc Wear Tester, Salt Spray Corrosion Apparatus, Vibration Sensors, shakers, and DAQ, Cryogenic Treatment Chamber, Engine Testing Facility, Engine Exhaust Emission Tester, Electrical Discharge Machine, Chase Testing Machine, MMAW Machine, GTAW Machine, GMAW Machine.

MESSAGE FROM DEAN SMS

Dr.H.Siddhi Jailani

Professor & Dean

I am delighted to address you in this edition of our department newsletter, a testament to our faculty and students' remarkable achievements, unwavering dedication, and unquenchable spirit. As we reflect on the past year, it's evident that our department has continued to thrive, thanks to our faculty and students' relentless commitment and ingenuity.

Our faculty members are at the forefront of cutting-edge research. Their work ranges from developing sustainable energy solutions to pioneering materials science and continues to shape the future of mechanical engineering.

Our students have once again demonstrated their exceptional talents, not only in their academic pursuits but also through their involvement in extracurricular activities. Their passion for learning continues to inspire us all.

The challenges we face in mechanical engineering are immense, but with the determined commitment of our community, there is no doubt that we will overcome them and continue to excel.
Thank you for your continued support, and I look forward to another year of progress and achievement in the Department of Mechanical Engineering.

MESSAGE FROM HEAD OF THE DEPARTMENT

Dr. A.S. Selvakumar

Professor & Head

As the Head of the Mechanical Department, I take immense pleasure in composing this message about our department. Our Department of Mechanical Engineering has successfully forged robust connections with a wide spectrum of industries. In addition to tailoring programs to cater to the needs of industry professionals, we actively engage in consultancy and collaborative research ventures with our esteemed industrial partners. This symbiotic relationship has enriched our department with real-world insights and innovation opportunities.

The department is conducting value-added courses on Industrial automation and Artificial Intelligence for B.Tech.students. The department also offers minor degree programs in Robotics and 3D printing for B.Tech. students. To update technical skills, the department organizes technical symposium, workshops, industrial visits, and internships. The department has regular interactions with industries for the enhancement of technical skills as per industry expectations. Our faculty members engage in research activities such as publication in reputed journals, patents, and funded projects. I extend my heartfelt best wishes for the department's continued growth and success.

DEPARTMENT NEWS

Programs organized

List of candidates awarded Ph.D.

Faculty Achievements

"SCOPE FOR RESEARCH IN OPTO MECHATRONICS"

The webinar on "Scope for Research in Opto Mechatronics" was organized by the Society of Mechanical Engineers, on 3rd March 2022. The presentation was delivered by Mr. Saran Kumar, Research Scholar, Opto Mechatronics Lab, IIT Madras. The event was coordinated by Dr. S. Jeavudeen.

The webinar offered awareness to the undergraduate students about opto Mechatronics. A brief introduction to the field of Opto Mechatronics that deals with the integration of optical components in Mechatronic systems was offered to the students. Optical sensors are used as measuring devices to control mechatronic systems. He touched upon the applications of these equipment's and its research potential.

A 3 DAYS WORKSHOP ON INDUSTRY 4.0

A 3 days workshop on Industry 4.0 – Industrial Design Visualisation & Conceptualisation" was organized by Department of Mechanical Engineering along with MSME (Govt of India) and Equad Engg services Pvt ltd from 6th to 8th March 2022. The lecture was delivered by Mrs. Vaishnavi Vignesh Raja, Director – Equad Engineering Services, VP – Operations & Strategy – SECO Controls Pvt. Ltd.

Dr.S.Rasool Mohideen , Dean SMS inaugurated the workshop. Dr. S. Siddhi Jailani, HOD Mechanical Presides. Dr. S. Ravikumar Coordinated the event. Around 37 students from Mechanical department participated in the workshop and get benefitted.

NATIONAL LEVEL TECHNICAL SYMPOSIUM

MECHA RUSH 2022

The annual Technical symposium MECHA RUSH 2022 was conducted on 26th May 2022. Chief Guest for the function, Mr. D. Janarthanan, Sr. Engg. Manager, L&T Ltd. attended the inaugural function and delivered the inaugural address. Dr. N. Raja Hussain, Additional Registrar delivered the presidential address.

Dr. H. Siddhi Jailani, Professor and Head of the department welcomed the gathering. Dr. S. Rasool Mohideen, Dean, School of Mechanical Sciences felicitated. The symposium was coordinated by Dr. A Arockia Julias, Senior Assistant Professor of the Department.

The student co-ordinators for the symposium and faculties of the department organized the events.

In this student festival five technical events namely RC CAR, Water Rocketry, CAD Modelling (Sponsored by Mosaique), MachinIT, Group Discussion and few non technical events were conducted. About 350 students participated in this technical festival. Students from neighboring institutions like SRM, CIT, St. Josephs, JAIN, and AMS also participated and competed along with our institution

Cash prize, Gift vouchers and Certificates were issued for winners and runners of each event. Participation certificates and gift coupon were also given for all the participants. Rs 2000 gift vouchers for winners of all the 10 events and gift coupon for all the registered participants was sponsored by TRIPR Fashion. Special gift for winners of CAD Modelling was sponsored by Mosaique Pvt. Ltd. Technical Events were sponsored by Ambit Automation and Non Technical Events were sponsored by Fathima Jewellery.

WORKSHOP ON "INDUSTRIAL ROBOTICS"

A five days workshop on “Industrial robotics” was organized from 20th to 24th June 2022 in collaboration with Prag Robotics Pvt Ltd. The course was handled by Mr. K. Naveen, Robotics Engineer at Prag Robotics Pvt Ltd. And Mr. D. Pragadish, Robotics Engineer at Prag Robotics Pvt Ltd. Around 12 faculty members from the Department participated in the workshop.

The workshop concentrated on two main aspects, first on the real robot with a teach pendant for manipulation and programming and the second one was on the ABB robot studio for virtual control and offline programming.

COMPETITION ON CAD MODELING

A competition on CAD modeling was organized by the Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE). The event was conducted on ISHRAE student's day 15.09.2022 at CAD Lab, Department of Mechanical Engineering. Students of our department participated in the event.

The objective of the CAD modeling contest is to enhance the modeling proficiency among the students. Dr. S. Rasool Mohideen, Dean, School of Mechanical Sciences and Dr. H. Siddhi Jailani, Head of the Department, awarded certificates to the winners and participants.

Exhibition: "Pneumatic system and Automation using FESTO Mobile Expotainer"

The objective of various types of pneumatic components used in the industry to develop automatic systems. It also featured a variety of Dynamic and Static displays with an emphasis on fast and easy ways of understanding the latest product applications of Pneumatic technology in Industrial Automation. Demonstration on the automation of pick and place functions, machine vision systems that identify components, automatic mixing of ingredients for pharma applications and many other industrial applications attracted the students.

SOCIETIES OF MECHANICAL ENGINEERS

EVENT ON 22ND SEPTEMBER 2022

Department of Mechanical Engineering has four professional societies namely Society of Mechanical Engineers (SME), Society of Automotive Engineers (SAE), American Society of Mechanical Engineers (ASME), and Indian Society for Heating Refrigeration and Air conditioning Engineering (ISHRAE). The inauguration of professional society activities for the academic year 2022-23 was conducted on 22nd September 2022

Dr. N. Kulasekharan, Metier Technical Leader, Valeo India Private Ltd. inaugurated the society activities and delivered Keynote address. Dr. H. Siddhi Jailani, Head of the department of Mechanical Engineering welcomed the gathering.

Dr. S. Rasool Mohideen, Dean School of Mechanical Sciences felicitated. Faculty coordinators & office bearers of the technical societies, Department staffs and students attended the function.

GUEST LECTURE ON "NANO STRUCTURED THERMOELECTRIC MATERIALS FOR ENERGY HARVESTING"

A guest lecture series on “Nano structured thermoelectric materials for energy harvesting” was conducted on 18th of November 2022, by ASME student chapter. The chief guest Dr. S. Kumaran, Professor NIT Trichy, introduced various nanomaterials, and then briefed us about the thermoelectric materials which can be used for harnessing energy using the heat generated by the products that we use daily.

"BUILD YOUR RC CAR"

The workshop on “Build your RC Car” was organized by the Society of Mechanical Engineers of the Department of Mechanical Engineering on 10th November 2022. The workshop was coordinated by the faculty in charge Dr. A. Arockia Julias, Assistant Professor Sr. Gr. and the student coordinators Mr. Mohammed Suhail S, Mr. Ajmeer Shan M, Mr. Mohammed Asif and other members of the society.

RC CAR COMPETITION

EVENT ON 28TH NOVEMBER 2022

An “RC Car Competition” was organized by the Society of Mechanical Engineers on 28th November 2022. Dr. H. Siddhi Jailani, Professor and Head of the department welcomed the participants and appreciated the students. Dr. A. S. Selvakumar, Dean i/c, School of Mechanical Sciences inaugurated the competition. The competition was coordinated by the faculty in-charge Dr. A. Arockia Julias, Assistant Professor Sr. Gr. and the student coordinators. About 9 teams comprising of 18 students from Mechanical Engineering department and other departments of the school of Mechanical Science participated in this competition. Cash prize and certificates were given for winners and runners.

WORKSHOP ON 3D PRINTING IN INDUSTRY 4.0

An AICTE sponsored ATAL FDP on 3D Printing in Industry 4.0 was conducted from 05.12.2022 to 16.12.2022 in the campus. An amount of Rs 3 Lakhs was sanctioned by AICTE for this program. The workshop was organized by the school of Mechanical sciences. The FDP was conducted in blended Mode.

50 participants from more than 100 enrolled were shortlisted and approved to attend the FDP. The FDP was successfully completed by 29 participants who attended minimum 80 % of the sessions and score more than 70 % marks in the continuous comprehensive assessment conducted as per AICTE guideline. E-certificates were issued for these participants through AICTE ATAL portal.

List of candidates awarded Ph.D.

Scholar: Mr. N. Sirajudeen
Supervisor: Dr.R.Karunanithi & Dr.Beer Mohamed, S
Month & Year: May 2022
Title of Thesis : Synthesis and characterization of ceramic particulate reinforced age hardenable Al alloy composite via stir casting route.

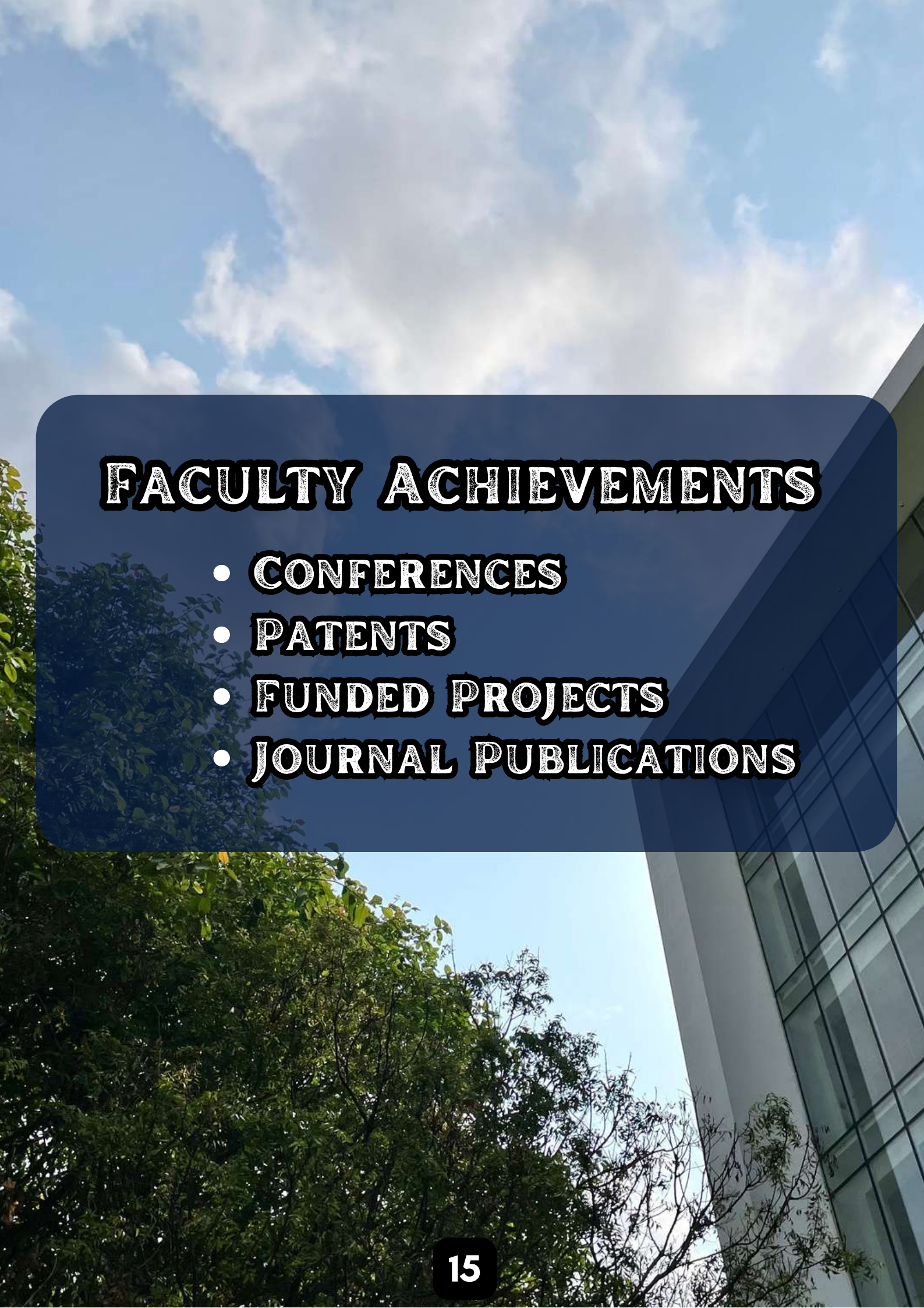
Scholar: Ms. Mahboob E Afshan
Supervisor: Dr. A.S.Selvakumar
Month & Year:June 2022
Title of Thesis : Experimental investigation on the charging and discharging performance of a thermal storage unit due to stratification affected by aspect ratio and dispersed PCM balls

Scholar: Mr.A. Karthik
Supervisor: Dr. R.Karunanithi
Month & Year: July 2022
Title of Thesis : Experimental investigation of AA2219-CeO2 composite Developed by Squeeze casting technique.

Scholar: Mr.K. Asrar Ahmed
Supervisor: Dr. S Rasool Mohideen
Month & Year: August 2022
Title of Thesis : Evaluation of Tribological Performance of different types of Brass and its varying composition in disc brake pads

Scholar: Mr. K Showkat Ali
Supervisor: Dr. R.Karunanithi
Month & Year: October 2022
Title of Thesis : A novel study on synthesis and characterization behavior of nanocrystalline Ti and Ti-6Al-4V alloys by mechanical alloying and spark plasma sintering Technique

Scholar: Mr. S. Karthikeyan
Supervisor: Dr. V. Muralidharan
Month & Year: Nov 2022
Title of Thesis : Experimental Investigations of Microstructure, Mechanical Properties and Electrochemical Behavior of A390 Alloy-based Metal Matrix Composites Material



Faculty Achievements

- Conferences
- Patents
- Funded Projects
- Journal Publications

Conferences / FDP / Seminars / Workshops Attended by faculty

S. No	Name of the faculty	Name of the programme	Type of Programme	Duration From - To	Organizing Agency
1	MR. LOGANATHAN SEKAR	Workshop on Material characterization techniques	Workshop	25 to 26 Feb 2022	VIT University, AP
2	DR. MOHAMED ILLYAS	Faculty Development Programme on Outcome Based Curriculum Design	FDP	1- 5 August 2022	BSACIST
3	DR. MOHAMED BAK KAMALUDEEN	"Indo-USA International Conference on Applications of Nanotechnology in Biology, Biotechnology and Biopharmaceuticals (ICNB3)"	International conference	11 – 12 August, 2022	School of Life SciencesBSACIST
4	MR. BALASRINIVASAN M	Inculcating Universal Human Values in Technical Education	Workshop	19th - 23rd September 2022	AICTE
5	DR. JEAVUDEEN S	International Conference on Applications in Computational Engineering &Sciences , VIT	International conference	21 & 22 October 2022	VIT
6	Dr. K. SATHICKBASHA	SAE ADMMS 2022	Offline Conference	25th to 26th November 2022	SAE and SRMIST

Conferences / FDP / Seminars / Workshops Attended by faculty

S. No	Name of the faculty	Name of the programme	Type of Programme	Duration From - To	Organizing Agency
9	DR. MUTHU MANOKAR A	1st Delta University International Engineering Conference on Research and Innovation, held at Cairo, Egypt	International conference	26 & 27 November, 2022	Delta University, Cairo, Egypt
10	DR. MOHAMED BAK KAMALUDEEN	“Indo-USA International Conference on Applications of Nanotechnology in Biology, Biotechnology and Biopharmaceuticals (ICNB3)”	International conference	11 – 12 August, 2022	School of Life SciencesB SACIST
11	Dr. B SURYA RAJAN	3D Printing in Industry 4.0	Hybrid FDP	5th to 6th December 2022	Atal FDP at BSACIST
12	DR. SERAJUL HAQUE	Inculcating Universal Human Values in Technical Education	Workshop	26th – 30th December 2022	AICTE

PATENTS

Dr. S. Rasool Mohideen	AN ADD-ON DEVICE FOR USE IN WIRE ARCADDITIVE MANUFACTURING	202341042114
N. Ravikumar	A SYSTEM FOR TEMPERATURE MEASUREMENT IN A TRIBOMETER	202341046574
Dr. B. SURYA RAJAN, Dr. K. SATHICKBASHA, Mr. P. BALAJI	A FRICTION MATERIAL FOR BRAKE AND CLUTCH LINING AND A METHOD OF PREPARATION THEREOF	202341026050
Dr. S. Rasool Mohideen, Dr. Ramalingam	Lift System	202241050205

Funded Projects:

Ongoing:

Principal Investigator: Dr. R. Karunanithi
Funding Agency: DST-SERB, Delhi
Project: Synthesis and Characterization of ZrO2 Dispersed Ti, Ti-6Al-4V, Ti-6Al-5V, Ti-6Al-7Nb composite.

Dr.R.Karunanithi

Principal Investigator: Dr. H.Siddhi Jailani
Co. Principal Investigator: Dr. J. Mahashar Ali
Funding Agency: AICTE
Project: Non-contact Surface Roughness Measurement of Machined Surfaces using Wavelet Metrics of Laser Speckle Images

Dr. H.Siddhi Jailani

Dr. J. Mahashar Ali

Principal Investigator: Dr. Surya Rajan B
Funding Agency: Science and Engineering Research Board in Teachers Associateship for Research Excellence (TARE)
Project: rGo Coated steel fiber development for brake friction materials

Dr. Surya Rajan B

Principal Investigator: Dr. Surya Rajan B
Co. Principal Investigator: Dr. K. Sathickbasha
Funding Agency: EDII
Project: Nano friction stabilizer coated steel fiber with high thermal conductivity & wear resistance for life - long brake pads for EVs

Dr. K. Sathickbasha

Completed & Report submitted

Principal Investigator: Dr. M.A. Sai Balaji
Funding Agency: TNSCST
Project: Design and fabrication of Automatic goods weighing system in a Truck

Dr. M.A. Sai Balaji

Applied Projects

Principal Investigator: Dr. M.Thirumurugan
Co. Principal Investigator: Dr. Sri Nithya Mahottamananda
Funding Agency: SERB-SURE
Project: Environment- friendly novel metal-organic frameworks based on energetic solid fuels for Hybrid rocket/Solid fuel Ramjet engine applications

Principal Investigator: Dr. H.Siddhi Jailani
Co. Principal Investigator: Dr. J. Mahashar Ali
Funding Agency: TNSCST
Project: Safe and Biocompatible High Density Polylactic acid (PLA) as Biomaterial for Orthodontic Brackets

Principal Investigator: Dr. Shahitha Parveen
Co. Principal Investigator: Dr. M.Thirumurugan
Funding Agency: DST SERB
Project: 3D printing of Hydrogel scaffolds for tissue regeneration

Principal Investigator: Dr. Hari Narayana
Co. Principal Investigator: Dr. S. Rasool Mohideen
Funding Agency: DST-SATHI
Project: Centre of Excellence for Advanced Instrumentation, Testing, Characterization , and Skill Development,

Principal Investigator: Dr. H.Siddhi Jailani
Co. Principal Investigator:
Dr. J. Mahashar Ali & Dr. M.Thirumurugan
Funding Agency: DST SERB
Project: Development of Al 2024/ Graphene composite for Aircraft Stringers using FSP

Principal Investigator: Mr. Parvez Alam
Co. Principal Investigator:
Dr. S. Rasool Mohideen & Dr. Tharini /ECE
Funding Agency: AICTE
Project: Fabrication Lab

JOURNAL PUBLICATIONS

1.	D Pradeep kumar, V Muralidharan, S Ravikumar, "Histogram as features for fault detection of multi point cutting tool-A data driven approach", Applied Acoustics Vol.186, 2022
2.	Shaul Hameed Syed, V Muralidharan, "Feature extraction using Discrete Wavelet Transform for fault classification of planetary gearbox-A comparative study", Applied Acoustics, Vol.188, 2022
3.	D PradeepKumar, V Muralidharan, Hameed Syed Shaul, "Multi-point tool condition monitoring system: A comparative study", FME Transactions Vol.50 1 pp.193-201 2022
4.	Serajul Haque, M. Abdur Rahman, Rafik Rajjak Shaikh, N. Sirajudeen, Mohamed Bak Kamaludeen, Omprakash Sahu, "Effect of powder metallurgy process parameters on tribology and micro hardness of Al6063- nano Al2O3 MMCs", Materials Today: Proceedings, Vol.68, 4, pp.1030-1037, 2022
5.	Serajul Haque, M. Abdur Rahman, Sirajudeen, Mohamed Bak Kamaludeen, "Artificial neural network approach for casting process parameters on wear rate of Al-Cu-SiCp metal matrix composite", Materials Today: Proceedings, Vol.66, 2, pp.587-594, 2022
6.	Mahashar Ali J, H.Siddhi Jailani, M. Murugan, "In-Situ Surface Roughness Evaluation of Surfaces Machined with EDM by Image Processing", Journal of Nondestructive Evaluation, Vol.41, 32, pp.44572, 2022
7.	M Prashanth, R Karunanithi, S Rasool Mohideen, S Sivasankaran, "Effect of Al2O3/Y2O3 in AA 7017 matrix nanocomposites on phase formation, microstructures and mechanical behavior synthesized by mechanical alloying and hot-pressing techniques", Applied Physics A, Vol.85, 2022
8.	K Showkat Ali, R Karunanithi, M Prashanth, S Sivasankaran, B Subramanian, H Siddhi Jailani, "Structure and mechanical properties of in-situ synthesized α-Ti/TiO2/TiC hybrid composites through mechanical milling and spark plasma sintering", Ceramics International, Vol.48, 8, pp. 11215-11227, 2022
9.	M.Prashantha, R.Karunanithi, S. Sivasankaran, Luis Pérez Villarejo, "Grain refinement and mechanical properties enhancement on inclusion of Al2O3 in AA 7017 alloy synthesized by mechanical alloying (MA) and hot pressing (HP)", Materials Today Communications, Vol.33, pp.104735, 2022
10.	CK Arvinda Pandian, H.Siddhi Jailani, "Formulation and characterisation of jute fabric-linen fabric-fumed silica-epoxy hybrid laminates", The Journal of The Textile Institute, Vol.113, 1, pp.151-158, 2022
11.	Manzoore Elahi M Soudagar, Asif Afzal, Mohammad Reza Safaei, A. Muthu Manokar, Olusegun David Samuel, MA Mujtaba, Waqar Ahmed, Kiran Shahpurkar, Marjan Goodarzi, "Investigation on the effect of cottonseed oil blended with different percentage of octanol and suspended MWCNT nanoparticles on diesel engine characteristics", Journal of Thermal Analysis and Calorimetry, ISSN:1588-2926, Springer, Vol.147 543, pp.525-542, 2022
12.	Thokchom Subhaschandra Singh, Upendra Rajak, Tikendra Nath Verma, Prerana Nashine, Hassan Mehboob, A. Muthu Manokar, Asif Afzal, "Exhaust emission characteristics study of light and heavy-duty diesel vehicles in India" Case Studies in Thermal Engineering, ISSN: 2214-157X, Elsevier, Vol.29, pp. Article number: 101709 44562, 2022

13.	Abd Elnaby Kabeel, Paul Durai Leon Dharmadurai, Sathiyaseelan Vasanthaseelan, Ravishankar Sathyamurthy, Bharathwaaj Ramani, Athikesavan Muthu Manokar, Ali Chamkha, "Experimental studies on natural convection open solar drying and closed solar drying using natural convection technique", Environmental Science and Pollution Research, ISSN:1614-7499, Springer Vol.29, pp.1391-1400 44563, 2022
14.	Sivakumar Vaithilingam, M.Vimala, A.Muthu Manokar, Asif Afzal, Ravishankar Sathyamurthy, "Energy and Exergy analysis of conventional acrylic solar still with and without copper fins", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.6194-6204 44564, 2022
15.	Ravishankar Sathyamurthy, Kabeel AE; Ali Chamkha, Hemanth Kumar, Hariprasath V, Muthu Manokar A, Bharathwaaj R; Vasanthaseelan S, "Energy and exergy analysis of a tubular solar still with and without fins: Comparative theoretical and experimental approach", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.6612-6621 44565, 2022
16.	Mohamed Thalib M, M.Vimala, A. Muthu Manokar, Ravishankar, Kabeel "Experimental investigation of an active inclined solar panel absorber solar still - Energy and Exergy analysis", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.14005-14018 44593, 2022
17.	Rajendra Prasad, Mohammed El Hadi Attia, M. Sudhakar, Ravishankar S, A. Muthu Manokar, "Performance improvement of solar still using phosphate granules as energy storing materials: An Experimental study", Desalination and water treatment, ISSN:1944-3986, Desalination Publications, Vol.250, pp.16-26 44621, 2022
18.	Mohammed El Hadi Attia, M. Mohamed Thalib, Srinivasan Kumar, Asif Afzal, Sivakumar Vaithilingam, Ravishankar Sathyamurthy, A. Muthu Manokar, "Water quality analysis of solar still distillate produced from various water sources of El Oued region Algeria", Desalination and water treatment, ISSN:1944-3986, Desalination Publications Vol.253, pp.55-62 44622, 2022
19.	Asif Afzal, Md. Tariqul Islam, Abdul Razak Kaladgi, A. Muthu Manokar, Olusegun David Samuel, MA Mujtaba, ManzooreElahi M Soudagar, H.Fayaz, Hafiz Muhammad Ali, "Experimental investigation on the thermal performance of inserted helical tube three-fluid heat exchanger using graphene/water nanofluid", Journal of Thermal Analysis and Calorimetry, ISSN:1588-2926, Springer, Vol.147, pp.5087-5100 44652, 2022
20.	Gopinath Radhakrishnan Govindan, Muthuvel Sattanathan, Muthukannan Muthiah, Sudhakara pandian Ranjitharamasamy, Muthu Manokar, "Performance analysis of a novel thermal energy storage integrated solar dryer for drying of coconuts", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.35230-35240 44682, 2022
21.	Mohammed El Hadi Attia, Muthu Manokar A, Murugan K, Guruprasad B, Syed Jafar K, Ravishankar S, "Performance improvements of hemispherical solar still using internal reflector: energy and exergy analysis", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.36887-36896 44682, 2022

22.	Babu Sasi Kumar Subrananiam, Arun Kumar Sugumaran, Muthu Manokar "Performance analysis of a solar dryer integrated with thermal energy storage using PCM- Al2O3 nanofluids", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.50617-50631 44743, 2022
23.	Rajendra Prasad, A. Muthu Manokar, A.E. Kabeel, M. G. Sumithra, Ravishankar, Amrit Kumar Thakur, "Analysis of a solar still with photovoltaic modules and electrical heater - Energy and exergy approach", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Vol.29, pp.57453-57465, 2022
24.	Asif Afzal, Rahul Kumar, RD Jilte, Mohammed Samee, Saboor Shaik, RK Abdul Razak, A. Muthu Manokar, C Ahamed Saleel, "Numerical analysis and machine learning for battery thermal performance cooled with different fluids International", Journal of Energy Research, ISSN:1099-114X, John Wiley & Sons Vol.43, 8, pp.3295-3305, 2022
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26.	Mohammed Anees Sheik, Erdem Cuce Aravindan M. K, Abhishek Dasore, Upendra Rajak, Saboor Shaik, A. Muthu Manokar, Saffa Riffat, "A comprehensive review on recent advancements in cooling of solar photovoltaic (PV) systems using phase change materials (PCMs)", International Journal of Low-Carbon Technologies (IJLCT), Vol.17, pp.768-783 44682, 2022
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28.	Syed Noman, T Harinarayana, A. Muthu Manokar, "A Comprehensive Review on Experimental, Numerical and Optimization Analysis of EAHE and GSHP Systems" Environmental Science and Pollution Research, ISSN:1614-7499, Springer, 2023
29.	Babu Sasi Kumar, Arun Kumar, A. Muthu Manokar, "Improving the performance of novel evacuated tube solar collector by using nanofluids: Experimental study", Environmental Science and Pollution Research, ISSN:1614-7499, Springer, 2022
30.	Murali Manohar Dharmaraj, Bikash Chandra Chakraborty, Shamshath Begum, Ravikumar Natarajan, Sivakumar Chandramohan, "Effect of nanoclay reinforcing filler in nitrile rubber/polyvinyl chloride blend: frequency response of dynamic viscoelasticity and vibration damping" Iranian Polymer Journal, Vol.31 pp.1247-1261, 2022

31.	Mohd Durvesh Mohiuddin, S Rasool Mohideen, "Investigation on the fracture behaviour of wire arc additive manufactured rotor steel weldments after heat treatment", Theoretical and Applied Fracture Mechanics, Vol.119, , 2022
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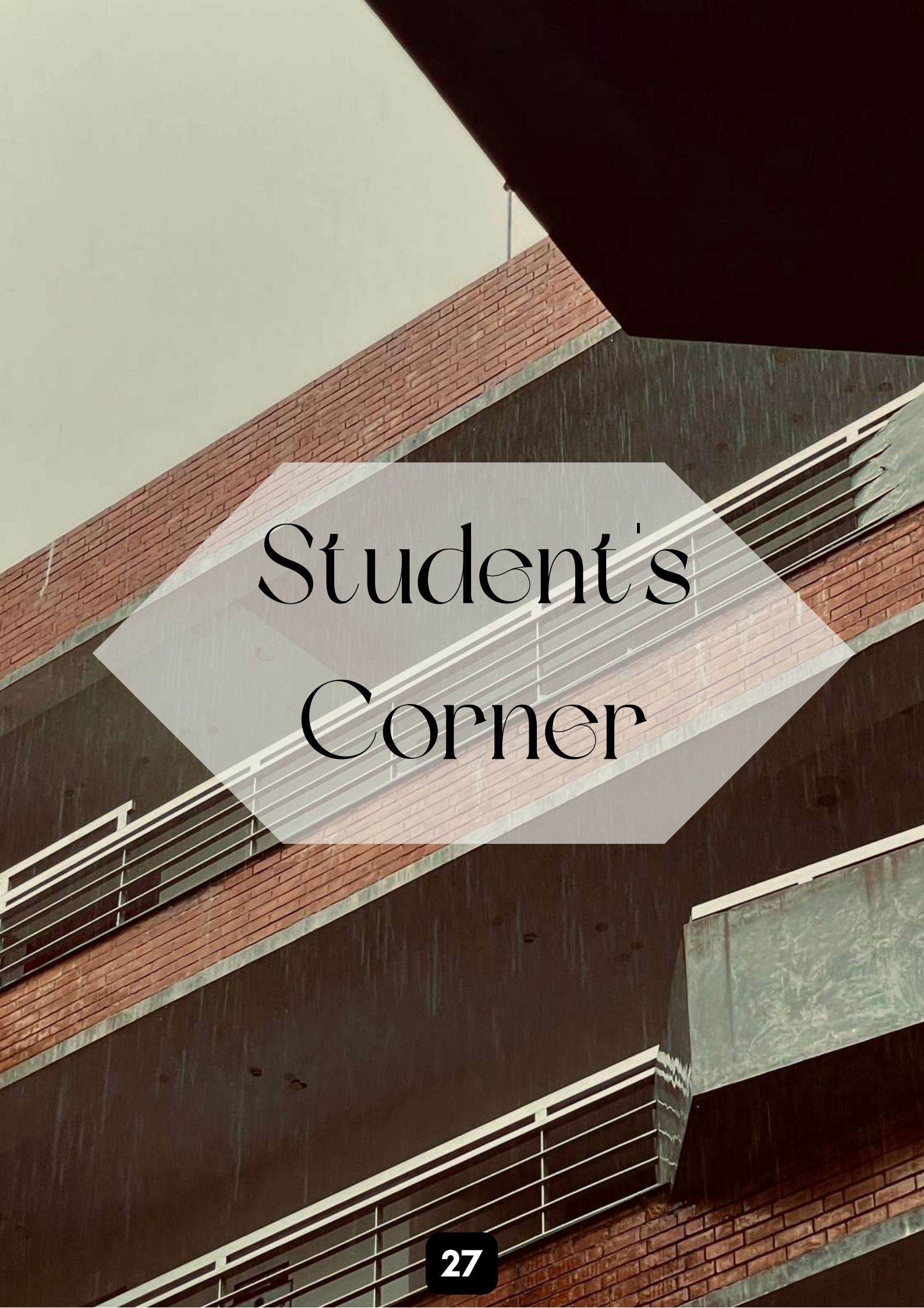


Student's Corner

INDUSTRIAL VISIT

Details of Field visits/Industrial visits organized by the department - 2022 :

S.No	Participant Details				Name of faculty involved	Industry Visited	Date / Duration
	Programme	Sem.	Sec.	No. of Students			
1	Industrial visit	VI	A	40	Dr. S. Jeavuden	TVS Training and services ltd	23.05.2022
2	Industrial visit	VI	B	27	Dr. S. Ravikumar	TVS Training and services ltd	23.05.2022
3	Industrial visit	V	A	32	Mr.N.Ravikumar Mr.C.Sivakumar	Mando Automotive India Pvt Ltd,Chennai	15.09.2022
4	Industrial visit	III	B	32	Dr.M.A.Sai Balaji Dr.Md Javeed Ahmed	Mando Automotive India Pvt Ltd,Chennai	25.11.2022
5	Industrial visit	VII	A	30	Mr.Loganathan Dr.Serajul Haque	Apollo Tyres ltd., Chennai	25.11.2022

Industrial Visit -2022

25.11.2022

Mando Automotive India Pvt Ltd,Chennai

23.05.2022

TVS Training and services ltd

Apollo Tyres ltd., Chennai

PLACEMENTS

DEPARTMENT OF MECHANICAL ENGINEERING

Year - 2022

PLACEMENTS

Representative list of placement details:

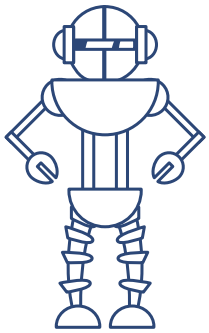
S. No	RRN	Name	Placed in
1	180021601002	Abubucker Sithick A	Inventaa Led Light Ltd
2	180021601004	Ahamed Mohiadeen Naweed A	Ucal
3	180021601005	Ahamed Razik A R	Wipro Nth
4	180021601006	Akash P	Inventaa Led Light Ltd
5	180021601012	Aswin S	L & T
6	180021601014	Channakeshav S	Ms Automotive
7	180021601018	Deepakkumar T	Inventaa Led Light Ltd
8	180021601019	Dhanasekar A	Inventaa Led Light Ltd
9	180021601020	Dinesh A	Motherson
10	180021601022	Giridharan. B	Jbm Auto Ltd
11	180021601025	Harish C	Enabl-Precede Workforce Solutions Ltd
12	180021601027	Ishan Salahudeen Maraikar	Sutherland
13	180021601035	Mahesh D	Inventaa Led Light Ltd

14	180021601040	Mohamed Hannifa S	Jsw
15	180021601044	Mohamed Nathersha I	Inventaa Led Light Ltd
16	180021601100	Kaligatla Vinay Tarun Sai	Mu Sigma
17	180021602005	Ajith Kumar R	Amorio Tech
18	180021602007	Asrarullah Sheriff U	Inventaa Led Light Ltd
19	180021602008	Balamanikandan M S	Severn Glocon Valves Ltd
20	180021602014	Pushparaj M	Enabl-Precede Workforce Solutions Ltd
21	180021601049	Mohamed Shakeel M	Pinnacle Infotech
22	180021601056	Mohammed Aseem N	Sutherland
23	180021601059	Kaif Mohammed	Wipro
24	180021601064	Mohammed Shahil. S	Css Corp
25	180021601065	Mohammed Siraj. A	Jayshree Ploymers Pvt Ltd
26	180021601066	Mahammed Zaheer Ali	Infosys

27	180021601067	Mohammed Zakee Zama	Mu Sigma
28	180021601073	Nazeem Afsal.M	Alkraft Tech
29	180021601076	Sahul Hameed Khan	Inventaa Led Light Ltd
30	180021601080	Shaik Abdul Wazeed	Wipro
31	180021601081	Shaik Abid	Inventaa Led Light Ltd
32	180021601082	Shaik Adnan	Wipro
33	180021601087	Simon Praveen Livingston D	Pinnacle Info Tech
34	180021601088	Sivamagadev	Jsw
35	180021601089	Sooraj. V	Pinnacle Info Tech
36	180021601090	Sridharan. V.R	L &T
37	180021601091	Subash M G	Alkraft Tech
38	180021601093	Suhail Diauddin Syed	Mks Vision
36	180021601099	Vijey Viruthagiri. V	Optum
40	180021602011	Mohammed. A	Mks Vision
41	180021602019	Syed Arshad.S.K	Ucal
42	180021603024	Sanaulla Sheriff.A	Accenture
43	180021603023	Syed Ameenuddin	Ucal

"DREAMS AND MUSINGS: STUDENT VOICES"

MECH ROCKS!



STUDENT'S ACHIEVEMENTS

Syed Wahid Ali (190021601066) received Certificate of appreciation in Autodesk on 24-Mar-22

Gokul Raam G (200021601008), Abuthahir Kalam (200021601010) Ananthakrishnan (200021601004), Abdul Zawahirudeen (200021601001) became the Winners of Electrons Cash award in Auto Hackathon. An amount of Rs. 50,000 for Incubation support to build the proposed product was awarded to the above students. Details of Awarding organization: AIC-AU Incubation Foundation, a not-for-profit company founded by the Anna University with support from Atal Innovation Mission, Niti Aayog, GoI.

Details of Awarding organization: Mr. Muhsin A R, (210021601062) won Second Prize in Cresathon for Smart waste management system proposal by team of 6 members CIIC Crescent

SCI Journal:
SRIRAM SURYA. K.S (190021601063) and ANISH. M (190021602002) wrote a review paper for the "MECX 30 - Solar Engineering" assignment. it is published in Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Impact Factor: 5.8

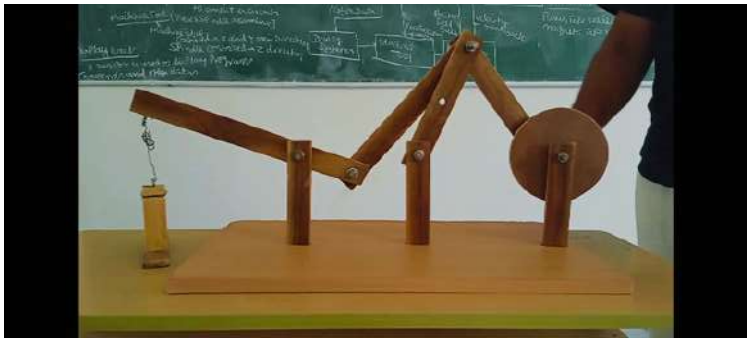
Ravishankar Sathyamurthy, Kabeel AE; Ali Chamkha, Hemanth Kumar, Hariprasath V, Muthu Manokar A, Bharathwaaj R; Vasanthaseelan S, " Exergy and energy analysis of a tubular solar still with and without fins: Comparative theoretical and experimental approach" Environmental Science and Pollution Research, ISSN:1614-7499, Springer, Volume 29, pages 6612-6621, January 2022, https://doi.org/10.1007/s11356-021-16065-w

MOHAMED HANNAN
200021602023

I created a kinematic stamping machine for my mini project because I was fascinated by links and mechanisms. Calculating the model's dimensions and constructing it posed some initial challenges, but due to my determination, they soon became more manageable.

I constructed my project using wood, and to complete it, I employed tools and a drilling machine from my institution. Throughout the project's development, the measurements were continuously adjusted. Initially, I worked alone, but over time, my friends joined in, providing suggestions and assisting with the machining during the final stages of the project.

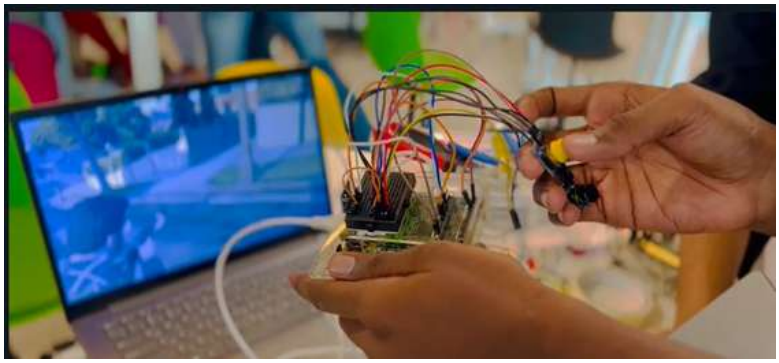
I thoroughly enjoyed the experience and gained valuable insights, whether it was related to interpersonal dynamics or my study of mechanics.



SAM BEZALEL 220021601049

Sam here, from second year mechanical. Designing and software development is my area of expertise so when I saw a poster for battle bot i teamed up with another mechanical student first year whose area of expertise was electronics and aerodynamics. We spent around 18 hrs to bring life for this bot. Our bot fought a fight but due to some technical issues we lost the finals in a close call. So what is the aim of this project? The Battle Bot project aimed to create a remote-controlled robot capable of battling other robots in a controlled arena. The project involved designing and building a robot with various weapons and defensive capabilities, including powerful motors, sharp blades, and durable armor.

The project required a multidisciplinary approach, with team members utilizing skills in mechanical engineering, electronics, and software development. The outcome of the project was a functioning robot that could withstand intense battles with other robots, showcasing the impressive capabilities of modern robotics technology. The Battle Bot project exemplifies the potential of robotics technology to create exciting and entertaining experiences while also advancing our understanding of complex engineering concepts. In addition to its entertainment value, the Battle Bot project has potential applications in various fields, such as military and law enforcement. The development of advanced remote-controlled robots could allow for safer and more efficient handling of dangerous situations. For instance, these robots could be used in bomb disposal, surveillance, and search and rescue operations. By creating a robot that is both powerful and durable, the Battle Bot project showcases the potential of robotics technology to solve real-world challenges. As technology continues to advance, the Battle Bot project offers a glimpse into the future of remote-controlled robotics and the many ways it can benefit society.



Joshua Joy Mark (220021601024) Joshua here, mechanical second year. Electronics, software and designing are my area of expertise, days back I finished building a gesture-controlled joystick at **IITM** that can control a character in a VIDEO game as well as control a real-life object by just adding one or two components to the gesture control joystick. I take it as a privilege to share with you how gesture control can make our life simple

One of the major benefits of the Gesture Control project is its potential to assist people with physical disabilities. The project's use of hand gestures as a form of control eliminates the need for physically pressing buttons or handling remote controls, which can be difficult or impossible for people with limited mobility. The Gesture Control system could also be used to control various assistive devices such as wheelchairs, allowing users to navigate their environment with greater ease and independence. By designing technology that is accessible to everyone, the Gesture Control project exemplifies the potential for innovation to make a positive impact on society.

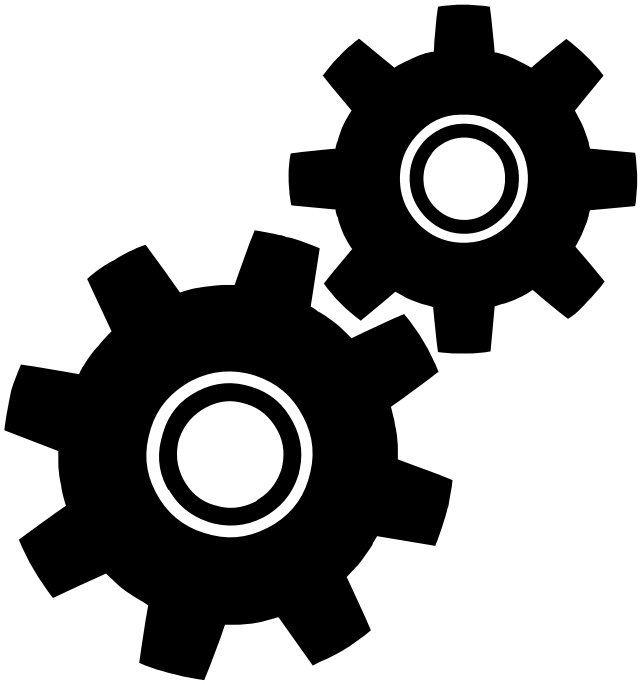
The Gesture Control project aimed to simplify work through the use of hand gestures. The project involved developing a system that allowed users to control various electronic devices through specific hand movements. The project utilized various technologies such as computer vision and machine learning to accurately recognize hand gestures and translate them into corresponding actions. The outcome of the project was a functioning prototype that demonstrated the potential of gesture control technology to streamline everyday tasks. The Gesture Control project has the potential to revolutionize the way we interact with electronic devices and make work more efficient and intuitive.

This is **Mohamed Aadhil,** from third year Mechanical engineering looking forward to learning about and gaining experience in the field of design of mechanical engineering and actively learning relevant designing softwares, namely AutoCAD and Solidworks. Intrigued by anything with an engine, I like to learn about them. I am part of a team involved in making a sustainable air cooler. My goal is to pursue a career in the design of machines and I am working towards it.

RRN 210021601034

I'm **Mohamed Aslam**, currently in my third year of pursuing a degree in Mechanical Engineering at B.S Abdur Rahman Crescent. While I'm deeply engrossed in the world of machines and mechanisms, there's a lot more to my academic journey than meets the eye. Passion for Designing and Robotics: One aspect that sets my heart racing is the world of design. I find myself naturally drawn to the field of mechanical design. My ultimate dream? To specialize in robot designing, a realm where engineering meets cutting-edge technology. Looking forward, I have my sights set on a master's program in robot design. To prepare for this exciting journey, I've embarked on an extra course in industrial robotics. Moreover, I'm dedicatedly learning the German language, a skill that will undoubtedly be invaluable when I pursue my master's degree abroad. I'm also the managing head of the Crescent Art Club. My passion for art extends beyond the classroom, and I firmly believe that the fusion of engineering and art can lead to breathtaking innovations. It's a side of me that not only balances my academic life but adds a splash of color to it as well. As I continue on my academic journey, I'm excited to see where this blend of engineering, robotics, language, and art will take me. Thank you for getting to know me a little better, and I look forward to sharing more of my experiences and insights with you in the future.

Am Subbiah, a Second Year undergraduate student pursuing Mechanical Engineering at Crescent Institute of Science and Technology. My passion for renewable energy is unwavering. With a deep-rooted commitment to sustainability, I am driven by the belief that we hold the power to reshape our energy landscape. Renewable energy sources, such as solar, wind, and hydroelectric power, captivate me for their potential to mitigate climate change, reduce our carbon footprint, and secure a cleaner future for generations to come. Exploring innovative technologies and advocating for policy changes that support the transition to renewable fuels my enthusiasm. I see a world where our reliance on fossil fuels is diminished, and the boundless potential of renewable energy is realized to create a more sustainable and harmonious planet.



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Assistant Professor

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(3RD YEAR)