



SETHU

INSTITUTE OF TECHNOLOGY



AN AUTONOMOUS INSTITUTION | ACCREDITED WITH 'A++' GRADE BY NAAC

Approved by AICTE, New Delhi & Permanently Affiliated to Anna University, Chennai

Approved Research Centres for MECH, CSE, ECE, EEE, IT, CSBS, PHYSICS & CHEMISTRY by Anna University, Chennai

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Pulloor – 626 115, Kariapatti Taluk, Virudhunagar District, Tamil Nadu, India.



Mr. S. Mohamed Jaleel, B.Sc., B.L.,
Founder & Chairman

SETRite

2023

SETHU RESEARCH NEWSLETTER

(Association with
Sethu Research Forum)

November 2023



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COFFEE WITH ELITE RESEARCHER

“Education is all about igniting young minds and enabling them to attain their fullest potential”

YOUNG RESEARCHERS :

1. B. NAZREEN BANU III YEAR EEE
2. M. NAGARAJAN III YEAR EEE
3. K. THARUKESH RANGA SUNTHAR III YEAR EEE

MENTORS :

1. DR.V. VAISHNAVI, ASP/EEE
2. DR.S. VIJAYARAJAN, ASP/EEE
3. MR.S. KANNADASAN, AP/EEE



OUR INSPIRATION TO BECOME A RESEARCHER

We are a group of passionate individuals who share a common interest in exploring the fascinating world of Electrical and Electronics Engineering (EEE). From an early age, we were captivated by the wonders of technology and the endless possibilities it holds.

This curiosity and fascination with how things work sparked our journey into the field of EEE, where we discovered a passion for solving complex problems and pushing the boundaries of innovation.

Our journey from students to aspiring researchers was driven by a desire to make a meaningful impact on society through our work. As we delved deeper into the field of EEE during our academic studies, we realized the immense potential it holds for addressing real-world challenges and improving lives. This realization inspired us to take our passion for EEE to the next level and embark on a journey of exploration, discovery, and innovation as aspiring researchers.

There are several key motivations that drive us in our pursuit of becoming researchers in the field of EEE. Firstly, we are driven by a passion for innovation and a desire to push the boundaries of what is possible in the field of EEE. We are excited about the opportunity to explore new ideas, develop cutting-edge technologies, and pioneer advancements that have the potential to revolutionize industries and improve lives.

Additionally, we are motivated by a commitment to solving real-world problems and making a positive impact on society. Whether it's developing sustainable energy solutions, advancing healthcare technologies, or improving communication systems, we are inspired by the potential to contribute to the greater good and leave a lasting impact on society.

Furthermore, we are driven by a thirst for knowledge and a commitment to lifelong learning. Research is a dynamic and ever-evolving field, and we are excited about the opportunity to embark on a journey of discovery, exploration, and self-improvement as aspiring researchers in EEE.

As researchers, our innovative idea stemmed from a blend of our passion for technology and a desire to address real-world challenges. We brainstormed potential avenues within Electrical and Electronics Engineering, focusing on areas with significant societal impact. Through thorough research,



HOW WE CAME UP WITH AN INNOVATIVE IDEA:

we identified the critical need for improved infant monitoring systems. Leveraging our expertise, we conceptualized the "Infant Monitoring System" project, integrating advanced sensor technologies and data analytics. Our breakthrough came when we realized the transformative potential of our solution to revolutionize infant care. Through perseverance and innovation, we successfully developed a tangible project concept with the potential to make a meaningful difference in the field.

CURRENT STAGE OF OUR PROJECT:

Currently, our "Infant Monitoring System" project has advanced to a stage of active development and testing. We have successfully conceptualized and designed the system, integrating advanced sensor technologies and data analytics for real-time monitoring of infants' vital signs and activities. Our focus now lies on refining the prototype and conducting rigorous testing to ensure its accuracy, reliability, and user-friendliness. Additionally, we are collaborating with healthcare professionals and stakeholders to gather feedback and validate the effectiveness of our system in real-world settings. Our ultimate goal is to further enhance the system's capabilities and readiness for deployment, aiming to make a meaningful impact in improving infant care.

OUR JOURNEY, COMPETITION & SUCCESS STORY:

Our journey with the "Infant Monitoring System" project has been a remarkable odyssey filled with challenges, growth, and ultimately, success. It all began with a shared vision to revolutionize infant care through innovative technology.

We embarked on our journey by participating in the YI Innovation IDS 3 Competition, where we showcased our project alongside other aspiring innovators. This competition served as a platform for us to demonstrate the potential impact of our project and receive valuable feedback from esteemed judges and industry experts.

Throughout our journey, we encountered numerous challenges and obstacles, from technical hurdles to logistical constraints. However, each challenge was met with determination and resilience, pushing us to think creatively and find innovative solutions.

Our perseverance paid off when we were awarded the prestigious prize of Rs. 75,000 at the Healthcare Innovation Summit for our "Infant Monitoring System" project. This recognition was a testament to the hard work, dedication, and innovation demonstrated by our team.

Our success story is a testament to the power of teamwork, collaboration, and innovation. We are excited about the future possibilities for our project and remain committed to making a meaningful impact in the field of infant care.

Overall, our journey with the "Infant Monitoring System" project has been a rewarding experience, and we are grateful for the opportunity to share our success story with others. We look forward to continuing our journey of innovation and making a positive impact in the world.

JOURNEY OF OUR PROJECT:

Our project, the "Infant Monitoring System," embarked on a journey driven by innovation, dedication, and a shared commitment to improving infant care. It all began with a vision to address the critical need for enhanced monitoring solutions in the field of infant health.



Our journey started with meticulous research and brainstorming sessions to identify the most pressing challenges in infant care. We recognized the limitations of existing monitoring systems and the potential for technological advancements to make a significant impact.

Inspired by this vision, we embarked on the development of the "Infant Monitoring System," leveraging our expertise in Electrical and Electronics Engineering. The journey was marked by countless hours of design, prototyping, and testing as we worked tirelessly to bring our concept to life.

Throughout the journey, we faced numerous challenges, from technical hurdles to resource constraints. However, each obstacle was met with resilience and determination as we remained steadfast in our pursuit of creating a solution that could make a difference.

Our project evolved through continuous iteration and refinement, guided by feedback from mentors,

experts, and stakeholders in the field of infant health. Collaborative efforts and a shared passion for innovation fuelled our progress as we navigated the complexities of developing a cutting-edge monitoring system.

As our project matured, we had the opportunity to showcase our work in various competitions and forums, including the YI Innovation IDS 3 Competition. These platforms provided invaluable opportunities for validation, feedback, and recognition, further motivating us to push the boundaries of innovation.

Ultimately, our journey culminated in the successful development of the "Infant Monitoring System" and recognition at the Healthcare Innovation Summit, where we were awarded a prestigious prize.

This achievement validated our efforts and reaffirmed our commitment to making a meaningful impact in the field of infant care.

Looking back on our journey, we are proud of how far we have come and grateful for the support and encouragement we received along the way. Our project's journey is a testament to the power of innovation, collaboration, and perseverance in addressing real-world challenges and making a positive difference in society.

RESEARCH ACHIEVEMENTS BY FACULTY

*"Research is formalized curiosity.
It is poking and prying with a purpose"*

NOVEMBER 2023

Dr.S.Sivaranjani, Dean IQAC & (CS & IT) (PI), Dr.Rathnamala, HOD/AIDS, Dr.C.Parameswari, ASP/IT mentored and won Rs.2,00,000 cash award & 3 years Incubation support by IIM, Nagpur in the E-Waste Hackathon conducted by Maharashtra Pollution Control Board, Maharashtra.

Dr.R.Tamilselvi, Dr.M.Parisa Beham and Mrs.T.Ruba mentored and received "consolation award" in Yukthi - An Innovation Maker Challenge Programme for the project titled, "Smart shoe" from Yi (Young India) on 25.11.2023.



Team received Yukthi Award



Dr.A.M.ArunMohan Associate Professor Civil has won best presentation under faculty category for the paper entitled "Experimental Study on the effect of Glass Fiber reinforced concrete" in International Conference on recent trends in management, Engineering & Technology organized by Maharani cluster University, bangalore on 25 and 26th November 2023



**Best presentation certificate received
by Dr.M.Arunmohan
DECEMBER 2023**

Dr. K. Nagalakshmi, A S P / C S E , Dr.J.Vairamuthu, ASP/Mech, Mrs.S.Gospelina Christiana, AP/CSE, Mrs.P.Pabithamuthu ,AP/CSE received Rs.5,00,000 under Pre-Seed Stage Grand in Aid, Agri Entrepreneurship Program, RKVY-RAFTAAR, CCS NIAM, Jaipur on 21.12.23, Mentored by Dr.S.Sivaranjani, Dean IQAC & (CS & IT).

Mrs.T.Ruba delivered a Guest lecture on the topic of "Multistage Amplifiers" for the second year students of Syed Ammal Engineering College on 12.12.2023.



**Best presentation certificate received
by Dr.M.Arunmohan**

Mrs.T. Ruba delivered guest lecturer at Syed Ammal Engineering College

Dr.A.M.ArunMohan Associate Professor Civil has won best presentation under faculty category for the paper entitled Green Concrete in second International Conference on recent trends in management, Engineering & Technology organized by vidya vihar institute of technology, Bihar on 22 and 23rd December 2023



**Best presentation certificate received
by Dr.M.Arunmohan**

Er.R.Nageshwari received a grant of Rs 12.75 lakhs from State Ministry of micro, small and medium enterprises for the project title "Fabrication of Smart Orthotic Calipers with Nanofabrics for Physically Challenged Person"

Er.R.Nageshwari received a grant of Rs 12.75 lakhs from State Ministry of micro, small and medium enterprises for the project title "Low Cost, Non-Invasive Microfluidic Device for Early Screening of Cancer"

Er.S.Vishnuprasad received a grant of Rs 15 lakh from State Ministry of micro, small and medium enterprises for the project title "Eco Friendly and Innovative Moss Bags For Air Pollution Control."

Dr.V.Akilandeswari received a grant of Rs 12.75 lakhs from State Ministry of micro, small and medium enterprises for the project title “AR EduTech Interactive Robo for Autism Spectrum Disorder Children”



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Students receiving the prize

M.KamaliShree, K. Dharshini of III Year Computer Science and Engineering -A received an award for completing the educational levels in Toastmaster International club on 3.12.23 held at Hotel Singaar, Kanyakumari District

RESEARCH ACHIEVEMENTS/ PARTICIPATION BY STUDENTS

“The way to do research is to attack the facts at the point of greatest astonishment”

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



Team won a cash prize of Rs.75000 and got Third prize in Yi IDS3

Ms. B. Nazreen Banu, Mr M. Nagarajan and Mr. K. Tharukesh Ranga Sunthar of Third Year Electrical and Electronics Engineering Department got Third place and won cash prize in IDS 3 organised by Yi Innovation on 18th November 2023, Mentored by DR.V. Vaishnavi, ASP/EEE, DR.S. Vijayarajan, ASP/EEE, MR.S. Kannadasan, AP/EEE, The prize winners were received their Certificates with cash prize of Rs.75000



Students receiving the prize

Arunbalaji A ,Balamurugan T , A,Aravinth K of Third year Computer Science and Engineering Department got Second place in “Intercollegiate Event of Non-Technical Event-INNOWIZ 2K24” Organized by Fathima College, Madurai on 20th December 2023, Mentored by Mrs. P.Pabithamuthu, AP/CSE.



Students receiving the prize

Arjun TM, Dhanush Raj D of Third year Computer Science and Engineering Department got First Prize in “Intercollegiate Event of Technical Event-INNOWIZ 2K24” Organized by Fathima College, Madurai on 20th December 2023, Mentored by Mrs. P.Pabithamuthu, AP/CSE.



Students receiving the prize

M.Ayisha Siddikka of Second year Computer Science and Engineering Department got First Prize in “Division Level Energy Conservation Competition-Debate(Elocution),Virudhunagar” Organized by Tamil Nadu Electricity Board ,Virudhunagar Electric Distribution Circle on 20th December 2023, Mentored by Mrs. S.Selvi, AP/CSE.



Students receiving the prize

Palaniyammal.A of Second year Computer Science and Engineering Department got Third Prize in “Division Level Energy Conservation Competition-Essay Competition, Virudhunagar” Organized by Tamil Nadu Electricity Board, Virudhunagar Electric Distribution Circle on 20th December 2023, Mentored by Mrs.D.Suriya, AP/CSE.

134 Students from Computer Science & Engineering Department Cleared NPTEL Exams in various Domains successfully in the results published in November 2023

11 Students got Elite + Silver

81 Students got Elite Certification

42 Students Successfully Completed their Courses with Certificates

DEPARTMENT OF CHEMICAL ENGINEERING

Roshan Kumar T of Final year Students (2020-2024 Batch), Department of Chemical Engineering, have been selected for Paid Placement Internship in IEC Fab Chem, Chennai with a paid stipend of Rs. 7,000 per Month and after successful completion of internship, placement offer will be issued. Mentored by Dr. P. Saravana Pandian, Mr. M. Dhatchinamoorthy, Mr. M. Samuthirakani and Mrs. P. Kajolpriya (December 2023).



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

The II Year students of Computer Science and Engineering (Artificial Intelligence and Machine Learning) won the Medals in Technical Events Held at CEOA Arts and Science College, Kariapatti, Virudhunagar District held on 02.11.2023.

DEPARTMENT OF COMPUTER SCIENCE AND DESIGN

11thDec 2023 to 12th June 2024:

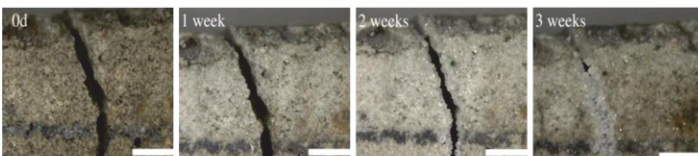
Mr.KrishnaRajkumar P, III rd year student selected for an Internship in Mobile Development Flutter stream. During his training period, he will receive a monthly stipend of Rs.5000 at Techjays, at Kerala

RECENT RESEARCHES AND INNOVATION IN TECHNOLOGIES

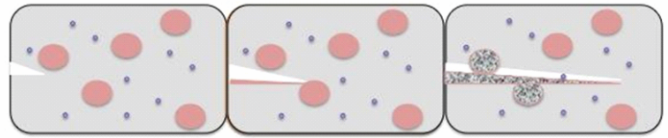
“Be ready for a new chapter”

RECENT INNOVATION IN CIVIL ENGINEERING SELF-HEALING CONCRETE

Self-healing concrete is characterized as the capability of concrete to fix its cracks on its own autogenously or autonomously. It not only seals the cracks but also partially or entirely recovers the mechanical properties of the structural elements. This kind of concrete is also known as self-repairing concrete. Because concrete has a poor tensile strength compared to other building materials, it often develops cracks in the surface.



These cracks reduce the durability of the concrete because they facilitate the flow of liquids and gases that may contain harmful compounds. If micro cracks expand and reach the reinforcement, not only will the concrete itself be susceptible to attack, but so will the reinforcement steel bars.



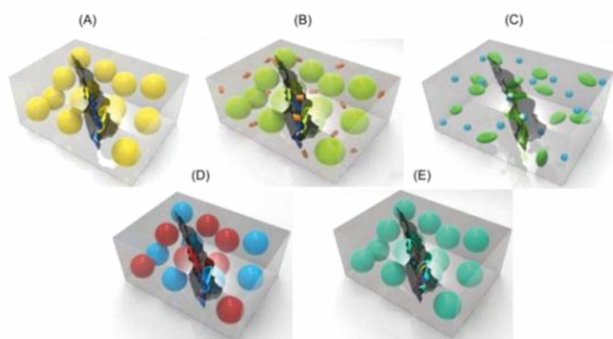
Therefore, it is essential to limit the crack's width and repair it as quickly as feasible. Self-healing concrete would not only make the material more sustainable, but it would also contribute to an increase in the service life of concrete structures and make the material more durable and environmentally friendly.



Self-healing is an old and well-known phenomenon for concrete, given that it contains innate autogenous healing characteristics. Cracks may heal over time due to continued hydration of clinker minerals or carbonation of calcium hydroxide.

Autogenous healing is difficult to control since it can only heal small cracks and is only effective when water is present. This limitation makes it tough to use. On the other hand, concrete may be altered to provide self-healing capabilities for cracks. There are many solutions for improving autogenous healing by adding the admixtures, such as mineral additions, crystalline admixtures, and superabsorbent polymers.

Further, concrete can be modified to built-in autonomous self-healing techniques. The capsule-based self-healing, the vascular self-healing, and the microbiological self-healing are the most common types of autonomous self-healing techniques



“Be ready for a new chapter”

Capsule-based self-healing systems

- (A) single capsules,
- (B) Capsule (green)/dispersed catalyst (orange),
- (C) phase-separated droplet/capsules (green),
- (D) double-capsule (blue capsules with hardener, red capsules with healing agent)
- (E) all-in-one microcapsules (multiple shell walls depicted with different colors)

Here are a few agriculture technology trends that are helping modern farmers make better, faster and smarter decisions and shaping the future of farming.



ARTIFICIAL INTELLIGENCE

Artificial intelligence(AI) is, essentially, the ability of a computer to imitate capabilities of the human mind and actions of the human body. AI computers are able to learn and apply facts and processes, recognize objects, understand language and solve problems in order to successfully perform human like functions. In farming, AI has the power to increase revenues, boost resource efficiencies and improve sustain ability

AI has several competencies, including predicting which crops will deliver the highest returns. Forbes reports that AI helps farmers analyze a variety of real-time and future data to make more informed decisions, including weather and temperature forecasting, water usage and soil conditions. AI helps farmers optimize their planning in order to generate a better harvest by determining crop choices and resource utilization. AI also helps to harvest crops at a higher volume and faster rate than humans – thereby reducing labor and yielding more accurate results.

EMERGING TRENDS IN AGRICULTURE TECHNOLOGY

In the world of farming and agriculture, emerging technologies are carving paths for greater opportunities. According to Mc Kinsey, the Agriculture in dustry must embrace a digital transformation enabled by connectivity in order to thrive. However, this field remains less digitized when compared to others. Though advances have been mostly mechanical (e.g., more powerful machinery) and genetic (e.g., better seeds and fertilizers), more complex digital tools are necessary for future improvement. In fact, only about 25 percent of American farms currently use any connected “smart” equipment or devices to access data and perform tasks.



DRONE FARMING

Drones aren't just for photographers! These hovering robots also help farmers surveil large areas and gather data to create important insights about their farms from virtually anywhere. Drones are used in farming to provide more frequent, cost-effective remote monitoring of crops and livestock. They're also able to analyze field conditions and drop proper interventions such as fertilizers, nutrients and pesticides where necessary.



AUTONOMOUS FARMING MACHINERY

Precise, self-operating machinery and robots can perform everyday tasks based on global positioning system (GPS) and imagery analysis – which are aimed at optimizing resources, reducing labor and boosting harvests. With GPS controls and computerized sensors, farmers are able to operate equipment on their fields with out human intervention, therefore saving time and resources. Importantly, these autonomous machines are more efficient at working a field than ones controlled by people.

To conclude, technologies help produce healthy crops, control pests, monitor soil and develop a range of farming-oriented tasks. These disruptive trends will aid the industry in overcoming challenges.



“Investing in science education and curiosity-driven research is investing in the future”

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Meenalochini P.; An Efficient Control Strategy for an Extended Switched Coupled Inductor Quasi-Z-Source Inverter for 3I Grid Connected System 2023 Journal of Circuits, Systems and Computers (WO-ABSO) Algorithm

Narmadha G.; Genetic Algorithm Based Detection of Breast Cancer Using Least Square-support Vector Machine Classifier 2023 ARPN Journal of Engineering and Applied Sciences

Harish Babu T. Analysis of Concrete Cracks And Fatigue In Smart Cities Using Yolov3 2023 IEEE International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering, RMKMATE 2023

Sugumar S.; Winston D.P.; Ganesan K.; Pravin M. Comparative analysis of Hybrid, conventional and staircase static reconfiguration methods to mitigate partial shading effects: Unveiling the superiority of two-step staircase (2SS) reconfiguration 2023 Solar Energy

Jeyakanth Krishnan, Spectrum and Power Allocation Scheme Using HoDEPSO-RP Approach for Cognitive Radio Network 2023 Proceedings of the 1st IEEE International Conference on Networking and Communications 2023, ICNWC 2023

Jeyashanthi J. Development of a three-level soft switching topology for renewable energy applications with multiple operating modes: Development of three-level soft switching topology 2023 3rd International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies, ICAECT 2023

Meena lochini P.; Deep Convolutional Spiking Neural Network optimized with Arithmetic optimization algorithm for lung disease detection using chest X-ray images 2023 Biomedical Signal Processing and Control

Jeyashanthi J.; Assessment of physical and chemical water quality parameters using naive bayes control algorithm 2023 Materials Today: Proceedings

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Parvathy M. Identifying Occluded Faces with a Modified Structural Similarity Index Measure 2023, International Conference on Sustainable Communication Networks and Application, ICSCNA 2023 – Proceedings

Askarunisa A.K. Effective Customer Review Analysis Using Combined Capsule Networks with Matrix Factorization Filtering 2023 Computer Systems Science and Engineering

Anuratha K.; Parvathy M. Multi-label Emotion Classification of COVID-19 Tweets with Deep Learning and Topic Modelling 2023 Computer Systems Science and Engineering

Mathina Kani M.A.J.; Parvathy M.S.; Classification of skin lesion images using modified Inception V3 model with transfer learning and augmentation techniques 2023 Journal of Intelligent and Fuzzy Systems



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Parisa Begam M. A Transfer Learning Approach for Retinal Disease Classification 2023 Proceedings of 2023 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunication, IConSCEPT 2023

Sabah Afroze A.; Tamilselvi R.; Parisa Beham M. OSTHERSIT- Dataset for Osteoarthritis Analysis using Thermal Images 2023 Biomedical and Pharmacology Journal

Fathu Nisha Smart fabric inspection using Mimosa pudica plant; [Inspección inteligente de materiales de textil folios de planta Mimosa pudica] 2023 Industria Textila

Pandimadevi M.; Tamilselvi R.; Parisa Beham M. Performance enhancement of patch antenna using nanocomposite substrate for modern wireless communication systems 2023 Materials Today: Proceedings

Afroze A.A.S.; Tamilselvi R.; Beham M.G.P. Machine Learning Based Osteoarthritis Detection Methods in Different Imaging Modalities: A Review 2023 Electronics and Communication Current Medical Imaging

DEPARTMENT OF MECHANICAL ENGINEERING

Vignesh V. Static and dynamic mechanical analysis of hybrid natural fibre composites for engineering applications 2023 Biomass Conversion and Biorefinery

Nagaraj G. Artificial Neural Network to Predict Swinging of Lower Limb in Jumping Jack Exercise 2023 IDCIoT 2023 - International Conference on Intelligent Data Communication Technologies and Internet of Things, Proceedings

DEPARTMENT OF CIVIL ENGINEERING

Palanikumar B Environmental remediation at vegetable marketplaces through production of biowaste catalysts for biofuel generation, 2023, Scientific Reports

DEPARTMENT OF BIO TECHNOLOGY

Vishnuprasad Biogenic facile green synthesis of actinobacterium exopolysaccharide-fabricated zinc oxide nanoparticles for the diverse biomedical applications 2023, Biomass Conversion and Biorefinery

DEPARTMENT OF BIOMEDICAL ENGINEERING

Easwaran M. Phages as delivery vehicles and phage display 2023 Progress in Molecular Biology and Translational Science

DEPARTMENT OF CSBS

Shunmughavel V.; A Concept-based Ontology Mapping Method for Effective Retrieval of Bio-Medical Documents 2023 9th International Conference on Advanced Computing and Communication Systems, ICACCS 2023

DEPARTMENT OF AIDS

Rathnamala S. A RYU-SDN Controller-Based VM Migration Scheme Using SD-EAW Ranking Methods for Identifying Active Jobs in the 5G Cloud Framework 2023, International Journal of Cloud Applications and Computing

DEPARTMENT OF PHYSICS

Kumar S.K. Silver nanoparticles modified ZnO nanocatalysts for effective degradation of ceftriaxone sodium under UV-vis light illumination 2023, Chemosphere



Murugesan N, Karthick Kumar S. Improving selectivity of thin film solar absorber by cobalt oxide grafted reduced graphene oxide 2023, Optical Materials

Murugesan N.; Karthick Kumar S. Facile dip-coating assisted preparation of reduced graphene oxide-copper oxide nanocomposite thin films on aluminum substrate for solar selective absorber, 2023, Physica B: Condensed Matter

Indira P. Magnetic porous Ag₂O/Chitin nanostructure adsorbent for eco-friendly effective disposing azo dyes 2023, Environmental Research

Revathy V. Phonon Polariton Dispersion in Metal-Doped Nanocomposite Superlattice System 2023, Journal of Optical Communications

DEPARTMENT OF CHEMISTRY

Jebakumar Immanuel Edison T.N. Electrosynthesis of deep eutectic solvent assisted NiFe nanoparticles on stainless steel mesh for electrocatalytic water splitting reactions 2023, Materials Today Sustainability

Jebakumar Immanuel Edison T.N. Corn husk biochar and chromium(VI) ions blended soil as fuel in soil microbial fuel cell 2023, Biomass Conversion and Biorefinery

Jebakumar Immanuel Edison T.N. Water Soluble PMPC-Derived Bright Fluorescent Nitrogen/Phosphorous-Doped Carbon Dots for Fluorescent Ink (Anti-Counterfeiting) and Cellular Multicolor Imaging 2023, Polymers

Edison T.N. J.I. Oil palm lignin-derived laser scribed graphene in neutral electrolyte for high-performance microsupercapacitor application 2023, Journal of Environmental Chemical Engineering

DEPARTMENT OF MATHEMATICS

Jansi Rani P.G. Developing Cost-Effective and Efficient Drinking Water Treatment Technology for the Removal of Salinity and Suspended Solids, 2023, Journal of Natural Remedies

RESEARCH PUBLICATIONS BY STUDENTS

*“You discover yourself through
the research of your work”*

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

1. Sakthi Samayee M, “A new single DC source five level boost inverter applicable to grid tied systems”, National level conference on communication Technology, Muthayammal Engineering College, Rasipuram, December 29th & 30th 2023.

2. Pandi selvi, “A model Predictive Controller based high current density DC-DC converter for EV charging Applications”, National level conference on communication Technology, Muthayammal Engineering College, Rasipuram, December 29th & 30th 2023.

3. Vetrivel, “Three Port Soft Switched DC-DC PSFB converter”, National level conference on communication Technology, Muthayammal Engineering College, Rasipuram, December 29th & 30th 2023.

4. Shakthi Samaei A, “Smart Portable Charging Station E-vehicle”, National level conference on communication Technology, Muthayammal Engineering College, Rasipuram, December 29th & 30th 2023.

5. Mohan.S, “Design and Implementation of soft switching converter with high setup ratio”, National level conference on communication Technology, Muthayammal Engineering College, Rasipuram, December 29th & 30th 2023.

PATENTS FILED/GRANTED



"There is no substitute for hard work"

1. SETHU INSTITUTE OF TECHNOLOGY, Ms.S.Selvi Dr.B.Lalitha Mr.Santhoshraja of COMPUTER SCIENCE ENGINEERING has Published a Patent for the work on "Exploring the Potential of AI Algorithm in Medical data Mining for Personalized Healthcare Solutions" on December 2023 with Patent number 202341077049 A

2. SETHU INSTITUTE OF TECHNOLOGY, Mr. S. Selvakumar of ELECTRONICS AND COMMUNICATION ENGINEERING has been Published a Patent for the work on "AI Based Street Light On/Off Based On The Object Detection" on 18/11/2023 with Patent number 202341078494

3. SETHU INSTITUTE OF TECHNOLOGY, Dr.P.Meenalochini of ELECTRICAL AND ELECTRONICS ENGINEERING has been Published a Patent for the work on "Method Of Controlling An Apparatus For Generating Electric Power And Methods Of Power Recovery." on 28/12/2023 with Patent number 202341089556

4. SETHU INSTITUTE OF TECHNOLOGY, Dr.P.Meenalochini of ELECTRICAL AND ELECTRONICS ENGINEERING has been Published a Patent for the work on "IoT Based Child Smart Health Monitoring System." on 22/12/2023 with Patent number 202331087958

5. SETHU INSTITUTE OF TECHNOLOGY, Dr.P.Meenalochini of ELECTRICAL AND ELECTRONICS ENGINEERING has been Published a Patent for the work on "Voice – Activated Home Energy Management Using Machine Learning." on 01.12.2023 with Patent number 202341071332

6. SETHU INSTITUTE OF TECHNOLOGY, Dr.P.Meenalochini of ELECTRICAL AND ELECTRONICS ENGINEERING has been Published a Patent for the work on "Neural Network-Based Predictive Maintenance For Iot-Connected Industrial Equipment." on 15/12/2023 with Patent number 202341073629

7. SETHU INSTITUTE OF TECHNOLOGY, Dr.A.M.Arun Mohan of CIVIL ENGINEERING has been Published a Patent for the work on "Smart device for mental health assessment." on 15 November 2023 with Patent number 6326173

CONSULTANCY WORK

"The role of a trainer or consultant is to empower the customer"

1. Mr.P.Rajeswaran, Department of CIVIL ENGINEERING has completed a Consultancy work for "Compressive Strength of Concrete Cubes" with Siva Materials Supplies, Kariapatti, for Rs.600/- on 04.11.2023.

2. Mr.P.Rajeswaran, Department of CIVIL ENGINEERING has completed a Consultancy work for "Compressive Strength of Concrete Cubes" Atharva Associates, Undirmikudakulam, Virudhunagar. , for Rs.600/- on 19.12.2023.

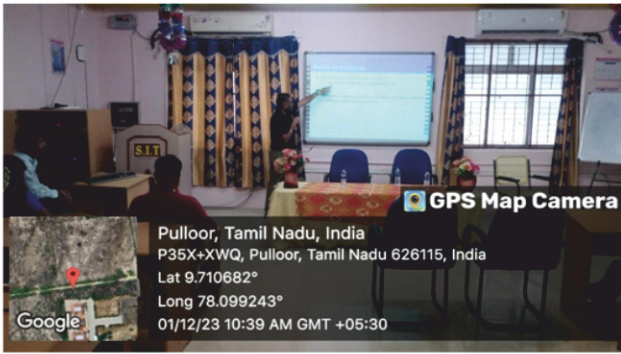
3. Dr.G.Venkatesan Mr.S.Paramasamy, Department of CIVIL ENGINEERING has completed a Consultancy work for "C Tensile Testing of Specimens(Bolt)" Indira Metal Components, Keeladi, Sivagangai. , for Rs.1000/- on 21.12.2023

PROGRAMS ORGANISED

"A place for everything, and everything in its place"

DEPARTMENT OF MECHANICAL ENGINEERING

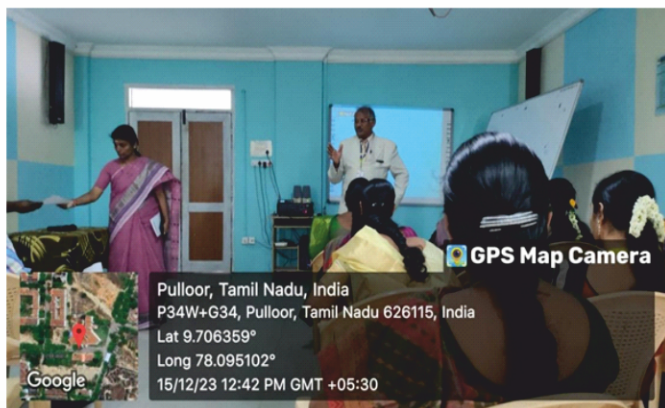
Department of Mechanical Engineering and Department of Agricultural Engineering Jointly Organizes one day Workshop on "Research Funding opportunities in India and Abroad" was organized on 01.12.2023



Dr. S. Rajasekaran, Dean-Mechanical presented a seminar “The Importance of Project Funding, Patents, and Research Publications in International Research Journals” on 14.12.2023 for the faculty of Computer Science Allied Department



Dr. S. Rajasekaran, Dean-Mechanical presented a seminar “The Importance of Project Funding, Patents, and Research Publications in International Research Journals” on 15.12.2023 for the faculty of the BioTech department



Two days faculty development programme on “FUTURE OF MAKING THINGS” was organized on 20-12-2023 & 21-12-2023

SETHU INSTITUTE OF TECHNOLOGY
(AN AUTONOMOUS INSTITUTION)
ACCREDITED WITH 'A++' GRADE BY NAAC
PULLOOR, KARIAPATTI-626 115.

Department of Mechanical, Electrical, Civil Engineering ,
Autodesk and USAM Technology
organizing Faculty Development Program on
"FUTURE OF MAKING THINGS"
KEY SPEAKER
Mr.Yasar Arafath
Application Engineer
USAM Technology Solutions, Chennai.

20TH & 21ST
DECEMBER, 2023

Patrons

Mr.S.Mohamed Jaleel
Founder & Chairman

<p>Mr.S.M.Seeni Mohaideen Chief Executive Officer</p> <p>Ms.S.M.Nilofer Fathima Director-Administration</p> <p>Dr.A.Senthil Kumar Advisor</p>	<p>Mr.S.M.Seeni Mohamed Aliyar Maraikkayar Joint Chief Executive Officer</p> <p>Dr.S.M.Nazia Fathima Director-R&D</p> <p>Dr.G.D.Sivakumar Principal</p>
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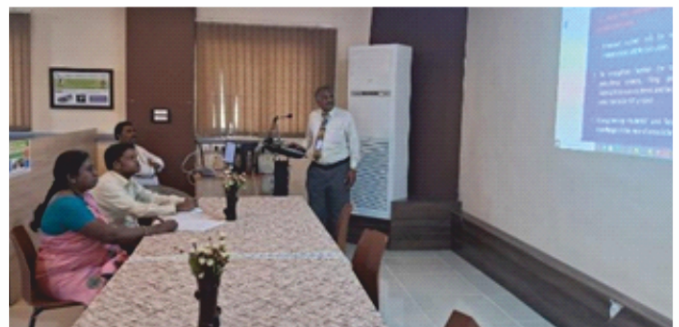
CONVENERS

<p>Dr.K.Arunbala Subramanian HOD/Mech</p>	<p>Dr.G.Soundradevi HOD/EEE</p>	<p>Dr.K.Arumugam HOD/CIVIL</p>
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CO-CONVENERS

<p>Dr.G.Nagaraj Associate Professor/Mech</p> <p>Mr.S.Kannadasan Assistant Professor/EEE</p>	<p>Mr.S.Santhana Iyyappa Sundararaj Associate Professor/Civil</p> <p>Mr.B.Rajesh kannan Assistant Professor/Mech</p>
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Dr. S. Rajasekaran, Dean-Mechanical presented a seminar “How to Write a Seminar Proposal” on 27.12.2023 at Sethu Research and Innovation Centre for the faculty of Artificial Intelligence and Data Science





DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Seminar on “Effective Teaching of Fundamentals to Students” was conducted on 28.11.2023

DEPARTMENT OF AGRICULTURAL ENGINEERING

Research Funding Workshop:



Our department, in conjunction with the Mechanical Engineering Department, hosted an insightful workshop on the topic of “Research funding opportunities in India and abroad” on 02/12/2024. Delivered by Dr. T. Ram Prabhu, Scientist ‘E’ and Joint Director, DRDO, the session provided invaluable insights for faculty members seeking to enhance their research endeavors.

DEPARTMENT OF EEE

Department of Electrical and Electronics Engineering released magazine on 02.11.2023 by Mr.Saravana Suramaniyan founder of Arasan and Shivaji & Co., Madurai. The Faculty Coordinator were Mr . S . K a n n a d h a s a n , A P / E E E , M s . N . C h a n d r a V a d h a n a , A P / E E E , Ms.M.Vijayalakshmi,AP/EEE.



Department of Electrical and Electronics Engineering organized seminar on “Research Opportunities in Electric Vehicle Charging Station”, on 06.12.2023. The Program was coordinated by Dr.P.Meenalochini ASP/EEE, Dr. Vaishnavi ASP/EEE and Mr.S.Kannadasan AP/EEE



DEPARTMENT OF IT

Value Added Course on 21VIT702-Cloud Computing with DEVOPS from 19.12.23 to 23.12.23.

Seminar on Cloud Computing and Getting Started with AWS for second and third year IT students on 30.01.2024.

Skill Development Program for students in association with DigitAll on 13.02.2024.



Department of information Technology organized value added course on 21VIT702-21VIT702-Cloud Computing with DEVOPS from 19.12.23 to 23.12.23 for thirdyear-IT students (batch 2021-2025). The course was conducted by Reccsar Private Limited, Madurai.

CENTRAL LIBRARY

1. A Seminar on “Open Education Resources and Online Education Resources & Online Education through Digital Tools OER” 08 November 2023
2. Faculty Workshop “National Digital Library and Online Education Resources OER” 02 December 2023,

DEPARTMENT OF BIOTECHNOLOGY

SITBio TALK’ 23, a National Seminar on “Recent Developments in Molecular Diagnostics and Regenerative Medicine” on December 21, 2023.



CONGRATULATIONS!!!

The following faculty has been awarded with PhD degree During Nov 2023

Dr. B.Karthikeyan, Part time research scholar, Assistant Professor, Department of Electrical and Electronics Engineering, Sethu Institute of Technology, completed PhD under the supervision of Dr.Karthigaivel, Professor, Department of Electrical and Electronics Engineering, PSNA Engineering College, Madurai.



PATRONS

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DR.G.D.SIVA KUMAR, Principal

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Dr. R. Tamilselvi, Prof & Pg Head, Department of ECE

Dr. P.Mahalakshmi, Associate Professor, Department of ECE

SETRITE MEMBERS

Dr.J.Vairamuthu,

Associate Professor, Department of Mechanical Engineering

Dr.V. Vaishnavi,

Associate Professor, Department of EEE

Dr. B.Lalitha,

Associate Professor, Department of CSE

Ms.T.Ruba,

Assistant Professor, Department of ECE

Mr.S.Parameswaran,

Assistant Professor, Department of IT

Ms.Mary James,

Assistant Professor, Department of BME

Ms.S.Bharathi,

Assistant Professor, Department of Civil Engineering

Dr.K.Nagalakshmi,

Associate Professor, Department of CSE

Dr. P.R.Rajkumar,

Associate Professor, Department of Mechanical Engineering

Ms.M.Uma Maheshwari,

Research Faculty, Department of ECE

Dr.A.M. Arun Mohan,

Associate Professor, Department of Civil Engineering

Mr.M.Jothi Bass,

Assistant Professor, Department of Agricultural Engineering

Ms.D. Juliebersiyal,

Assistant Professor, Department of BME

Dr. David Gnanaraj,

Associate Professor, Department of Mechanical Engineering

Dr.S.Mariaamalraj,

Associate Professor, Department of BT

Mr. Karthik Kumar,

Assistant Professor, Department of AIDS



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