



SETHU

INSTITUTE OF TECHNOLOGY



An Autonomous Institution | Accredited With 'A' Grade By NAAC
(Affiliated to AICTE, New Delhi and Anna University, Chennai)
(Accredited by NBA, AICTE, New Delhi for MECH, CSE, ECE, EEE & IT)
(Approved Research Centre for MECH, ECE, EEE, CSE Engineering)
Pulloor, Kariapatti – 626115, VIRUDHUNAGAR DISTRICT.



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

SETRite 2023

SETHU RESEARCH NEWSLETTER

(Association with Sethu Research Forum)

MAY 2023 - Vol.1, Issue 3

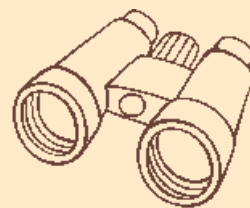


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INSTITUTE VISION

- To promote excellence in the technical education and scientific research for the benefit of the society



INSTITUTE MISSION

- To provide quality technical education to fulfill the aspiration of the student and to meet the needs of the Industry
- To provide holistic learning ambience
- To impart skills leading to employability and entrepreneurship
- To establish effective linkage with Industries
- To promote Research and Development activities
- To offer services for the development of society through Education and Technology



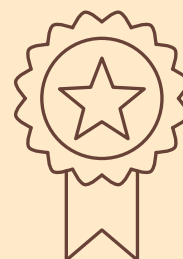
CORE VALUES

- Quality
- Commitment
- Innovation
- Team work
- Courtesy



QUALITY POLICY

- To provide Quality technical education to the students
- To produce competent professionals and contributing citizens
- To contribute for the upliftment of the society



W-Credit (Waste to Wealth)*“Team of W- Credit”*

Dr.S.Siva Ranjani, Dean (CS & IT), Dr.S.Rathnamala, HoD (AIDS) and Dr.C.Parameswari, Associate Professor (IT) have developed a mobile application called W-Credit(Waste to Wealth) for Solid waste Management. Madurai Corporation has agreed to implement the project in the Krishnapuram Colony area. The project was inaugurated by the Ward Counselor Mr.Jeyaraj on 03.03.2023. Our students from Information Technology department and Artificial Intelligence Department have volunteered themselves in this Project. We have designed an application called "W-credit (waste to wealth) for sanitation workers in which the workers can award points to residents for waste segregation at source scanning QR codes put up on the wall of every house. In association with NGO Nallor Vattam and help of health committee chairman of Madurai corporation council Mr.D Jeyaraj, the civic body will be implementing this as a pilot project in 500 houses of Krishnapuram Colony of ward 16.

At the early stage, the students have put up QR code stickers at 150 houses on six streets. They have also trained the sanitation workers on using the application. We will gift a saree to the top three residents who get most points in the next one month. If a resident does not segregate the waste, he will be awarded one point. For partial

segregation a resident will get three points and for perfect segregation, five points. If the door is locked, are sident will not get any point. In January 2022 the students had implemented the project at 150 houses of Thirumangalam municipality.

The app was developed by the students with the help of us (Dr.S Siva Ranjani, Dr.C Parameshwari and Dr.S Rathnamala). It bagged first prize of the ministry of housing and urban affairs In the software edition of hackathon held in Jaipur in August 2022. After studying solid waste management of the city in 2019, we decided to develop a web based application for waste segregation.

Around 600 tons of unsegregated waste is being sent to Vellaikal dumping yard every day and it is a tiring process to segregate it".The application can track the movement of sanitary workers, their attendance and, at the user's end, the number of points earned. Initially the residents were hostile to a low us to put up a sticker on their wall. Eventually they understood the cause of the project and supported us.

*“Submitting proposal to Madurai Mayer for W-credit project implementation”*

During the second phase we are planning to try out the app at 500 houses in Indiranagar colony, adjacent to Krishnapuram colony. We have planned to organize a meeting for the students with the corporation commissioner and the city health officer. If the application success it can be implemented in other wards of the corporation.

ECE Department

Dr.R.Tamilselvi, Dr.M.Parisa Beham and Ms.T.Ruba mentored and received “Best Entry Award” in Sustainability Hackathon Challenge 2023 held at EDII Ahmedabad for the project “Neocare Surveil Device” on 29.04.2023.



Team Receiving Best Entry Award

Dr.R.Tamilselvi, Dr.M.Parisa Beham, Ms.J.Judith and Ms.S.Ramya received Rs.2.5 Lakhs grant for the project titled, “Dewpoint Based Management for Atmospheric Water Generator” in the Innovation & Incubation Division, Entrepreneurship Development and Innovation Institute of Tamilnadu on 26.03.2023.

Dr.R.Tamilselvi, Dr.M.Parisa Beham, Mr.S.Seeni Mohammed Aliar Maraikkayar and Ms.shanmugapriya received Rs.2.5 Lakhs grant for the project titled, “Amnisen” in the Innovation & Incubation Division, Entrepreneurship Development and Innovation Institute of Tamilnadu on 26.03.2023.

Dr.R.Tamilselvi, Dr.M.Parisa Beham and Ms.T.Ruba mentored and received Third Prize and Rs.15,000 worth voucher in ADC Design Contest 2023 held at IIIT Bangalore for the project “Kashaya Machine” on 11.03.2023.



Team Receiving ADC Design Contest Award

Dr.R.Tamilselvi, Dr.M.Parisa Beham and Ms.T.Ruba, mentored and received First place and cash prize of Rs. 1000/- in “STARTUP Ideas and Plans (SIP-2023) Contest” Organized by Institute Innovation council & Entrepreneurship Development cell of Sethu Institute of Technology on 10.03.2023.

CIVIL Engineering Department

Mrs.B.Mallika AP/Civil received the amount of Rs.7500 for the project “Development of Heat Resistant Tile for industrial and home applications” under TNSCST- Students Project Scheme.

Dr.A.M.Arun Mohan Associate Professor, ASP/Civil and Mrs.S.Bharathi AP/Civil mentored and received first prize in “MECILAUT2K23” National level Technical symposium conducted by Fatima Michael College of Engineering on 24.3.2023 for Project event using brick matting & CADD Modelling..

Dr.A.M.Arun Mohan Associate Professor, ASP/Civil ,Mrs.S.Bharathi AP/Civil and Mr.R.Mafaz Ahamed AP/Civil mentored and received second prize in “GYAN LMEC 2K23” conducted by Latha Mathavan College of Engineering on 31.3.2023 for Mini project event.

IT Department

Dr.V.Akilandeswari, has received cash prize of 1 lakh for Union Grand Challenge 2023 (stage1) conducted by MINISTRY OF CONSUMER AFFAIRS , FOOD AND PUBLIC DISTRIBUTION on 15th March 2023 at Vanijya Bhawan, New Delhi



Team Receiving Union Grand Challenge Award

CSD Department

Dr.G.Vaira Suganthi, Mr.S.Arun Inigo, Ms.Fathima John and Ms.G.Maheswari mentored and received second prize in innovative ideas for Project Contest SCIMIT-23 held at Manakula Vinayagar Institute of Technology, Pondicherry on 01.03.2023.



Team Receiving SCIMIT-23 Award

BME Department

Dr.M.Rajalakshmi, Ms.S Harishna, Ms.Julie Bersiyal, mentored and received second place - cash prize Rs. 10000/- in INNOVATE X CHALLENGE Hackathon and Best innovation project in Navirithi's 23 in National level project competition held as part of SWASTHIKA '23, at Mar Baselios Christian College, Kerala on 27.04.2023.

Dr. E. Maheswaran, Dr. N. Kins Burk Sunil, and Dr. M. Rajalakshmi, mentored and received first place - cash prize Rs. 25000/- in Zifo Scienteka Hackathon in National level science and technology fest DAKSH organized by Shanmugha Arts, Science, Technology & Research Academy, Thanjavur on 07.04.2023-08.04.2023.

Dr. M. Rajalakshmi, Mr. B. Muthupandian, Mrs. G. Vijayalakshmi, mentored and received second place - cash prize Rs. 6000/- in Rendezvous

Problem Solvers & Ideators @ INNOVATE'23 conducted by Dr.NGPiTech, Coimbatore on 28.03.2023.

Dr. M. Rajalakshmi, mentored and received Second place— cash prize Rs. 750/- in "STARTUP Ideas and Plans (SIP-2023) Contest" Organized by Institute Innovation council & Entrepreneurship Development cell of Sethu Institute of Technology on 10.03.2023.

Ms. S. Harishna, Dr. M. Rajalakshmi, and Dr. E. Maheswaran, mentored and received JURY AWARD in Rendezvous Problem Solvers & Ideators @ INNOVATE'23 conducted by Dr.NGPiTech, Coimbatore on 28.03.2023.

Mrs. Mary James, Dr. N. Kins Burk Sunil, Mrs. G. Rubini, mentored and received BEST PROJECT INITIATION AWARD in ELECTRIX 2K23 organized by St. Mother Theresa Engineering College, Vagaikulam on 12.04.2023.

AI&DS Department

Ms. SankarKiran Clara R.S .Cocosnucifera Scaling up-Machine.: got a best paper award in the ICEESC 2023:Proceedings. April 2023 held at Department of EEE, Sethu Institute of Technology

Dr. Rathnamala acted as a peer reviewer in the Fifth International Conference on Materials Science and Manufacturing Technology (ICMSMT-2023)

MATHS Department

Dr.K.Lakshmi Narayanan recognized as Research Supervisor for Anna University Ph.D Programme on 09.03.2023

3D Printing in Digital Prosthetic Dentistry

Popular media now often present 3D printing as a widely employed technology for the production of dental prostheses. This article aims to show, based on factual information, to what extent 3D printing can be used in dental laboratories and dental practices at present. It attempts to present a rational evaluation of today's applications of 3D printing technology in the context of dental restorations. In addition, we here discuss future perspectives and examine the ongoing viability of traditional dental laboratory services and manufacturing processes. It also shows which expertise is needed for the digital additive manufacturing of dental restorations.



Additive manufactured models for implantology

Additive Manufacturing and Ceramics

A number of different build-up methods now allow even ceramic materials to be processed using either indirect or direct techniques.



3D printed surgical guide with drilling sleeves



Cross-section through an implant impression tray on the implant model

Direct technique

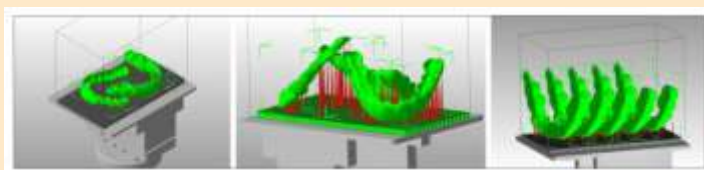
SLA process, Material extrusion, Material jetting/nanoparticle jetting, Binder jetting, LOM process (laminated object layering)



Overview of the existing process categories in additive manufacturing

Scanning and CAD design

The oral situation can be digitally acquired directly, by means of an intraoral scanner, or indirectly, by scanning a master cast after taking an analog impression. The digital pressing technology is suitable for both acquisition methods. The partial crowns can be efficiently using standard CAD software tools.



CAD Model (Different orientations for occlusal splints on the build platform)

Additive Manufacturing and Metals

Additive manufacturing using metal alloys has been successfully used in the dental sector since 2002. The use of laser sintering in the dental field represented a revolution in the processing of non-precious alloys at the time

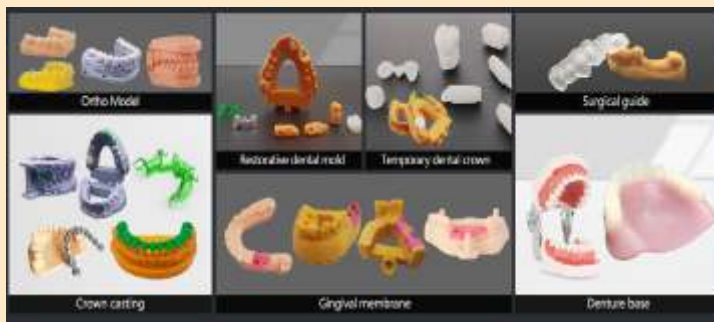
Limitations of 3D-Printing

3D printing has high flexibility in small batch production, fast printing, low cost, high precision, and good surface quality. It is especially suitable for small batch production of art, cultural creativity, film and television animation, instrument parts and other products. It overcomes the problems caused by traditional manufacturing such as manual, CNC, injection molding, casting, etc. due to high cost, low efficiency, and difficult quality assurance.



Clear Aligner

With the continuous emergence of new materials and the price trend towards civilians, 3D printing is gradually penetrating into every corner of our lives. Whether it is industrial parts, auto parts, medical equipment, animation toys, jewelry, etc., as long as your imagination is rich enough, you can print them out. Let's take a look at the small batch production of 3D printing rapid prototyping.



Dental implant model

It is unique in the manufacture of complex parts, innovative applications combined with 3D printing technology, design and manufacture of conformal cooling molds, etc. It is widely used in the stages of R&D, testing, show cars, prototype car trial production, and small-batch functional product manufacturing, which greatly shortens product development cycle and reduce R&D costs.

Therefore, whether it is designing and manufacturing complex industrial products or a simple daily necessities, manufacturers and designers can use the comprehensive 3D digital technology solutions of 3D scanning, intelligent design and additive manufacturing to speed up product development iterations and optimize The quality and function of the product can be improved, and a lot of financial, material and manpower expenses can be saved.

(Source: Shera Werkstofftechnologie, Lemförde, Germany). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8125828/><https://www.3dacme.com/application/118.html#process936>

List of Publications (November-December 2022)

RESEARCH PUBLICATIONS IN INTERNATIONAL / NATIONAL JOURNALS

Department of Mechanical Engineering

A.Perumal, P.R.Rajkumar, G.Venkatesan, S.Paramasamy and T.Gangadharan, 'Multi response optimisation of machining parameters of Ti-6Al-2Sn-4Zr-2Mo alloy using EDM process through grey rational analysis', Eng.Res.Express 5 (2023) 025005.

Manoj Kumar Prabakaran, Parvathy Meenakshi Sundaram, Abinaya Devi, 'An enhanced deep learning based phishing detection mechanism to effectively identify malicious URLs using variational auto encoder', IET Information Security 17,3 (2023), 423-440 DOI: <https://doi.org/10.1049/ise.2.12106>.

Anuratha, M. Parvathy, 'Multi-label Emotion Classification of COVID-19 Tweets with Deep Learning and Topic Modelling', Computer Systems Science and Engineering (2023), 45(3), 3005-3021. <https://doi.org/10.32604/csse.2023.031553>.

Mohamed Ali Jinna Mathina Kani, Meenakshi Sundaram Parvathy, 'Classification of skin lesion images using modified Inception V3 model with transfer learning and augmentation techniques', Journal of Intelligent & Fuzzy Systems, 44 (2023), 4627–4641, DOI:10.3233/JIFS-22138. ,IOS Press.

Shunmughavel V, 'A concept based Ontology Mapping Method for effective retrieval of Bio–Medical documents', 9th International Conferences on Advanced Computing and Communication systems (I C A C C S), I E E E e x p l o r e , 0 5 May(2023), DOI:10.1109/ICACCS57279.2023.10113073.

***Department of Electronics and
Communication Engineering***

T. Ruba, R. Tamilselvi, M. Parisa Beham, "Brain tumor segmentation using JGate-AttResUNet – A novel deep learning approach", Biomedical signal processing and control, Volume 84, Jul 2023, 104926, ISSN 1746-8094, <https://doi.org/10.1016/j.bspc.2023.104926..>

***Department of Electrical and
Electronics Engineering***

Jeyashanthi J, 'ANFIS based double integral sliding mode control a grid integrated hybrid power system' Optik - International Journal for Light and Electron Optics Elsevier, Volume 270, (2022), 170013 <https://doi.org/10.1016/j.ijleo.2022.170013>

Jeya Shanthi J, 'Assessment of physical and chemical Water Quality Parameters Using Naïve Bayes Classification Algorithm', Material Today Proceedings 80, 2, (2023), 851-859 Elsevier (2022)

Meenalochini P, 'An Optimal Partitioning and Floor Planning for VLSI Circuit Design based on a Hybrid Bio-inspired Whale Optimization and Adaptive Bird Swarm Optimization (WO-ABSO) Algorithm', Journal of Circuits, Systems and Computers, World Scientific Publishing, <https://doi.org/10.1142/S0218126623502730>

Meenalochini P, 'Dual-Channel Capsule Generative Adversarial Network Optimized with Golden Eagle Optimization for Pediatric Bone Age Assessment from Hand X-Ray Image', , 37, 2, (2023) International Journal of Pattern Recognition and Artificial Intelligence, World Scientific Publishing

Department of Civil Engineering

Palanikumar.B, "Environmental remediation at vegetable marketplaces through production of biowaste catalysts for biofuel generation, Scientific Journals, 13, Article number: 5067 (2023).

Kalaiselvi.P, Anitha. P, Logaraja.R 'Experimental study on strength improvement of concrete paver block using granite powder', international journal of creative research thoughts. Volume 11, Issue 3, March 2023.

Karthik.A, 'Experimental Study on Effect of Bioash on Mechanical Properties of Concrete', International Journal of Engineering Research and Applications, Vol. 13, Issue 4, April 2023, pp. 225-232.

**RESEARCH PUBLICATIONS IN
INTERNATIONAL / NATIONAL CONFERENCE**

Department of Biotechnology

S.Mariaamalraj, T.Sundhareswari and M Devika, "Production of single cell protein from the Lactobacillus species by utilizing fruit waste", International Conference on Biotechnological Solutions for Sustainable Development Proceedings (2023 ISBN: 978-93-5780-6114

Department of Information Technology

A.Hyils Sharon Magdlene, G.Susan Shiny, .G.Rajalakshmi, , J.Naveen, M.Umapathy, 'Iot Based (Sos) Women Safety', International Conference on Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.

G. Susan Shiny , Hyils Sharon Magdalene, 'Autonomous Vacuum Cleaning Robot', International Conference on Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.

K. Kamalambika ,P. Kavitha , S. Brendha ,.G. Susan Shiny, G. Rajalakshmi, 'Driver Safety System', International Conference on Emerging Trends in Information & Communication Technologies ' ETICT 2K23- April 5th & 6th 2023.

G. Susan Shiny, Hyils Sharon Magdalene, .G.Rajalakshmi, K.Sunya, K.Vannamathi, 'Railway Track Object And Crack Detection', International Conference on Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.

G.Susan Shiny, G.Rajalakshmi, A.Hyils Sharon Magdalene, M.Ishika Sachdeva, M.V.Karpaga Sneha, 'Smart Jacket For Bike Rider's Safety', Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.

A .Hyils sharon magdalene, G Susan Shiny, G. Rajalakshmi, R K Manikandan, O M Mohamed aadhil, M Faisal nisath, 'Voice Controlled Smart Wheelchair With Automatic Medicine Dispenser', Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.

E. Selvamanju,V.SriHari, Mohamed Umar Yashik, M.Harish kumar,'Crop Prediction and Soil Analysis using Gradient Boosting Framework (LIGHTGBM)',International Conference on Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.

Rajalakshmi Gurusamy, '2C-CNN-LSTM: Two Channel Convolutional Neural Network- Long Short Term Memory Deep Learning for Categorization of Autism Using EEG Data" 5th International Conference on Communication and Computational Technologies (ICCCT 2023) organized by Rajasthan Institute of Engineering and Technology, Jaipur, on January 28-29, 2023.

Department of Mechanical Engineering

G.Nagaraj, 'A detailed investigation on potential impact of quantum computing on improving artificial intelligence'International conference on innovative data communication technologies and application-IEEE Xplore part number CFP23cr5-ART,ISN979-8-3503-9720
8/23DOI:10.1109/ICIDC56705.2023.10099821

Department of Electrical and Electronics Engineering

Jeyashanthi J, Hybrid energy system for smart tractor with energy management systems, First International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management" held on 21, 22 April 2023 at Solamalai College of Engineering, Madurai.

Jeyashanthi J, Smart digi card for health monitoring at emergency state, First International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management" held on 21, 22 April 2023 at Solamalai College of Engineering, Madurai.

Department of Artificial Intelligence and Data Science

Sobana R S Rathnamala S Parameswari.C Veeralakshmi .Iot Based Smart Farming System. ETICT 2023: Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.Proceedings. April 2023

Rathnamala S,Parameswari.C Vinothini.V Asafia Banu. A Smart Storage System And Non-Invasive Technique For Spoilage Detection. Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.ETICT 2023: Proceedings. April 2023

Aaron Sam.A.S,Bala Cheran.V,Shanmuga Pradeepan. R,Mohamed Tharic.S Nivedha.C Narmatha B. Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.Automatic Dipping System. ETICT 2023: Proceedings. April 2023

Subasree K Priya Dharshini B Sai Swathi S Ramsi G Narmatha B Nivedha.C Water Level Monitoring. Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023. ETICT 2023: Proceedings. April 2023

Sobana R.S Aaron Sam.A Shanmuga Pradeepan.R LEMONAID APP: Emerging Trends in Information & Communication Technologies ETICT 2K23- April 5th & 6th 2023.ICEESC-2023: Proceedings. April 2023

Department of Biomedical Engineering

Maheswaran E. 'Invisible Exoskeleton for perfect Perch' in International Conference On Biotechnological Solutions For Sustainable Development (ICBSSD – 2023) at P.S.R Engineering College, Sivakasi on 16th March 2023.

Department of Civil Engineering

A.M.Arun Mohan S.Bharathi, 'Critical Risk Assessment of road accidents on national highways", International Conference on "Emerging trends in Science, Engineering, Technology and Management (ICESTEM'23), Bharath Niketan College of Engineering Madurai, 28th&29th April 2023.

Department of Civil Engineering

A.M.Arun Mohan, S.Bharathi ‘Experimental study on Glass cullet as a partial replacing material in concrete for fine aggregate.’, International Conference on “Emerging trends in Science, Engineering, Technology and Management (ICESTEM’23), Bharath Niketan College of Engineering Madurai, 28th&29th April 2023.

Karthik, “An Experimental Investigation On Cement Brick Using Jute Fibre & Partial Replacement Of Cement By Saw Dust Ash”, International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management (iCRAISETM-2023), Solamalai College of Engineering Madurai, 21st & 22nd April 2023.

R.Logaraja ‘A review paper on image processing and deep learning based crack techniques for civil engineering structures’, on Recent Advances and Innovations in Science, Engineering, Technology and Management (iCRAISETM-2023), Solamalai College of Engineering Madurai, 21st & 22nd April 2023.

R.Logaraja ‘A review paper on image processing and deep learning based crack techniques for civil engineering structures’, on National Conference on Global technologies in Manufacturing and Thermal Science, April 2023.

P.Anitha, ‘Thermal Performance of light weight building blocks using phase change material”, International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management (iCRAISETM-2023), Solamalai College of Engineering Madurai, 21st & 22nd April 2023.

B.Mallika, ‘Synthesis of cost effective anti corrosive coating from waste printed circuit board powder’, International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management (iCRAISETM-2023), Solamalai College of Engineering Madurai, 21st & 22nd April 2023.

A.Subalakshmi, ‘Effect of Nano particles on performance of cement composites’ International Conference on sustainable practices SIP’23 on 20th April, 2023 at Kumaraguru College of technology, Coimbatore.

PUBLICATION OF CHAPTERS IN BOOK

Department Of Biomedical Engineering

C. Karthik; M. Rajalakshmi; Sachi Nandan Mohanty; Subrata Chowdhury. Machine Learning for Healthcare Systems: Foundations and Applications. River Publishers, March 2023.

Salsabil Makky, Fatma Abdelrahman, Maheswaran Easwaran, Anan Safwat, Ayman El-Shibiny. Phages as delivery vehicles and phage display. Progress in Molecular Biology and Translational Science (3.622), Academic Press, April 2023.

Salsabil Makky, Fatma Abdelrahman, Nouran Rezk, Maheswaran Easwaran, Ayman El-Shibiny. Phages for treatment Pseudomonas aeruginosa infection. Progress in Molecular Biology and Translational Science (3.622), Academic Press, April 2023.

PATENT (FILLED / PUBLISHED / GRANTED)

Department of Biomedical Engineering

Faculty Name: Rajalakshmi Murugesan, Maheswaran Easwaran, N. Kins Burk Sunil, S. Harishna, Mary James, Julie Bersiyal D. Patent Name: Artificial Intelligence based Biosensor device to detect Breast Cancer, Register / Ref. No.: 381301-001, Organization: IP India, Date: 2023-03- 11. Status: Filed & Published.

Faculty Name: Rajalakshmi Murugesan. Design Patent Name: IoT Based wearable monitoring device, Register / Ref. No.: 6274670, Organization: IP UK, Grant Date: 2023-04- 20. Status: Granted.

CONSULTANCY WORK

Mr. P. Rajeswaran & Dr. A. M. Arunmohan, Department of Civil Engineering has completed a Consultancy work for “Compressive Strength and Water Absorption of Concrete Paver Blocks” with Thangapandian Bricks and Lorry Services, Madurai for Rs: 2800/-.

Mr. P. Rajeswaran & Dr. A. M. Arunmohan, Department of Civil Engineering has completed a Consultancy work for “Compressive Strength of Concrete Cubes” with Sree Kaveri Transports, Thiruchuzhi for Rs: 1200/-.

Mr. P. Rajeswaran, Department of Civil Engineering has completed a Consultancy work for “Compressive Strength of Fly Ash bricks” with Mohan Fly Ash Bricks Pvt Ltd, Thirumangalam for Rs: 1500/-.



Testing Instrument Photos

PROGRAMS ORGANISED

1. Department of Mechanical Engineering organized a Guest Lecture on “SQC Applications to wards Quality Enhancement” on March 2, 2023.

2. Department of Mechanical Engineering and Training and Placement Cell jointly organized a Guest Lecture on “Industrial Readiness” on March 6, 2023.

3. Department of Information Technology organized an Idea Level Project Contest on “Women Centric Challenges” on March 6, 2023.

4. Women Empowerment Cell in association with Nallor Vattam – Madurai organized “Women’s Day Celebrations – 2023” on March 8, 2023.

5. Institution’s Innovation Council (IIC) and Entrepreneurship Development Cell (EDC) jointly organized a “Startup Ideas and Plans (SIP – 2023) Contest” on March 10, 2023.

6. Department of Computer Science and Engineering organized a Guest Lecture on “Key to Success in Civil Service Exams” on March 10, 2023.

7. Department of Computer Science and Business Systems and VEI Technologies Pvt Ltd jointly organized an “International Conference on Recent Trends in Computer Communication and Business Management (ICRTCCB 2023)” on March 10, 2023.

8. Department of Electronics and Communication Engineering (SOECE) organized a “Word of the Day

Quiz” on March 14, 2023.

9. Sethu Institute of Technology organized an Orientation Program on “Aerospace Industry Opportunities” on March 24 & 25, 2023.

10. Department of Agriculture Engineering organized a Workshop on “Career Guidance in Agriculture Engineering” on March 28, 2023.

11. Department of Chemical Engineering organized a Workshop on “Process Optimization Modeling Studies and Startup Ideas” on March 29, 2023.

12. Department of Biotechnology organized National Level Conference on “Industrial Perspectives of Biotechnological Research” during 29-30, March, 2023.

13. Department of Biotechnology organized online seminar on “Interpretation of analytical characterization method results: FTIR & H-NMR” on 31, March, 2023

14. Department of Electrical and Electronics Engineering along with ICC (Internal Complaints Committee) organized Guest Lecture on “Voice Out Violence against Women-VOW” on March 1, 2023

15. Department of Electrical and Electronics Engineering, IEEE Students Branch (STB-62301) of Sethu Institute of Technology organized a webinar on “How to write project proposal” on 29th March 2023

16. Department of Electrical and Electronics Engineering organized International Conference “Emerging Electrical Systems and Control ICEESC 23” on April 26, 2023

RESEARCH ACHIEVEMENTS BY STUDENTS

Department of Biomedical Engineering



Team won cash prize and got second prize in SIP-2023

Mr Vigneshrajan J, Mr.Abinesh V, Anudharani K, Divya G of Third year Biomedical Engineering Department got Second place and won cash prize in “STARTUP Ideas and Plans (SIP-2023)Contest” Organized by Institute Innovation council & Entrepreneurship Development cell of Sethu Institute of Technology on 10th March 2023, Mentored by Dr.M.Rajalakshmi M, ASP/BME. The prize winners of SIP-2023 were received their Certificates with cash prize from Resource Person Mr.Suresh Kumar, CEO, 360 degrees flying group of Companies.



Team Receiving award in INNOVATE'23

Ms Iswarya & Ms.Madhana Karthiga of Third year Biomedical Engineering Department got Jury award in Rendezvous Problem Solvers & Ideators @ INNOVATE'23 conducted by Dr.NGP iTech, Coimbatore on 28th March 2023, Mentored by Ms.S Harishna, AP/BME, Dr M Rajalakshmi, ASP/BME, Dr E Maheswaran, AP(Sr)/BME.



Team Won First place and got 25,000 cash prize in DAKSH 2023

Obeidullah S, Renuka V V , Loga prinisha R , Aarthi S of Third year Biomedical Engineering Department got first place cash prize 25k in Zifo Scienteka Hackathon in National level science and technology fest DAKSH 2023, Mentored by Dr E Maheswaran, AP(Sr)/BME, Dr N Kins Burk Sunil, ASP/BME, Dr M Rajalakshmi, ASP/BME.



Team got second place and won cash prize in INNOVATE'23

Mr Vigneshrajan J & Mr.Abinesh V of Third year Biomedical Engineering Department got Second place and won cash prize 6k in Rendezvous Problem Solvers & Ideators @ INNOVATE'23 conducted by Dr.NGP iTech, Coimbatore on 28th March 2023, Mentored by Dr M Rajalakshmi, ASP/BME, Mr B Muthupandiyan, AP/BME, Mrs G Vijayalakshmi, AP/BME.



Team received BEST PROJECT INITIATION AWARD in ELECTRIX 2K23

Mr.Kathir M, Eeswar G N, Veeranamoorthy A, Dhanabalakrishnan of Third Year Biomedical Engineering Department project got BEST PROJECT INITIATION AWARD in ELECTRIX 2K23 organized by St Mother Theresa Engineering College, Vagaikulam on 12th April 2023, Mentored by Mrs. Mary James, AP/BME, Dr N Kins Burk Sunil, ASP/BME, Ms G Rubini, AP/BME.



Team won First prize and cash prize in INNOVATE X CHALLENGE Hackathon

Mr.Vigneshrajan J & Mr.Abinesh V of Third year Biomedical Engineering Department won First place and 10k cash prize in INNOVATE X CHALLENGE Hackathon and Best innovation project in Navirithi's 23 in National level project competition held as part of SWASTHIKA'23, at Mar Baselios Christian College, Kerala on 27th April 2023, Mentored by Dr M. Rajalakshmi, ASP/BME, Ms.S Harishna, AP/BME, Ms.Julie Bersiyal, AP/BME.

STUDENT PUBLICATION
BIOMEDICAL ENGINEERING

Hasmitha M N, Meerasri K S, Naga Suveatha N, Alan Judah Elroy T, Maheswaran E, "Invisible Exoskeleton for perfect Perch" in International conference on Biotechnological solutions for Sustainable Development (ICBSSD – 2023) at P.S.R Engineering College, Sivakasi on 16th March 2023.

Department of Electronics and Communication Engineering



Team Won Third prize and cash voucher in ADC2023 design contest

Mr Naveen Raj R & Miss. Poojavarshini R, of Third year Electronics and Communication Engineering Department won 3rd prize with Rs.15000 worth voucher in ADC 2023 design contest held at IIIT Bangalore on 11.3.2023, for the project title of Portable Kashaya Machine, Mentored by Dr.M.Parisa Beham, Prof/ECE, Dr.R.Tamilselvi, Prof /ECE, and Mrs.T.Ruba, AP/ECE.



Team Received Best Entry Award from Sustainability Hackathon Challenge

Mr.Santhosh P, Mr.Jaya Devan J, of Third year Electronics and Communication Engineering Department receiving the Best Entry Award among 6000 submitted ideas from Sustainability Hackathon Challenge Organized by EDII Ahmedabad on 28th and 29th April 2023, for the project title of NEOCARE. Mentored by Dr.M.Parisa Beham, Prof/ECE, Dr.R.Tamilselvi, Prof /ECE, and Mrs.T.Ruba, AP/ECE.

Department of Agriculture Engineering



Ms.Naveena of Second year Agriculture Engineering receiving second prize in paper presentation contest

Ms. Naveena of Second year Agriculture Engineering Department, won second Prize In paper presentation and the contest held on Holy Cross Engineering College at Thoothukudi on March 18 , For the paper presentation Title of Development of Patch antenna in green Agriculture, Mentored by Mrs. J. Rajalakshmi AP/ECE .

Department of CSD



Team received second prize in SCIMIT-23

JothiramC, Raja Shruthika R and Sivakarhika C received second prize in innovativeideas for Project Contest SCIMIT-23 held at Manakula Vinayagar Institute of Technology, Pondicherry on 01.03.2023 mentored by Dr.G.Vaira Suganthi, Mr.S.ArunInigo, Ms.Fathima John and Ms.G.Maheswari

Department of Computer Science And Engineering



Team got First place and cash prize in TECHNOPHILIA'23

N.Jayadharshini, M.Kamalishree & P.Hariram of Second year Computer Science and Engineering Department got First place cash prize Rs.1000 in National Level Technical Paper Presentation @TECHNOPHILIA'23 conducted by St. Michael College of engineering, Madurai on 15th March 2023 .



Team got Third place, cash prize and overall performance award in PSNA College

T.M.Arjun, M.Aravinth of Second year Computer Science and Engineering Department got Third place cash prize Rs.750 in General Quiz and Overall Performance conducted by PSNA college of engineering and Technology, Dindugal on 15th March 2023



Team participated inTECHNOPHILIA'23

N.Jayadharshini, M.Kamalishree & G.R P.Harini of Second year Computer Science and Engineering Department selected for Final round and participated in National Level Techno Exhibition Presentation @ TECHNOPHILIA'23 conducted by Dr.AMBEDKAR INSTITUTE OF TECHNOLOGY, Bangalore on 13th March 2023 Mentored byDr. K.Nagalakshmi, AP/CSE .



Winner certificate for second place in CRYTIQUE @KRIYA 2023

Rajesh Kanna M R of Second year Computer Science and Engineering Department got Second place in CRYTIQUE @ KRIYA2023 conducted by PSG College of Technology ,Coimbatore from 24th March 2023 to 26th March 2023.

Department of AI & DS



Team Participation certificate in National Entrepreneurship Conclave

Aaron Sam.A.S, Tafni, neha.J, Shanmuga Pradeepan.R, Sobana RS of Second year AI DS Department participated conducted by National Entrepreneurship Conclave, LEAD College of Management , LEAD College of Management, Palakkad on 8th March 2023

Department of Information Technology



Team won Fourth prize in Startup TNSDG Hackathon 2023

M.Srisanth, K.Jeyagurudev and R.Dineshkumar of II/IT won 4th prize Rs.12,000 in Startup TN SDG Hackathon 2023 at PSNA College of Engineering and Technology on 30&31 March 2023.



Participation certificate in Startup TN SDG Hackathon,2023

Akshat Sachdeva.G, Preethiga.A, Shivani.L of II/IT participated in StartupTN SDG Hackathon, 2023 at PSNA College of Engineering and Technology during 30 & 31 March,2003



Participation certification in Srinivasa Ramanujan Mathematical Competitions

Yuvarajan.S of II/IT had participated in the Srinivasa Ramanujan Mathematical Competitions Level 1 – Chapter Level and Level 2 – State Level conducted by ISTE Tamilnadu in the Engineering level

Department of Mechanical Engineering



Team presented product presentation in Anna University Regional camps, Madurai

Selvan M.Sathiskumar, Selvan Somasundaram and Selvan Poopathi of 2nd YEAR Mechanical engineering presented their product presentation in the start up contest held at Anna University Regional campus MADURAI on 9th March 2023.



***Selvan M.K.Kasirajan,
II/Mech won first prize in CAD Modelling contest***



***Participation certificate in
National Entrepreneurship conclave***

Selvan B.Vishnukumar, 3rd year Mechanical engineering student successfully presented his project in the National Entrepreneurship conclave (project startup contest) held at LEAD College of management Palakkad from 8th March to 10th March 2023.

Department of Civil Engineering



Team won First prize in MECILAUT2k23

A.Harini, V.Amuprakash, Girivasanthan received first prize in “MECILAUT2K23” National level Technical symposium conducted by Fatima Michael College of Engineering on 24.3.2023 for Project event using brick masonry & CADD Modelling.

K.S.Chandra kumar, R.Gokul Jeyaram received second prize in “GYAN LMEC 2K23” conducted by Latha Mathavan College of Engineering on 31.3.2023 for Paper Presentation.

A.Harini, V.Amuprakash received second prize in “GYAN LMEC 2K23” conducted by Latha Mathavan College of Engineering on 31.3.2023 for mini project

F.Mohamed Abdul Rasikkabeer T, Shiraz Deen K, Manikandan P, Akash.S received the amount of Rs.7500 for the project “Development of Heat Resistant Tile for industrial and home applications” under TNSCST- Students Project Scheme.

S.V.Nisha, K.Saravanapandi received third prize in “Startup Ideas and Plans (SIP-2023)” Contest conducted by Institute Innovation Council and Entrepreneurship Development cell of Sethu Institute of technology on 10th March 2023.

STUDENT PUBLICATION CIVIL ENGINEERING

1. V.Shanthoshkumar, S.Nagarjun, P.Periyasamy, L.Ramkumar attended conference on “An Experimental Investigation on Cement Brick Using Jute Fibre & Partial Replacement of Cement By Saw Dust Ash” in International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management (I CRAISETM-2023), Solamalai College of Engineering Madurai, 21st & 22nd April 2023.

2. Mohamed savees, Mohamed subair, Mohamed Sithik published a journal on, “Experimental Study on Effect of Bioash on Mechanical Properties of Concrete” in International Journal of Engineering Research and Applications, Vol. 13, Issue 4, April 2023, pp. 225-232. (Impact Factor-6.465).

3. M.Valliappan attended conference on “A review paper on image processing and deep learning based crack techniques for civil engineering structures”, on Recent Advances and Innovations in Science, Engineering, Technology and Management (iCRAISETM-2023), Solamalai College of Engineering Madurai, 21st & 22nd April 2023.

4. M.Valliappan attended conference on “A review paper on image processing and deep learning based crack techniques for civil engineering structures”, on National Conference on Global technologies in Manufacturing and Thermal Science, April 2023

Department of CSBS



Team won First prize in CSEUTSAV'23

SAKTHIVIGNESH N, UMARALIM, SAYEESWARNAN S,ESWAR KARTHICK R of 2nd Year CSBS won First prize in CSEUTSAV'23 held at PSNA College of Engineering and Technology



Certificate for Third prize in CSEUTSAV'23

UMAR ALI M of II/CSBS won Third prize in CSEUTSAV'23 held at PSNA College of Engineering and Technology



Team won project presentation in Project presentation/ Technical Symposium

S M Ragul Vasanth, U D Aravindhana of II/ CSBS won First Prize in Project Presentation/ Technical Symposium at Kamaraj College of Engineering and Technology

First year

A.KamatchiRakesh, M.Arun, K.Jameetheen, S.Shammer and H.Mohammed Nowfal of Ist Year Mechanical won first prize in the National Level Technical Symposium – Gyan LMEC2K23 at Latha Mathavan Engineering College, Madurai on 31-03-2023

Department of Biotechnology

GATE Scorecard	
Name of Candidate	SUJITHA S
Parent's/Guardian's Name	SEETHIL KUMAR S
Registration Number	GT23567421247
Date of Birth	21-Jan-2002
Examination Paper	Biotechnology (BT)
GATE Score	377
All India Rank in this paper	1798
Number of Candidates Appeared in this paper	14097
Valid up to	31 st March 2026
Scored out of 100	33.33
Qualifying Mark	31.6
Qualifying Mark	31.6
Qualifying Mark	31.6

Ms. Sujitha S of Third Year Biotechnology Department has successfully cleared GATE 2023 with an All India Rank of 1798 conducted by Indian Institute of Technology, Kanpur on 11.02.2023.

NPTEL Online Certification	
This certificate is awarded to S SUJITHA for successfully completing the course RNA Biology	
with a consolidated score of 53 %	
Online Assignments	19.06/25
Proctored Exam	33.75/75
Total number of candidates certified in this course: 168	
Prof. Prabhat Singh Mishra	Prof. Arun Kumar
2024-Apr-2023	172 WEEK 004/003
Indian Institute of Science Education and Research Mohali	

Ms. Sujitha S of Third Year Biotechnology Department has successfully completed and cleared a 12 week NPTEL course on RNA Biology with 53% conducted by Indian Institute of Science Education and Research, Mohali during January to April 2023.

Upcoming Project Contest

Sl.No	Name of the Event	Organizer	Type of the Event	Date of the Event
1	Shell Assessed Internship Programme	Shell India	Internship	May 2023
2	Internship Opportunity for Mechanical Engineers at NoPo Nanotechnologies	NoPo Nanotechnologies	Internship	May 2023
3	Summer Internship Programme at NIT Calicut, Stipend 5,000/	NIT Calicut	Internship	May 2023
4	Internship Opportunity as College Intern at HP, Bangalore.	HP, Bangalore	Internship	May 2023

Funded Project Proposal

Sl.No	Name of the Event	Organizer	Type of the Event	Date of the Event
1	Investigator Initiated Research (IIR) Initiative 2023-ICMR-IAVI Joint Call for Proposal	ICMR	Funding	Closing Dates: Expression of interest (EOI) 30 April 2023 Full proposal: 15 July 2023
2	2024-2025 Fulbright-Nehru Academic and Professional Excellence Fellowships	USIEF	Fellowship	17 July 2023
3	10th India-Israel Industrial R&D and Technological Innovation Fund (I4F)	Government of India	Funding	10 August 2023
4	EU- MSCA Postdoctoral Fellowships Call 2023	Funding & tender opportunities Single Electronic Data Interchange Area (SEDIA)	Postdoctoral Fellowships	13 September 2023
5	SERB GE Call for Proposals	SERB	Funding	31/05/23

CONGRATULATIONS

Following research scholars has been awarded with PhD degree during March – April, 2023

During March 2023 to April 2023

Dr.K.Nagalakshmi, Part time Research scholar, Assistant Professor, Department of Computer Science and Engineering, Sethu Institute of Technology, under the supervision of Dr. S. Suriya, Associate Professor, Department of Computer Science and Engineering, PSG College of Technology, Coimbatore.



Dr. B. Lalitha, Part time Research scholar, Assistant Professor, Department of Computer Science and Engineering, Sethu Institute of Technology, under the supervision of Dr. V. Gomathi, Professor, National Engineering College, Kovilpatti.



Dr. R. Ramesh Kannan, Part time Research scholar, Assistant Professor, Department of Physics, Sethu Institute of Technology, under the supervision of Dr. M. Siva Bharathy, Professor, Sethu Institute of Technology, Kariapatti.



EDITORIAL TEAM

Dr. M.Parisa Beham, Prof & Head/ECE / Dr. R.Tamilselvi, Prof & PG Head/ECE

Dr. P.Meenalochini, Asso.Prof./EEE

SETRITE COORDINATORS

DETAILS	FACULTY COORDINATORS
Recent Researches and Innovations in Technologies	Dr.J.Vairamuthu / Mech
Coffee with Elite Researcher (with photos)	Dr.J.Jeyashanthi / EEE
Recent Researches and Innovations in Technologies	Dr.S.Vijayarajan / EEE
Call for Project Contests	
Research Achievements by Faculty (with Photos)	Dr.A.M.Arun Mohan / Civil Ms.T.Ruba/ECE
Research Achievements/Participation by Students (in contests, technical symposiums, etc.with Photos)	Mr.S.Parameswaran/IT Dr.M.Rajalakshmi/BME Ms.S.Bharathi/Civil Dr.K.Nagalakshmi /CSE
Research Publications by faculty	Dr.S.KarthickKumar / Physics Dr.V. Vaishnavi / EEE
Research Publications by students	Dr.B.Muthu Chozha Rajan/MECH Dr. V.Vignesh/Mech
Patents filed / granted	Ms. J.Rajalakshmi / IT
Consultancy works	Dr.R.BabhuVignesh/Chem
Programs organised	Dr.M.JothiBass/Agri Ms.D. Juliebersiyal /BME Ms. M.Fathima John /CSD
Faculty/FT Scholars PhD completed details	Dr.S.Mariaamalraj/BT Dr. S.S.D.Elanchezhian/Chem