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St. JOSEPH'S COLLEGE OF ENGINEERING

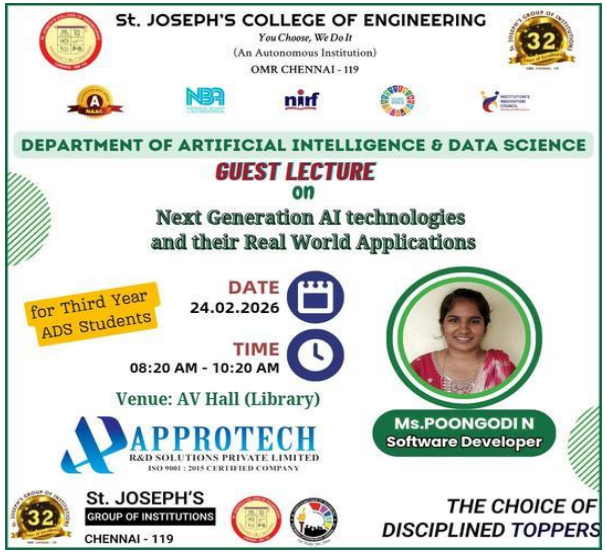
(An Autonomous Institution)

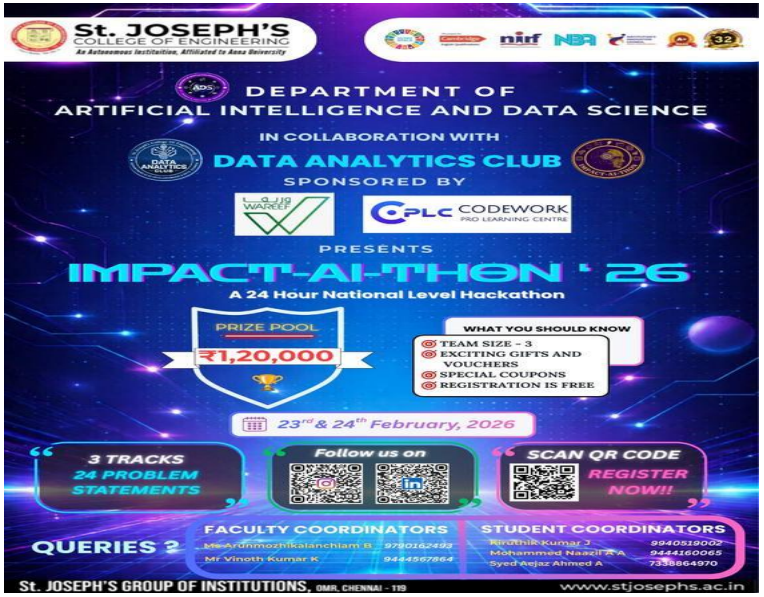
St. Joseph's Group of Institutions

OMR, CHENNAI - 119

FEBRUARY 2026

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

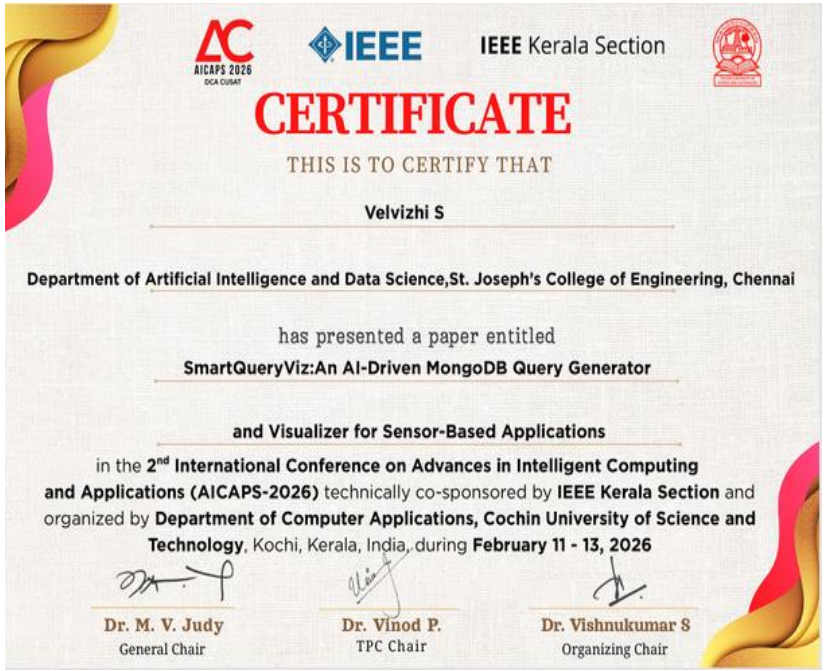
S.No.	Title of the Events and Photographs	Details of the Event
1.	**GUEST LECTURE** 	*The Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering successfully organized a Guest Lecture on "Next Generation AI Technologies and their Real World Applications" for the Third Year ADS students on 24th February 2026 from 08:20 AM to 10:20 AM at the AV Hall (Library). The session was delivered by Ms. Poongodi N, Software Developer at Approtech R&D Solutions Private Limited, an ISO 9001:2015 certified company.*

2.	**ADS CLUB ACTIVITY**  	*St. Joseph's College of Engineering proudly presents IMPACT-AI-THON '26, a 24-hour National Level Hackathon organized by the Department of Artificial Intelligence and Data Science in collaboration with the Data Analytics Club. Scheduled for 23rd & 24th February 2026, this exciting event brings together innovators and tech enthusiasts to solve real-world challenges across 3 tracks featuring 24 problem statements. With an impressive prize pool of ₹1,20,000, participants will compete in teams of three, and registration is completely free. The hackathon also offers exciting gifts, vouchers, and special coupons for participants. Sponsored by Wareef and CPLC Codework Pro Learning Centre, the event aims to foster innovation, collaboration, and impactful AI-driven solutions. Students passionate about Artificial Intelligence and Data Science are invited to take part, showcase their skills, network with peers, and be a part of a transformative technological experience. Register now and step into the future of AI innovation.*

		*The Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering organized Query Quest under the banner of the Data Analytics Club on 2nd February 2026 at the Library AV Hall from 8:30 AM to 11:00 AM. The event featured an interactive workshop on DBMS and SQL followed by an exciting quiz competition with exclusive prizes, aimed at enhancing students' conceptual understanding and practical knowledge of database management systems.*
3.	**FDP/WORKSHOP/CONFERENCE/HACKATHON (ATTENDED /ORGANIZED)**	*Ancy SK Sithany, a III year student from the Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering, served as a resource person at the Two-Day Workshop on "Machine Learning Techniques in Satellite Image Processing for Engineering*

	 	*Applications" organized by the Department of Civil Engineering, College of Engineering and Technology, at SRM Institute of Science and Technology, Kattankulathur, on February 13–14, 2026. She participated as a resource person along with Dr. C. Heltin Genitha, Professor and Head, Department of Information Technology, St. Joseph's College of Engineering.* *The Department of Artificial Intelligence and Data Science at St. Joseph's College of Engineering proudly celebrates the achievement of its student team Dream Coders, who emerged as winners at the prestigious Tenkasi Hackathon organized by StartupTN in association with the Tenkasi District Industries Centre, securing the first prize along with a cash award of ₹10,000 for their innovative solution and outstanding performance; the winning team includes Sankari K, Kevin J C, and Kalpitha P from IV year, along with Sri Akshitha Devan and Priyadharshini R from II year of ADS, whose success reflects strong technical expertise, creativity, and teamwork, under the guidance of their faculty mentor Ms. V. Sathya, Assistant Professor, Department of ADS.*

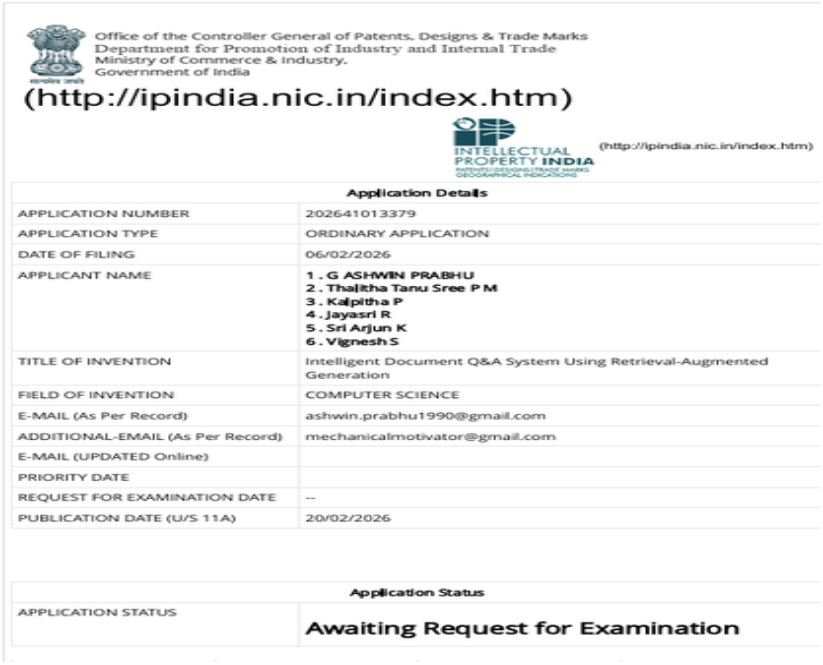
4.	**STUDENT ACHIEVEMENTS/COMPETITION ATTENDED BY STUDENTS**   	*Students M. Deepika and C. Giftlin along with faculty member Kumari Deepika of St. Joseph's College of Engineering were honored with the Best Paper Award at the ANRF Sponsored 2nd International Conference on Sustainable Materials and Advances in Regenerative Technologies (SMART 2.0) organized by the Department of Science at Sona College of Technology, Salem, on 29th and 30th January 2026. Their research paper titled "Detecting Query Intent Drift in Relational Databases Using Machine Learning" received high appreciation from the review committee for its innovative approach and practical relevance. The recognition highlights the department's commitment to quality research and academic excellence, bringing laurels to the institution.* *Students Sathiyapriya S and Subhasri B along with staff member D. Deepa successfully presented the research paper titled "AI-Based Phishing Email and Link Detection Framework through Generative AI and Explainable ML" at the 4th International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT-2026), organized by Jawaharlal College of*



Engineering and Technology, Ottapalam, Kerala, India, held from 4–6 February 2026.

Student Velvizhi S, from the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, Chennai, presented the paper titled "SmartQueryViz: An AI-Driven MongoDB Query Generator and Visualizer for Sensor-Based Applications" at the 2nd International Conference on Advances in Intelligent Computing and Applications (AICAPS-2026), technically co-sponsored by IEEE Kerala Section and organized by the Department of Computer Applications, Cochin University of Science and Technology, Kochi, Kerala, India, during February 11–13, 2026. The paper was authored by Sahana S and faculty member Sivaprabha T, whose research introduced an innovative AI-driven system.

Student Muhilan Meenakshi Sundaram P and Nithishwar A P, along with faculty member Mrs. Kavitha G were awarded a Certificate of Participation for presenting their paper titled "AI Powered Monitoring and Risk Prediction for Maternal Health to Ensure Fetal Well-Being" at the



Office of the Controller General of Patents, Designs & Trade Marks
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Ministry of Commerce & Industry,
Government of India

(http://ipindia.nic.in/index.htm)

INTELLECTUAL PROPERTY INDIA (http://ipindia.nic.in/index.htm)

Application Details

APPLICATION NUMBER	202641013379
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	06/02/2026
APPLICANT NAME	1 . G ASHWIN PRABHU 2 . Thalitha Tanu Sree P M 3 . Kalpitha P 4 . Jayasri R 5 . Sri Arjun K 6 . Vignesh S
TITLE OF INVENTION	Intelligent Document Q&A System Using Retrieval-Augmented Generation
FIELD OF INVENTION	COMPUTER SCIENCE
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E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	20/02/2026

Application Status

APPLICATION STATUS	**Awaiting Request for Examination**

International Conference on Computing, Communication, Control and Cyber-Physical Systems (ICCPS-2026), held on February 26–27, 2026, at the National Institute of Technology Puducherry, Karaikal, India, under the IEEE Madras Section.

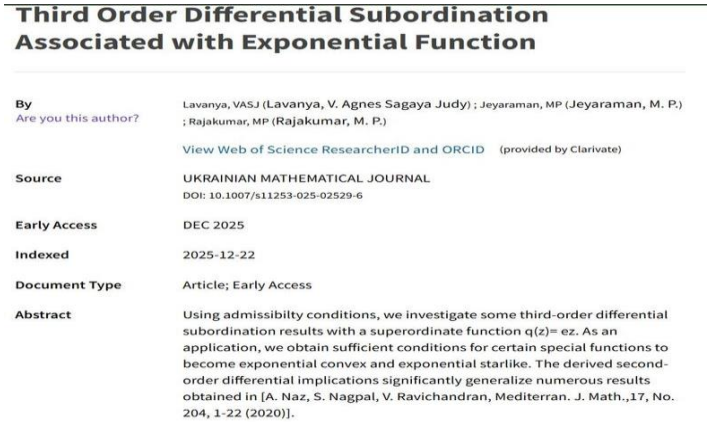
G. Ashwin Prabhu, Thalitha Tanu Sree P M, Kalpitha P, Sri Arjun K, and Vignesh S along with faculty member Ms Jayasri R have successfully published a patent titled "Intelligent Document Q&A System Using Retrieval-Augmented Generation" under the Office of the Controller General of Patents, Designs & Trade Marks, functioning under the Ministry of Commerce & Industry, Government of India. The patent (Application No. 202641013379) was filed on 06/02/2026 and published on 20/02/2026 in the field of Computer Science.

	  	*Harrick Christo JP, Mohamed Abul Faizal T, Jess Annet A, and Catherine Christina secured First Place in the Paper Presentation competition held at Agni College of Technology. The team delivered an outstanding presentation that impressed the judges with their in-depth knowledge, clarity of explanation, and innovative ideas.* *Raju V, Padma Priya R, and Nethra R earned Second Prize in the CTF Technical Event held as part of QuantiX-2K26 at Agni College of Technology. The team demonstrated strong technical expertise, strategic thinking, and collaborative skills throughout the competition.*

Gokulakannan P secured Third Prize in the Pitch Perfect Event conducted during the Symposium at Chennai Institute of Technology. He demonstrated impressive presentation skills, innovative thinking, and confidence while pitching his ideas before the judges.

Gayathri R and Dhanushri Muthukumaran of II Year secured the First Prize in the event "Lab to Market Launch – TECHNOFEST 2026," a National Level Technical Symposium organized by Anand Institute of Higher Technology on 12.02.2026.

		*Showcasing innovation, entrepreneurial insight, and strong presentation skills, they excelled among participants from various institutions. Their outstanding performance earned them a cash award of ₹1500 and brought great pride to the college.* *Team Dream Coders comprising Sankari K (IV Year), Sri Akshita Devan (II Year), and Priyadarshini R (II Year) achieved recognition in the Gen AI Category at Techdeviation 2.0. The team showcased innovative ideas and technical proficiency in the field of Generative Artificial Intelligence, demonstrating creativity and strong collaborative skills.*
5.	**JOURNAL PUBLICATIONS(ONLY PUBLISHED) DETAILS**	*Dr. M. P. Rajakumar, from the Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, has published a*



Third Order Differential Subordination Associated with Exponential Function

By
Are you this author?

Lavanya, VASJ (Lavanya, V. Agnes Sagaya Judy) ; Jeyaraman, MP (Jeyaraman, M. P.) ; Rajakumar, MP (Rajakumar, M. P.)

View Web of Science ResearcherID and ORCID (provided by Clarivate)

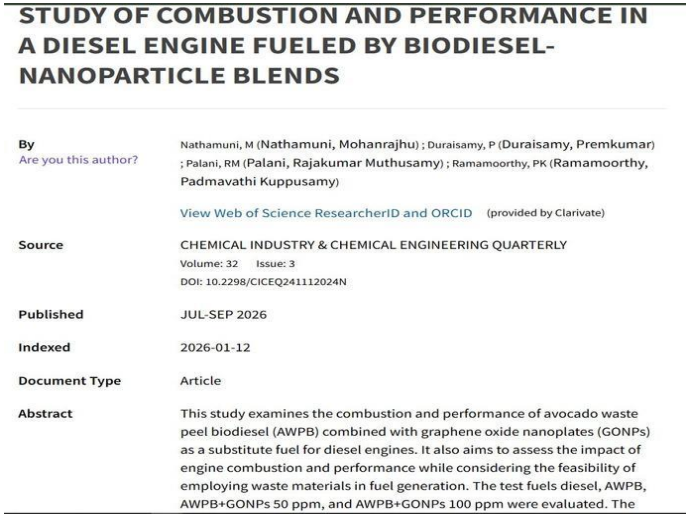
Source: UKRAINIAN MATHEMATICAL JOURNAL
DOI: 10.1007/s11253-025-02529-6

Early Access: DEC 2025

Indexed: 2025-12-22

Document Type: Article; Early Access

Abstract: Using admissibilty conditions, we investigate some third-order differential subordination results with a superordinate function q(z)= ez. As an application, we obtain sufficient conditions for certain special functions to become exponential convex and exponential starlike. The derived second-order differential implications significantly generalize numerous results obtained in [A. Naz, S. Nagpal, V. Ravichandran, Mediterran. J. Math.,17, No. 204, 1-22 (2020)].



STUDY OF COMBUSTION AND PERFORMANCE IN A DIESEL ENGINE FUELED BY BIODIESEL-NANOPARTICLE BLENDS

By
Are you this author?

Nathamuni, M (Nathamuni, Mohanrajhu) ; Duraisamy, P (Duraisamy, Premkumar) ; Palani, RM (Palani, Rajakumar Muthusamy) ; Ramamoorthy, PK (Ramamoorthy, Padmavathi Kuppusamy)

View Web of Science ResearcherID and ORCID (provided by Clarivate)

Source: CHEMICAL INDUSTRY & CHEMICAL ENGINEERING QUARTERLY
Volume: 32 Issue: 3
DOI: 10.2298/CICEQ241112024N

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Indexed: 2026-01-12

Document Type: Article

Abstract: This study examines the combustion and performance of avocado waste peel biodiesel (AWPB) combined with graphene oxide nanoplates (GONPs) as a substitute fuel for diesel engines. It also aims to assess the impact of engine combustion and performance while considering the feasibility of employing waste materials in fuel generation. The test fuels diesel, AWPB, AWPB+GONPs 50 ppm, and AWPB+GONPs 100 ppm were evaluated. The

research article titled "Third Order Differential Subordination Associated with Exponential Function" in the prestigious Ukrainian Mathematical Journal (Early Access, December 2025).

Dr. M P Rajakumar , Department of Artificial Intelligence and Data Science, St. Joseph College of Engineering, has published a research article titled "Study of Combustion and Performance in a Diesel Engine Fueled by Biodiesel–Nanoparticle Blends" in the journal Chemical Industry & Chemical Engineering Quarterly, Volume 32, Issue 3, during July–September 2026. The article (DOI: 10.2298/CICEQ241112024N) presents an experimental investigation on the combustion characteristics and performance analysis of avocado waste peel biodiesel (AWPB) blended with graphene oxide nanoplates (GONPs) as an alternative fuel for diesel engines.

6.	**FUNDED PROJECTS**	-
7.	**STAFF CONFERENCE PRESENTATION and PATENT PUBLISHED**  Conferences > 2025 5th International Confer... **Generative AI-Enhanced Deep Learning for Glaucoma: A Framework for Early Detection and Progression Forecasting** Publisher: IEEE Cite This PDF Deepa D ; R Pugalenthi All Authors Abstract Document Sections I. Introduction Literature **Abstract:** Glaucoma is still a leading cause of permanent blindness, and artificial intelligence (AI) has the potential to be used to detect the disease at an early stage. Nevertheless, the current constraints of ophthalmic datasets in the development of deep learning (DL) models are devastating because they are small, unheterogeneous, and cross-sectional in nature. To address these data-centric bottlenecks, this paper suggests a new framework to be implemented with	*Staff member Deepa D have successfully published a research paper titled "Generative AI-Enhanced Deep Learning for Glaucoma: A Framework for Early Detection and Progression Forecasting" in an IEEE conference publication. The paper presents an innovative framework that integrates generative artificial intelligence with deep learning techniques to enable early detection and accurate progression forecasting of glaucoma, one of the leading causes of permanent blindness.* *Sathya V., Department of Artificial Intelligence and Data Science, St. Joseph's College of Engineering, Chennai, Tamil Nadu, India, has published a research paper titled "Natural Language Processing for Multilingual and Low-Resource Languages" in the 2025 IEEE 7th International Conference proceedings, published by IEEE. The paper addresses the challenges of multilingual and low-resource Natural Language*

Conferences > 2025 IEEE 7th International C...

Natural Language Processing for Multilingual and Low-Resource Languages

Publisher: IEEE

Cite This | PDF

J. Karthikeyan ; Munawar Yusuf Sayed ; Yashwant Waykar ; V. Sathya ; Krishna Prasad R ; M. Suseela Grace Padma

All Authors

26 Full Text Views

Department of AIDS, St. Joseph's College of Engineering, Chennai, Tamil Nadu, India

Abstract
Document Sections
I. Introduction
II. LITERATURE SURVEY
III. PROPOSED MODEL
IV. RESULTS AND DISCUSSIONS
V. CONCLUSION
Authors
Figures
References
Keywords

Abstract:
Multilingual and low-resource NLP is a challenging task as it suffers from the lack of labelled data, high annotation cost, and the paucity of language-specific resources. We present an integrated framework that uses pre-trained multilingual encoders, synthetic data augmentation, active learning, and cross-lingual transfer to enhance performance on foundational NLP tasks, including part-of-speech tagging, named entity recognition, and machine translation. We use XLM-Roberta as a multilingual encoding layer and transfer learn per-task on four low resource languages: Amharic, Guarani, Uyghur, and Yoruba. We experimented with data augmentation via back-translation and paraphrasing, which greatly improved training corpus, and active learning, which reduced manual annotation by up to 40%. Cross-lingual transfer from related languages also improved system performance for which over and above language-specific baselines, improved F1-scores in the range of 8−10% were recorded. Experiments on low-resource benchmarks corroborate the effectiveness of the framework, with BLEU score improvements in up to 10 points and stable convergence gains. The proposed approach provides a scalable and cost-effective mechanism to improve the performance of NLP for

More Like This

Automatic Annotation of Metadata in Power System Databases Based on Correlation Feature Selection and Natural Language Processing
2023 IEEE 8th International Conference on Smart Cloud (SmartCloud)
Published: 2023

Advancing Odia Natural Language Processing: A Study on HMM-Based POS Tagging
2025 International Conference on Cognitive, Green and Ubiquitous Computing (IC-CGU)
Published: 2025

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/12/2025
(21) Application No.202521132723 A
(43) Publication Date : 13/02/2026

(54) Title of the invention : BISMUTH-FUNCTIONALIZED 2D NANO-ELECTRONIC LAYERS FOR IMPROVED EV BATTERY STABILITY AND SAFETY

(51) International classification :B82Y30/00, B82Y40/00, H01M10/04, H01M10/054, H01M10/0562, H01M10/585, C01G29/00, H01M4/64
(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(86) International Application No Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number Filing Date :NA :NA
(62) Divisional to Application Number Filing Date :NA :NA

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(57) Abstract :
BISMUTH-FUNCTIONALIZED 2D NANO-ELECTRONIC LAYERS FOR IMPROVED EV BATTERY STABILITY AND SAFETY The present invention provides a developement of the electric vehicle batteries encounter severe issues of stability and safety owing to dendrite formation, thermal runway, and decomposition of the electrolyte materials with high rates of cycling. This paper proposes bismuth-functionalized two-dimensional nano-electronic layers (Bi-2D NELs), which include bismuth oxide nanosheets with hybrids of graphene and MXene materials, and act as a multi-functional layer for Li metal electrodes. The addition of bismuth improves ionic conductivity (e 10−2e 10 −2 S/cm) and helps form a self-healing solid-electrolyte interface (SEI), which prevents more than 95% of dendrite formation after 1000 cycles of 5C rates. In situ EIS results, along with DFT calculations, indicate that bismuth helps reduce Li+ solvation energy and nucleation overpotential by 0.3 V. Thermal tests show that there is a 60% decrease in heating up, thus preventing runaway phenomena up to 200 °C. Full cells with NMC electrodes reach an 85% capacity retention ratio after 800 cycles, which is a 2.5x improvement over the control cells. Bi-2DN LEs provide a scalable means for the production of the next generation of EV batteries. FIG.1
No. of Pages : 13 No. of Claims : 2

The Patent Office Journal No. 07/2026 Dated 13/02/2026 18439

Processing (NLP), particularly the lack of labelled data and high annotation costs.

Dr. R. Baghialaxmi has successfully published a patent titled "Bismuth-Functionalized 2D Nano-Electronic Layers for Improved EV Battery Stability and Safety", as featured in the Patent Office Journal No. 07/2026 dated 13/02/2026. The invention addresses critical challenges in electric vehicle battery performance, particularly dendrite formation, thermal runaway, and electrolyte decomposition.

Ms. Kavitha G has published a patent titled "IoT-Enabled Machine Learning Framework for Real-Time Cardiac Anomaly Prediction and Emergency Alerting", as featured in the Patent Office Journal No. 08/2026 dated 20/02/2026. The invention presents an advanced integrated

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :02/02/2026
(21) Application No.202641010921 A
(43) Publication Date : 20/02/2026

(54) Title of the invention : IOT-ENABLED MACHINE LEARNING FRAMEWORK FOR REAL-TIME CARDIAC ANOMALY PREDICTION AND EMERGENCY ALERTING

(51) International classification :A61B 5/00, G16H 40/67, A61B 5/0205, A61B 5/352, A61B 5/361

(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(86) International Application No : Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA Filing Date :NA
(62) Divisional to Application Number :NA Filing Date :NA

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(57) Abstract :
IoT-Enabled Machine Learning Framework for Real-Time Cardiac Anomaly Prediction and Emergency Alerting is the proposed invention. The proposed invention integrates wearable biomedical sensors with IoT connectivity to continuously collect cardiac physiological signals such as ECG and heart rate data. Advanced machine learning and deep learning algorithms analyze the real-time data to detect abnormal cardiac patterns with high accuracy and minimal latency using edge and cloud computing. Upon identification of a critical cardiac anomaly, the system automatically generates emergency alerts and transmits them to patients, caregivers, and medical professionals along with essential health information. The framework also incorporates secure data transmission and privacy-preserving mechanisms, enabling reliable, scalable, and intelligent remote cardiac monitoring for proactive healthcare and timely emergency response.
No. of Pages : 15 No. of Claims : 5

The Patent Office Journal No. 08/2026 Dated 20/02/2026 21981

healthcare monitoring system that leverages Internet of Things (IoT) devices

Dr. R. Ramya published a patent titled "Chemical Sensor-Integrated IoT Network for AI-Optimized Electricity Usage in Residential Areas", officially released in the Indian Patent Office Journal No. 31/2025 on 01/08/2025, with Application No. 202541070964 A, filed on 25/07/2025. This invention presents an advanced framework that integrates chemical sensors with Internet of Things (IoT)

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :25/07/2025

(21) Application No.202541070964 A

(43) Publication Date : 01/08/2025

(54) Title of the invention : Chemical Sensor-Integrated IoT Network for AI-Optimized Electricity Usage in Residential Areas

(51) International classification	:G05B0015020000, F24F0011300000, H04L0067120000, G06Q0010040000, G06Q0050060000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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3)DR.G. SOUNDRADEVI
4)DR.P. VAMSHEEDHAR REDDY
5)SELVAKUMAR N
6)DR R RAMYA
7)DR. VAMSHI KOLLIPARA
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7)DR. VAMSHI KOLLIPARA
Address of Applicant :Associate Professor, ECE, Malla Reddy College of Engineering Maisammaguda, Secunderabad, Medchal, Hyderabad, Telangana Hyderabad ----------- -----------

(57) Abstract :
"Chemical Sensor-Integrated IoT Network for AI-Optimized Electricity Usage in Residential Areas," introduces a transformative solution for enhancing energy efficiency and sustainability in smart homes and communities. This system integrates advanced chemical sensors within an Internet of Things (IoT) framework to monitor environmental parameters such as air quality, gas leaks, humidity, and pollutant levels, which directly influence household energy consumption patterns. By continuously gathering real-time data from various chemical and environmental sensors embedded in residential infrastructures, the network enables precise analytics on the relationship between environmental conditions and energy usage. Artificial Intelligence (AI) algorithms process this multidimensional data to predict optimal energy usage schedules, control HVAC systems, lighting, and appliance operations dynamically, and mitigate energy wastage while ensuring safety through chemical hazard detection. The AI-driven optimization not only enhances energy conservation but also improves indoor air quality and user comfort. Additionally, the system supports decentralized energy management by integrating with smart meters, renewable energy sources like solar panels, and energy storage devices to balance supply and demand efficiently. The network can adapt to behavioral patterns of occupants and environmental shifts, offering personalized recommendations for energy- saving practices.

No. of Pages : 19 No. of Claims : 10

ORIGINAL
क्रम सं/ Serial No. : 220173

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 475992-001
तारीख / Date : 07/10/2025
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *IOT BASED PORTABLE HEALTH MONITORING DEVICE FOR MULTIPLE SCLEROSIS PREDICTION* से संबंधित है, का पंजीकरण, श्रेणी 24-01 में 1.Dr. J. Vijayalakshmi 2. Dr. M. Vidhyasree 3.Dr. K. Shanthi 4.Ms. Suman 5.Dr. Vishwa Priya V के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 24-01 in respect of the application of such design to *IOT BASED PORTABLE HEALTH MONITORING DEVICE FOR MULTIPLE SCLEROSIS PREDICTION* in the name of 1.Dr. J. Vijayalakshmi 2. Dr. M. Vidhyasree 3.Dr. K. Shanthi 4.Ms. Suman 5.Dr. Vishwa Priya V.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि : 14/01/2026
Date of Issue

महानियंत्रक पेटेंट, डिज़ाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।
The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

Dr. Vijayalakshmi has successfully published and secured the design registration for her innovative healthcare invention titled "IoT Based Portable Health Monitoring Device for Multiple Sclerosis Prediction." The design was officially registered with the Intellectual Property Office, Government of India, under Design No. 475992-001 on 07/10/2025

DEPARTMENT OF ARTIFICAL INTELLIGENCE AND MACHINE LEARNING

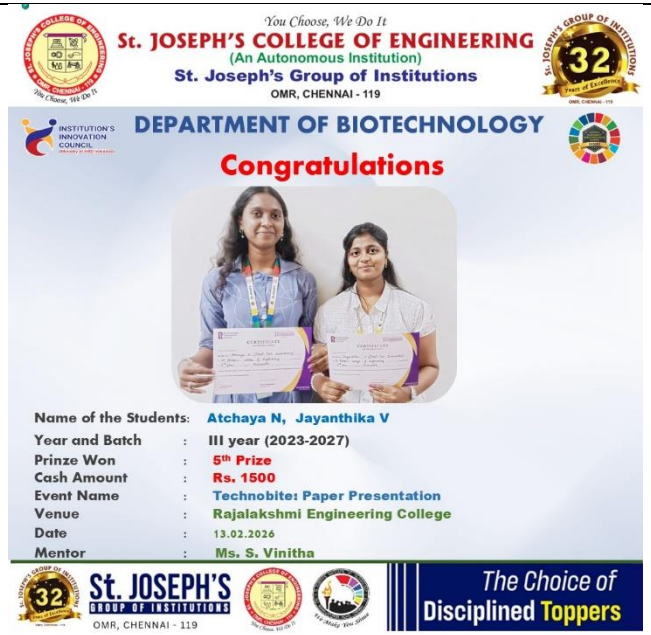
Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
1.	**Dr. Adlin Sheeba** **Published Paper** 	**Title of the Paper –** An AI-Driven VR Learning Framework Using RL-Optimized Transformer Models for Personalized English Proficiency Assessment. **Abstract:** Effective English language learning demands adaptive, interactive, and flexible instructional support, which traditional e-learning systems and existing AI tutors struggle to provide due to limited immersion, static feedback mechanisms, isolated task structures, and the absence of robust reward-driven learning strategies. Although prior studies on VR-based learning environments and Natural Language Processing (NLP) have reported enhanced learner motivation and engagement, most existing solutions suffer from fixed task sequencing, limited real-time linguistic intelligence, and inadequate grammar and pronunciation correction capabilities. To address these challenges, this study proposes a Virtual Reality–based architecture named the Self-Evolving Neural Intelligence Tutor (SENIT), driven by Curriculum Reinforcement Learning and Hierarchical Adaptive Weighting. SENIT integrates a fine-tuned T5 transformer for grammar refinement and prosody-aware feedback, while a reinforcement learning agent dynamically adjusts task difficulty and lesson progression based on learner performance. Developed using Python and TensorFlow and deployed within a Unity3D VR environment, SENIT enables realistic conversational simulations and multimodal learner assessment. Experimental evaluation on a dedicated VR English Learning Dataset demonstrates grammar and pronunciation accuracy improvements of 90% and 81%, respectively, outperforming existing models by approximately 12 percentage points. Additionally, learners achieved notable fluency gains and high engagement scores, highlighting SENIT's effectiveness in delivering personalized, immersive language learning experiences.

2.	**Dr. Adlin Sheeba** **International** **Conference**  	**Title of the Paper :** Adaptive CognitionNET for predicting student Performance in E-Learning Systems
3.	**Ms.Priyadharshini S P** **International** **Conference**	

		**Title of the Paper :** SmartCross: IoT-based Safe Cross Railway

DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	**STUDENT ACHIEVEMENTS**  *You Choose, We Do It* St. JOSEPH'S COLLEGE OF ENGINEERING (An Autonomous Institution) St. Joseph's Group of Institutions OMR, CHENNAI - 119 DEPARTMENT OF BIOTECHNOLOGY Congratulations Name of the Students: Sherwin Domnic Jose, Pragadees U Year and Batch : III year (2023-2027) Prinze Won : 1st Prize Cash Amount : Rs. 7000 Event Name : TECHNOBITE: PAPER PRESENTATION Venue : Rajalakshmi Engineering College Date : 13.02.2026 Mentor : Ms. Justin Packia Jacob St. JOSEPH'S GROUP OF INSTITUTIONS OMR, CHENNAI - 119 The Choice of Disciplined Toppers ***A copy of proof***	Our Third-year students (Batch 2023-2027), Sherwin Domnic Jose and Pragadees U have won 1st position (Rs. 7000 Cash Prize) in TechnoBite Paper Presentation held at Rajalakshmi Engineering College, Chennai on 13.02.2026. Our Third-year students (Batch 2023-2027), Atchaya N and Jayanthika V have won 5th position (Rs. 1500 Cash Prize) in TechnoBite Paper Presentation held at Rajalakshmi Engineering College, Chennai on 13.02.2026.

	 ***A copy of proof***	Our third-year student (Batch 2023-2027), Jafferin D.R has secured 2nd position (State Level) in Chennai Regional Round of the Maria Philip Future Leader Debate at XIME, Chennai, with the cash prize of Rs. 10,000.

	 ***A copy of proof***	Our third-year students (Batch 2023-2027), Hariharan D. K and Sreevarshan S, Nanditha R and Nithyasri G have secured 1st and 3rd position in Eco-Social Club activity conducted by our College Our second year students (Batch 2024-2028), Tanushri T, Harshita R, Priyadharshika M, Sabrin H and Smera Athiban have won 1st position (Rs. 5000 Cash Prize) in IDEA2MARKET: CONCEPT TO CUSTOMER, Hackathon held at SSN College of Engineering, Chennai.

	 ***A copy of proof***	Our second-year students, Keerthi Shri R, Sindhu Gowri, Monika and Anushya Mary (Batch 2024-2028), have secured 1st position in Gene Auction, Technical Event conducted by Rajalakshmi Engineering College, Chennai with a cash prize of Rs. 10,000.

		 ***A copy of proof***	Our second-year students, Varnika S, Rashmika Ragunath Nair and Madhumitha K (Batch 2024-2028) have secured 1st positions in Nutrizone-26, National Conference at SRM Institute of Science and Technology, Chennai. Our second-year students, Nithyashree G and Mercy Shalin A (Batch 2024-2028) have secured 3rd position in MED-XPLORE-26, National Level Technical Symposium at Agni College of Technology, Chennai

	 *A copy of proof*	

	 ***A copy of proof***	

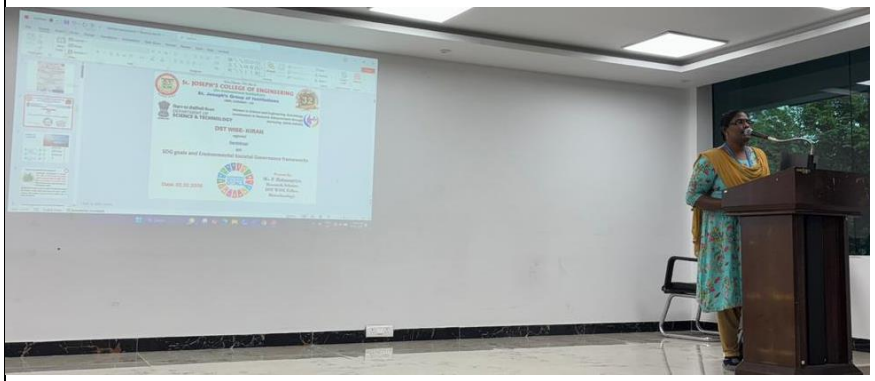
	 ***A copy of proof***	
2.	**NGO VISIT**	Our Second year recently embarked on a visit to Saastha old-age home, Madambakkam on 9th February 2026

	  *A copy of proof*	
3.	**GUEST LECTURE**	The Department of Biotechnology hosted a guest lecture on “Smart Bio-fabrication: Merging Lab-on-chip system with 3D Bio-print Constructs” by Dr. S. Yamini Sudha Lakshmi, Assistant Professor at University of Madras, Chennai.

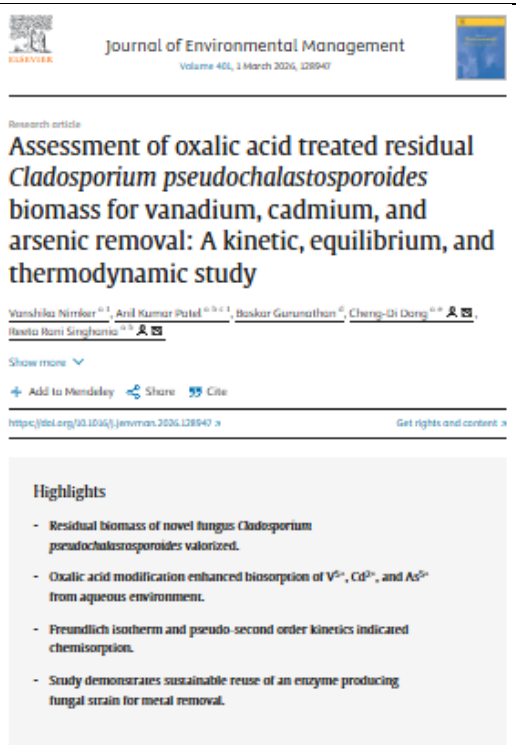
	 ***A copy of proof***	
4.	**CULTURAL WINNERS**   ***A copy of proof***	The students from Department of Biotechnology have actively participated in the cultural event and secured the following prizes: III year (Batch 2023-2027) Sowmiya M – First prize in Creative Writing Tamil Nandita R - Third prize in Creative Writing Tamil Nandita R and Harshitha P - Third prize in Rangoli Hariharan D K and Santhosh M D - Third prize in Quiz
5.	**COLLEGE DAY WINNERS**	Our 2nd and 3rd year students have participated in the college day and secured a cash prize of Rs.3000

A copy of proof

	A copy of proof	
6.	**INTRAMURAL SPORTS WINNERS**  ***A copy of proof***	Our 2nd year students (Batch 2024-2028) have participated in the intramural sports and won 1st place in throw ball (girls)and football (boys)

	 ***A copy of proof***	
7.	**SEMINAR FOR STUDENTS**  ***A copy of proof***	Our research scholar Ms. Mohana Priya P has presented a seminar on SDG Goals and Environmental and Societal Frameworks on 2nd February supported by DST WISE KIRAN

8.	**WORKSHOP ATTENDED BY FACULTY**  STAR INTERNATIONAL Foundation for Research and Education (Registered Under Indian Trust Act, ISO Certified and 12AA & 80G Approved Organisation) Tiruchengode-637211, Namakkal-Dt, Tamil Nadu, India e-Certificate of Recognition This is to certify that Prof/Dr/Mr/Ms Dr. L. F. A. Anand Raj, Associate Professor and Head, has actively participated in "Three Days Online Workshop on Research Methodology and Data Analysis - A Smart Learning" organized by Star International Foundation for Research and Education From 05.02.2026 to 07.02.2026. Dr.S. Sekar Founder / Managing Trustee Star International Foundation for Research and Education ***A copy of proof***	Dr. L. F. A. Anand Raj from the Department of Biotechnology has attended three days workshop on Research Methodology and data-analysis - A smart Learning organized by Star International Foundation for Research and Education from 05.02.2026 to 07.02.2026.
9.	**PAPER PUBLICATIONS/ BOOK CHAPTERS**	Dr. G. Baskar has published a research paper entitled "Assessment of oxalic acid treated residual *Cladosporium pseudochalastosporoides* biomass for vanadium, cadmium and arsenic removal" in the Journal of Environmental Management.

	 Journal of Environmental Management Volume 401, 1 March 2026, 128947 Research article Assessment of oxalic acid treated residual *Cladosporium pseudochalastosporoides* biomass for vanadium, cadmium, and arsenic removal: A kinetic, equilibrium, and thermodynamic study Vanshika Nirmkar, Anil Kumar Patel, Baskar Gurunathan, Cheng-Di Dong, Reeta Rani Singhania Show more Add to Mendeley Share Cite https://doi.org/10.1016/j.jenvman.2026.128947 Get rights and content Highlights - Residual biomass of novel fungus Cladosporium pseudochalastosporoides valorized. - Oxalic acid modification enhanced biosorption of V^{5+}, Cd^{2+}, and As^{5+} from aqueous environment. - Freundlich isotherm and pseudo-second order kinetics indicated chemisorption. - Study demonstrates sustainable reuse of an enzyme producing fungal strain for metal removal. ***A copy of proof***	
10.	**DBT FUNDING FOR INTERNATIONAL CONFERENCE**	Dr. G. Baskar and Dr. B. Sangeetha from the Department of Biotechnology have received a sanctioned amount of ₹1,50,000 from the Department of Biotechnology (DBT), for organizing the 3rd International Conference on Frontiers in Industrial Biotechnology

	 ***A copy of proof***	
11.	**DESIGN PATENT PUBLICATION**	Ms. Anli Dino A and her students have published a patent grant entitled “AI-Based Construction Failure Detection Device”

Intellectual Property Office

Certificate of Registration for a UK Design

Design number: 6493838

Grant date: 13 January 2026

Registration date: 19 December 2025

This is to certify that,

in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Amit Dattatray Choudhari, Kanimozhi Suguna Subramanian, Dr. Panthadeep

Bhattacharjee, Pragati Bhausaheb Chandane, Krishna Pandey, Dr. Aayush

Shrivastava, Anli Dino Alphonse, Dr Rakesh Gupta, Dr. Abhishek Das, Dr.

Sarankumar Ramasamy

in respect of the application of such design to:

AI-Based Construction Failure Detection Device

International Design Classification:
Version: 15-2025
Class: 10 CLOCKS AND WATCHES AND OTHER MEASURING INSTRUMENTS, CHECKING AND SIGNALLING INSTRUMENTS
Subclass: 05 INSTRUMENTS, APPARATUS AND DEVICES FOR CHECKING, SECURITY OR TESTING

Adam Williams
Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office
The attention of the Proprietor(s) is drawn to the important notes overleaf.

A copy of proof

DEPARTMENT OF CHEMICAL ENGINEERING

S.No.	Title of the Events and Photographs	Details of the Event
12.	**INDUSTRIAL VISIT**	Industrial visits for **II and III Year students** in February 2026 to enhance practical exposure and strengthen industry–academia interaction. On **13.02.2026**, **the II Year B.Tech Chemical Engineering students visited Rajshree Sugars & Chemicals Limited, Genguvarpatti, Tamil Nadu.** Earlier, on 06.02.2026, the **III Year Chemical Engineering students** also undertook an **industrial visit** as part of experiential learning initiatives of the department. The visit provided insights into industrial process operations, safety practices, process optimization techniques, and real-time troubleshooting methods. Students interacted with plant engineers and gained valuable exposure to practical applications of core chemical engineering principles.  

13.	**NGO VISIT**	**On 09 February 2026**, the **II Year students** of the Department of Chemical Engineering actively participated in a social outreach programme through a visit to **Sakthi Aadharavu Illam**, an NGO dedicated to supporting and caring for the underprivileged. The visit was organized by the college management with the objective of nurturing social responsibility and humanitarian values among students. 
14.	**GUEST LECTURE**	**Mr. Stalin S, Project Director at ESSAR Refinery**. Addressing a packed audience at Basil Hall, Mr. Stalin provided a comprehensive deep dive into the "**Life Cycle of a Chemical Plant,"** bridging the gap between academic theory and the complex realities of large-scale industrial operations. The event was supported by prominent industry bodies, including the Chemical Industries Association and the Indian Chemical Council.

		
15.	**PLACEMENT**	***Mr. Thareneshwar R and Mr. Santhosh K J*** have been successfully placed as **Graduate Engineer Trainees (GET) at Reliance Industries Limited**, with an impressive CTC of **8 LPA**. Their achievement stands as a testimony to their technical competence, problem-solving skills, and the rigorous academic and placement training framework of the department. ***Mr. Hari Balaji*** has achieved a remarkable milestone as his Research Internship in Electrochemistry **at Meine Electric** has been officially converted into a full-time placement offer, with a package of **9 Lakhs.** This conversion from internship to placement reflects his exceptional performance, research capability, and professional commitment during his internship tenure.

		Reliance Industries Limited MEINE ELECTRIC
16.	**STUDENT ACHIEVEMENT**	**Sanjay S and Santhosh K J** secured **First Prize at CHEMCON 2025**, the 78th Annual Session of the Indian Institute of Chemical Engineers (IIChE). The prestigious event was organized by the IIChE Annamalai Regional Centre at **Annamalai University, Tamil Nadu**, from December 27–30, 2025, under the theme "**AI-Driven Chemical Engineering Processes – Transformation and Sustainability**." Their award-winning paper titled "**Adsorptive Removal of Emerging Contaminants Including Fluoroquinolone Antibiotics from Aqueous Environments Using Green Nanocomposites**" was highly appreciated for its innovation, environmental relevance, and technical excellence. Our students achieved remarkable success at various prestigious technical events, bringing pride to the institution. At Titanium '26, hosted by **Rajalakshmi Engineering College on 13.01.2026,** multiple teams from the Department of Chemical Engineering secured top positions. In the Paper Column (Technical Paper Presentation) event, Team Polymerix **comprising S. Akshaya, R. Abishek, and Mohammad Aasif G secured First Place**, winning a cash prize **of ₹10,000** for their outstanding research and presentation skills. In **Chemstruct (Working Model Competition), Team ATOMIC WIZARD with Prakadesh S and Susindhiran S achieved Second Place**, earning **₹6,000** for their innovative model and technical expertise. In the Causeberg Technical Case Puzzle, **Shalesh Priyan K S and Prakadesh S secured Second Place**, winning **₹6,000**, demonstrating strong analytical and problem-solving abilities.

The II Year students of the Department of Chemical Engineering actively participated in the **Cultural Competitions held on 27th February 2026** and the Intramural Sports Meet conducted on 19th February 2026. The students showcased exceptional enthusiasm in events such **as Rangoli, Drawing (Pencil), Creative Writing, Oratorical, Quiz, Light Music, and team events like Pattukku Pattu and Dumb C**. Notably, **Dakshin Kiran K secured the I Prize in Oratorical (Tamil),** bringing pride to the department. Students also earned prizes **in Rangoli and Drawing competitio**ns, reflecting their artistic creativity and communication excellence. In sports, II Year students contributed significantly to team victories in Football and Throw Ball (in combined categories), and secured individual

		recognition in **Table Tennis and Badminton**. Their active involvement demonstrated strong team spirit, leadership qualities, and competitive excellence. **Agni Fest 2026, hosted by Agni College of Technology**, leading the charge in core technical excellence**, Pranav M secured the First Prize in the Paper Presentation event**, while the duo of **Tholkappian N and Pranav M, competing as Team Blaze, clinched First Prize in Chem Connectz. Furthering this success, the trio of Senthamizh Selvi P, Priyadharshini A, and Samyuktha C** demonstrated exceptional technical skill to win First Prize in the "Fix the Flow" event. In the realm of competitive quizzes and analytical challenges, the department's students maintained a strong presence on the podium. In the **ChemGenius Quiz, the team comprising Abarna P, Lokeshwari S, and Senthamizh Selvi P secured the Second Prize, while Sakthi Pradeep G and Abhijit Kanna A M (Team Fluid Guys) earned the Third Prize.** Additionally, during the Mechrazz 2k26 technical quiz, **Abarna P, Vaishali R, Yuva Sree V, and Logamaya S T** showcased their cross-disciplinary knowledge by securing Second/Third place finishes. Another successful run in the Chem Connectz event saw **Logamaya S T, Vaishali R, and Yuvashree V** taking home the Second Prize.    **The III Year students** marked their presence in the Cultural Competitions (2025–26) with outstanding performances. **Rishon Jos Anton S secured prizes in multiple events including Composing (Lyrics) and Creative Writing (English), showcasing**

		literary and artistic talent. The students also participated in Oratorical, Quiz, and various creative competitions, reflecting their well-rounded development.    **Sivadurga M. and Roshini Priya**, both II-Year Chemical Engineering students from St. Joseph's College of Engineering, have been honored with the Special Mention Prize at the prestigious **IMPACTX 3.0 hackathon.** Competing under the team name Hack Master, the duo distinguished themselves during the intensive 24-hour competition held on February 5th and 6th, 2026.

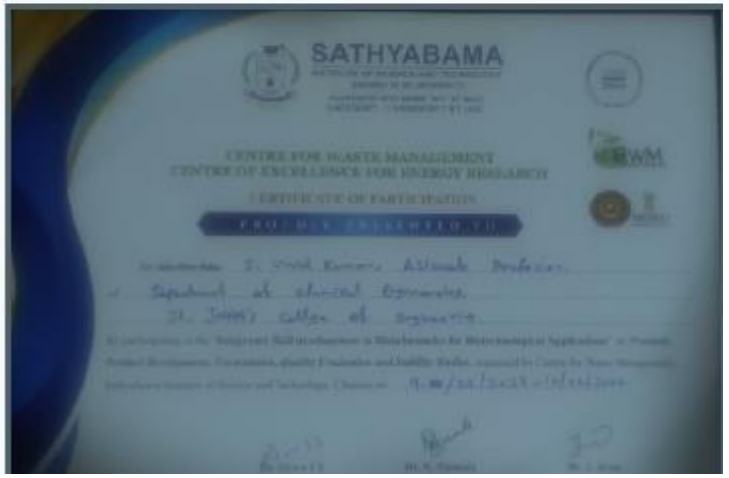
		 **Akshaya S.,** a third-year Chemical Engineering student, was among the select participants recognized for her engagement in the high-level technical session hosted by The Institution of Engineers (India), Kanchepuram Local Centre (KLC). Final-year Chemical Engineering students **Kavin Raja Chakravarthy and Kuperan,** under the expert mentorship of Assistant Professor **Ms. Lavanya, secured the Best Paper Award at the 9th International Conference** on Innovative Computing and Communication (ICICC-2026) for their pioneering research on **"Prediction of Bio-Oil Yield in Pyrolysis of Biomass Using Machine Learning Algorithms."**

		
17.	**ALUMNI MEET**	**The Silver Jubilee Celebration of the 1997–2001** batch was grandly organized on 27th February at St. Joseph's College of Engineering, commemorating 25 glorious years of friendship, achievements, and cherished memories. The event began with a heartfelt welcome by the college management and faculty members, who expressed immense pride in the accomplishments of the alumni. The reunion created a vibrant and emotional atmosphere as classmates met each other after many years, reliving their unforgettable college days.

		
18.	**STUDENT SPORT**	**Vijay Sabareswar K.M**., , secured a podium finish at the **Open State Level Interschool and Collegiate Swimming Competition.** The event, which drew top talent from across the state, was held at the **SDAT Swimming Pool in Shenoy Nagar on January 31, 2026.** Competing in the highly demanding **100M Individual Medley (IM), Sabareswar** demonstrated exceptional versatility across all four competitive **strokes—butterfly, backstroke, breaststroke, and freestyle**. His disciplined performance earned him the second-place silver medal, distinguishing him as one of the premier collegiate swimmers in the region.

		
19.	**STAFF ACTIVITY**	**Dr. N. Venkatesh, Professor and Head of the Department,** has successfully completed the prestigious **Faculty Development Program (FDP**) on **Stress Management and Productivity Enhancement** conducted by the AICTE Training and Learning (ATAL) Academy. The program was organized at the School of Technology from **09.02.2026 to 14.02.2026**  ALL INDIA COUNCIL FOR TECHNICAL EDUCATION Nelson Mandela Marg, Vasant Kunj, New Delhi -110070 AICTE Training and Learning (ATAL) Academy *Certificate*

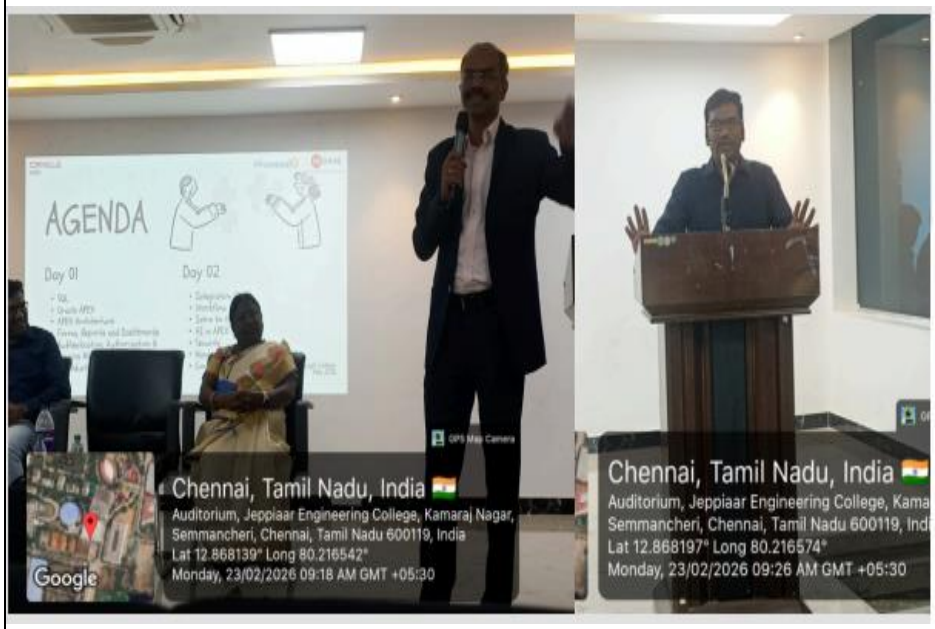
		Dr. N. Magesh, Assistant Professor, served as **a Resource Person** at the All India Seminar on "**Nanomaterial from Research to Industry**" organized by The **Institution of Engineers (India),** Tamilnadu State Centre, held at Sathyabama Institute of Science and Technology on 27–28 February 2026.  **Dr. S. Vinod Kumar, Associate Professor, and Dr. N. Magesh**, Assistant Professor ,participated two-day workshop on **"Integrated Skill Development in Bioinformatics for Biotechnological Applications**," specifically focusing on Probiotic Product Development: Formulation, Quality Evaluation, and Stability Studies, held on February 9th and 10th, 2026. Organized by the **Centre for Waste Management and the Centre of Excellence for Energy Research.**

		 SATHYABAMA CENTRE FOR WASTE MANAGEMENT CENTRE OF EXCELLENCE FOR ENERGY RESEARCH CERTIFICATE OF PARTICIPATION PROUDLY PRESENTED TO Department of Chemical Engineering St. Joseph's College of Engineering  SATHYABAMA CENTRE FOR WASTE MANAGEMENT CENTRE OF EXCELLENCE FOR ENERGY RESEARCH CERTIFICATE OF PARTICIPATION PROUDLY PRESENTED TO Department of Chemical Engineering St. Joseph's College of Engineering

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	**CSI-GUESTLECTURE**	**Date** : 5.2.2026 **Venue** : **Conference Hall** **Nature of Event** : GUEST LECTURE Participants : II & III Year students Objective : • **To** bridge the gap between classroom learning and real-world industry practices through alumni experience sharing. • **To** guide students on career pathways, job roles, required skills, and higher studies opportunities. • **To** motivate and prepare students for employability through insights on trends, tools, internships, and interviews. • Outcome : • **Improved student awareness** of current industry practices, tools, and expectations related to the topic. • **Clear career direction** gained by students on job roles, skills to develop, certifications/higher studies, and placement preparation. • **Enhanced motivation and engagement**, with better readiness for internships, interviews, and professional communication.
	   	

2	# Guest Lecture	
		**Date** : **17** .2.2026 **Venue** : Conference Hall **Nature of Event** : Guest Lecture **Participants** : II & III Year students **Objective :** • **To** expose students to current industry trends, tools, and real-time practices through expert sessions. • **To** bridge the gap between curriculum and industry expectations by mapping required skills and job roles. • **To** enhance employability by providing guidance on internships, projects, certifications, and interview readiness. **Outcome :** • **Better understanding of industry expectations** (latest trends, tools, and workplace practices) relevant to the subject. • **Improved skill readiness** through clarity on required competencies, job roles, and project/internship directions. • **Enhanced employability preparation** with actionable inputs for certifications, resume building, and interview preparation.

3	workshop	
		**Date** : 19.2.2026 & 20.2.2026 **Venue** : Conference Hall **Nature of Event** : Workshop **Participants** : II & III Year students **Objective :** • To move beyond theory by providing hands-on practice and the application of knowledge in a real-world context. • To master a specific tool, technique, or "soft skill" (like leadership or coding) that isn't deeply covered in a standard curriculum. • To build professional networks and teamwork skills by solving challenges alongside peers and industry experts. **Outcome :** • Students leave knowing how to actually perform a task, not just the theory behind it. They gain the **confidence** to use a tool or technique on their own. • Students finish with a **result**—like a finished drawing, a working piece of code, or a solid plan—that they can show off or put in a portfolio. • Students walk away with **new friends or mentors** who share their interests, making them feel like part of a professional community.

DEPARTMENT OF MECHANICAL ENGINEERING.

Sl No	Name of the Activity	Remarks
1	➢ Dr. G. M. Lionus Leo, Associate Professor in the Department of Mechanical Engineering, has published a research article titled “Advanced Phase Change Material–Thermal Energy Storage for Low Carbon Heat: Materials, Reliability, and AI-Driven System Integration for Industry, Buildings, and Data Centers” in the journal Applied Energy (Volume 409, Impact Factor: 11). Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering Published an article titled "A Study on the Effects of Adding Cerium Oxide Nanoparticles to CI Engines Powered by Prosopis Juliflora Biodiesel-Diesel Blends." in Scopus Indexed Q4 Journal "International Journal of Vehicle Structures & Systems (IJVSS)," on 6 February 2026. th Mr. T. Balasubramanian, Assistant Professor from the Department of Mechanical Engineering Published a Patent Title “ An Intelligent Regenerative Braking Energy Optimization System and Method for Electric Vehicles” Application no: 202341005465A. Mr. M. Siva, Assistant Professor from the Department of Mechanical Engineering Published a Patent Title “ High- Performance Composite Structural Beam Incorporating Bio-Resin-Based Shear Interface Layers” Application no: 202641002918A. ➢ Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering has published a Scopus Indexed Book Chapter entitled "Bridging Health Equity in Times of Crisis: Ensuring Inclusive Care During Emergencies and Disasters", IGI Global Scientific Publishing on 12 February 2026. Mr. G. Ashwin Prabhu from the Department of Mechanical Engineering attended the Six-Day Virtual Faculty Development Programme (FDP) on “Green Energy Technologies for Sustainable Development (GETSD’26)” organized by the Department of Mechanical Engineering, Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, from 09.02.2026 to 14.02.2026. Mr. G. Ashwin Prabhu, Assistant Professor from the Department of Mechanical Engineering Published an article titled "Experimental Study on Drilling Performance of Bio-Waste-Based Corn Husk Fiber Reinforced Epoxy Composites for Green Applications", in "Journal of Manufacturing and Materials Processing" a Scopus & ESCI Indexed, Q1 Journal with an impact factor of 3.3 on 21th February 2026 ➢ Dr. G. M. Lionus Leo, Associate Professor in the Department of Mechanical Engineering, has published a research article titled “Physics-encoded machine learning for performance and emission prediction of nickel ferrite nanocatalyst and hydrogen-enriched biodiesel in diesel engines” in the RSC Advances (Volume 16, Impact Factor: 4.6). Mr. G. Ashwin Prabhu, Assistant Professor from the Department of	

	Mechanical Engineering has published a Scopus Indexed Book Chapter entitled "AI-Enhanced Predictive Analytics and Reliability Management for Wind Turbine Maintenance", IGI Global Scientific Publishing on 28th February 2026. Mr. T. Balasubramanian Assistant Professor & Dr. N. Arunkumar, Professor, from the Department of Mechanical Engineering has presented a paper titled " Surface Roughness Prediction in Drilling Inconel Grade-2 using Textured Tools and Soft cvomputing Technique" in 2 International Conference on Processing and performance of MAterials ICPPM-26 organized by Mechanical Engineering, SSN College of Engineering chennai, during 19 & 20 February, 2026 th th Mr. N. Sathishkumar, Assistant Professor, Department of Mechanical Engineering, acted as a reviewer for the manuscript titled "Novel Nonlinear Control Algorithms for Hexacopters to Overcome Contro	
2	 **MECHOVATE 1.0**	➢ On behalf of Department of Mechanical Engineering, we organized Mechovate 1.0 a 24 hours Hackathon on 26/02/2025 to 27/02/2025. The session was inaugurated and timer for hackathon was pressed by Mr. PG. Ramanan, Director, CADDAM technologies. Total of 62 teams from 24 various colleges participated in the hackathon in software and Hardware domain at various problem statement. Total of 11 juires Evaluated their projects and suggestion of imporvments and second evaluation was done on how much incorporation was carried out from juiries suggestion was marked and prizes were given. The session valedictory was chaired by Mr. S.R. Ramakrishnan, Director, Thaai Casting and also a proud alumnus of 2016-2020 Batch.
3	Employability Enhancement Program (EEP)	➢ The Department of Mechanical Engineering successfully organized an Employability Enhancement Course on SD0502 – Non Destructive Welding Inspection Techniques in association with Shri Sai NDT Services. The program was conducted from 2nd February 2026 to 6th February 2026, with the objective of enhancing the practical skills and industry readiness of

		students. A total of 61 third-year Mechanical Engineering students actively participated and benefited from this course. The training provided valuable exposure to modern non destructive testing methods and their applications in welding inspection, thereby strengthening the technical competence and employability of the participants.
5	Alumni Lecture	➢ On 06/02/2026, Department of Mechanical Engineering organized a Alumni guest lecture. Mr. Ashwin Santhanam (2006-2010), Senior Group Manager, Metro Global Solution Center & Mr. Adhityan PT (2006-2010), Project Manager, Enmas India Pvt Ltd, Shared the stage and addressed the topic " Orientation on Project Management & Process Improvement " to the all Clear

		students of mechanical. The students had a clear insight of what process imporvement is and the roll of porject manager and what are the prerequisite for being in the role.
	Guest Lecture 	➢ The Department of Mechanical Engineering at St. Joseph's College of Engineering, Chennai, organized a guest lecture titled "Opportunities in the Field of Non-Destructive Testing (NDT)" on February 4, 2026, from 10:00 am to 12:00 pm at Basil Hall, Placement Block. The session was delivered by Mr. R. Nirmal, Founder of NP Technical Services Private Limited, Chennai. The session provided students and professionals with insights into career prospects, industry applications, and emerging technologies in the field of NDT.
	 **ABHS seminar**	➢ The Department of Mechanical and Mechatronics Engineering, in association with the Advisory Bureau for Higher Studies, successfully organized a Faculty Collaborative Research & Student Seminar on "Hydrogen, Additive and Nuclear Technologies in Manufacturing Systems" on 02 February 2026 at the AV Hall, Library, St. Joseph's College of Engineering, Chennai. The seminar witnessed active participation from faculty members and students, providing valuable insights into emerging manufacturing technologies and their global relevance. The session emphasized the role of advanced technologies in sustainable manufacturing, research collaboration, and future

		career pathways. The event facilitated meaningful discussions on faculty collaborative research opportunities, global technology exposure, and international higher studies and career prospects. Students were motivated to pursue innovation-driven research and interdisciplinary learning. Overall, the seminar was highly informative and inspiring, contributing significantly to research awareness, academic growth, and global outlook among participants
		➢ On behalf of SAE Student Chapter Activity, the ACES HIGH AERO SQUAD TEAM comprising Final, Third and Second year Mechanical & Mechatronics students participated in the SAE Drone Design Challenge 2026 held at KCG College of Technology from 20th to 22nd February 2026, Organized by SAE INDIA, SOUTHERN SECTION. The team has won All India Rank 3 out of 85 Teams in Aerodynamic Analysis Category (CFD)

	 **Drone Development Challenge 2026**	

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Events conducted:

The following events have been conducted during February 2026 at College Level

1. An Industry Conclave – EMERGENCE' 26	**Report**
a) Activity 1	
	EMERGENCE'26 began with inspiring sessions from industry leaders across IT, hardware, and technology services. Speakers from Fidelity, TCS, Motherson Technology, Kone Elevator, and HCL Tech shared insights on emerging trends and industry expectations. The sessions emphasized innovation, leadership, and real-world engineering applications. Students gained valuable knowledge on career growth, skill enhancement, and industry readiness. The day concluded with interactive discussions that motivated students toward disruptive technology domains.

Day 2 featured experts from Valeo, TVS, and Nokia who highlighted advancements in automotive electronics and communication technologies.The speakers discussed product development, R&D practices, and software project management in global industries. Students were exposed to real-time industrial challenges and innovation strategies. The sessions strengthened understanding of embedded systems,

	telecom advancements, and industry collaboration.The day fostered technical curiosity and encouraged students to pursue research and internships.  Day 3 focused on leadership, technical excellence, and talent development in leading organizations like Einfocips and Hyundai Motor India.Industry professionals shared experiences on project execution, team management, and career progression.The sessions highlighted the importance of technical expertise combined with soft skills.

	
2. Alumni Activities	**Report**
a) Activity 1	

An Alumni Talk titled "Institution to Industry: Mastering the Art of Interviews" was conducted on 13 February 2026 for Third-Year ECE students. The alumna shared practical tips on resume building, interview preparation, and corporate expectations. The interactive session motivated students and boosted their confidence for placements.

The session was delivered by a distinguished alumni who shared her inspiring journey from college to the corporate world. She provided practical guidance on resume preparation, technical and HR interview strategies, communication skills, and adapting to workplace culture. Students actively participated in the interactive

	discussion, asking questions and clarifying doubts about recruitment processes and industry expectations. The session was engaging, insightful, and motivating, helping students gain clarity and confidence as they prepare for their placement journey.
3. Professional Society Activities	**Report**
a) Activity 1	
	A Guest Lecture on “Smart Shortcut to Enter the IT Industry as a Fresher” was conducted on 06 February from 9:30 AM to 11:30 AM. The session was organized in association with IEEE Antennas and Propagation Society and IEEE Communications Society. Mr. Saravanan Rajarajan, Deputy Manager at Deloitte, Bangalore, shared practical tips on entering the IT industry as a fresher. He spoke about in-demand skills, resume building, interview preparation, and career planning, helping students understand what companies look for during placements. 

The session was interactive and engaging, with students actively asking questions about internships, placements, and career growth in multinational companies. The speaker encouraged students to strengthen their fundamentals, improve communication skills, and gain real-time project experience. He also highlighted the importance of continuous learning and smart preparation strategies. The lecture gave students clarity on industry expectations and motivated them to confidently plan their IT careers with focus and determination.

a) Activity 2	
	The session was interactive and engaging, with students actively asking questions about internships, placements, and career growth in multinational companies. The speaker encouraged students to strengthen their fundamentals, improve communication skills, and gain real-time project experience. He also highlighted the importance of continuous learning and smart preparation strategies. The lecture gave students clarity on industry expectations and motivated them to confidently plan their IT careers with focus and determination. 

	The workshop was interactive and engaging, with students actively clarifying doubts about resume formats, technical profiles, and industry expectations. The speaker also shared insights from his professional journey and current hiring trends. Students gained useful guidance on presenting themselves confidently and creating resumes that stand out during campus recruitment drives.
4. ED CELL	**Report**
a) Activity 1	
	ED Cell and OPTICA of the Department of ECE organized a mentoring session titled “From Campus to Startup – Dream, Design, Disrupt: Student Spark to Startup Scale” for II Year ECE students. The session aimed to motivate students to transform innovative academic ideas into practical startup ventures through structured guidance and expert mentoring. Industry mentors from Nebula Startup School shared insights on ideation, identifying real-world problems, design thinking, and building scalable solutions with strong market relevance.

Students actively interacted with the mentors, presenting their ideas and discussing feasibility, challenges, and growth potential. The session provided exposure to startup ecosystems, funding opportunities, and investor expectations. It also encouraged students to strengthen their entrepreneurial mindset and innovation culture. Promising teams were identified for future bootcamps, incubation support, and startup acceleration programs. Overall, the mentoring session inspired students to think beyond academics and confidently explore entrepreneurship as a career pathway.

5) Industry Interaction

On 13–14 February 2026, Dr. P. Latha and final-year student Ms. Renisha V from the PEP–Semiconductor and VLSI Design Centre visited ADVI Group of Company. They met Mr. B. S. Manusudhan, Director, and Ms. Lalitha Lakkur, Senior Project Manager, and discussed strengthening industry collaboration. The team toured the Static Timing Analysis and VLSI Technology Centres, gaining insights into current design practices. Discussions also focused on establishing a Centre of Excellence in Semiconductor and VLSI Technology on campus. Dr. Latha additionally served as a Technical Evaluator during the company's recruitment process.

6) Publications

Journal Publications

1) GVignesh, G. D., Rakesh, J., & Balamurugan, A. M. (2026, February 18). Latency-aware load management in cognitive VANETs via hybrid Grey Wolf–Differential Evolution optimization. In Proceedings of the 2025 Tenth International Conference on Science Technology Engineering and Mathematics (ICONSTEM). https://doi.org/10.1109/ICONSTEM65670.2025.11374774

2) Vignesh, G. D., Subash, K. M., Sudheesh, S. S., & Balamurugan, A. M. (2026, February 18). Adaptive power control in cognitive VANETs via quantum-behaved particle swarm optimization. In Proceedings of the 2025 Tenth International Conference on Science Technology Engineering and Mathematics (ICONSTEM). https://doi.org/10.1109/ICONSTEM65670.2025.11374345

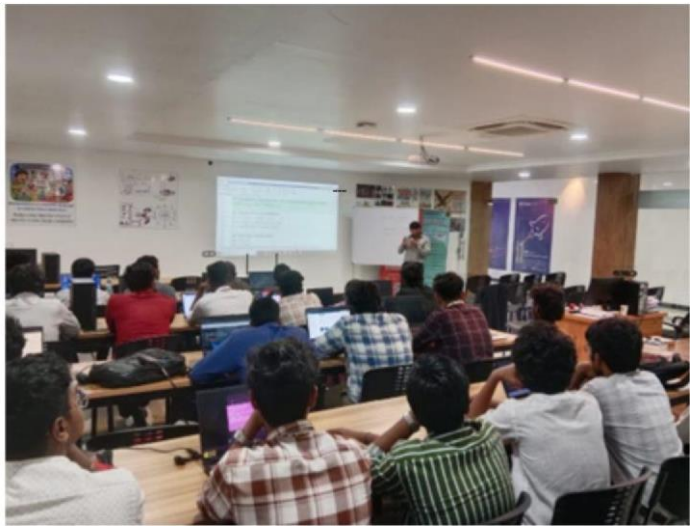
3) Vignesh, G. D., Wilson Arul Raj, J. D., Silambarasan, M., & Balamurugan, A. M. (2026, February 18). Dragonfly algorithm-based cooperative spectrum sensing for enhanced spectrum hole detection in cognitive VANETs. In Proceedings of the 2025 Tenth International Conference on Science Technology Engineering and Mathematics (ICONSTEM). https://doi.org/10.1109/ICONSTEM65670.2025.11374840

4) Vignesh, G. D., Sudharsan, T., Saravanan, G., & Balamurugan, A. M. (2026, February 18). HHO-NOMA: Harris Hawks optimization model for energy-efficient dynamic allocation in 5G downlink. In Proceedings of the 2025 Tenth International Conference on Science Technology Engineering and Mathematics (ICONSTEM). https://doi.org/10.1109/ICONSTEM65670.2025.11374868

5) Vignesh, G. D., Saravanan, G., Balamurugan, A. M., & Sudharsan, T. (2026, February 12). Modified C-ED sensing under maximum select logic with improved detection accuracy using whale optimization algorithm in CR-WSN. In Proceedings of the 2025 Global Conference on Information Technology and Communication Networks (GITCON). https://doi.org/10.1109/GITCON65266.2025.11379712

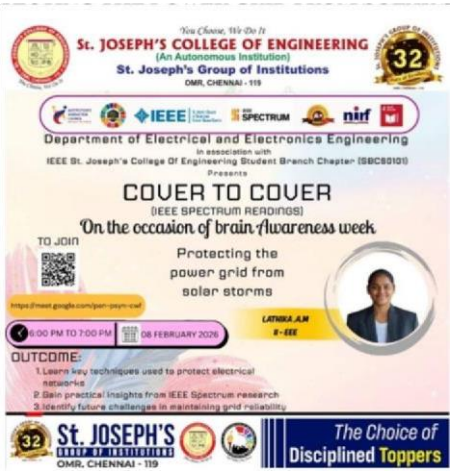
Sl. No.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)
1.	 **STUDENT WORKSHOP**	The Department of Electrical and Electronics Engineering at St. Joseph's College of Engineering organized a two-day workshop on "**Building a Future-Ready Workforce with Employability Skills for Industry 4.0**." for **II year students** on **23rd and 24th of February 2026**. The workshop was handled by resource persons **Ms. Vaishnavi Saravanan, Partnership Development Lead, Mr. Prithvi, Project Manager, and Ms. Poornima Gunasekar, Project Management Associate from ASSIST Development Foundation.** They shared insights on Electric Vehicle and robotics technologies and their realworld applications. The sessions also provided valuable career guidance and enhanced students' employability and practical skills. The workshop helped students develop industry-relevant competencies and prepared them for future career opportunites.

2.	 **GUEST LECTURE**	A guest lecture on Automation in Renewable Energy Systems was organized on **03 February 2026** at the Library AV Hall, providing students with valuable insights into modern automation practices in renewable energy applications. The session was delivered by **Mr.Anbarasan Marimuthu**, **Controls Lead Engineer at GE Vernova, Chennai**. He explained renewable energy sources and highlighted the role of automation, sensors, controllers, and communication protocols in improving system efficiency and reliability. The lecture also covered automation in energy storage systems, including battery management, safety monitoring, and integration with renewable energy sources**.**

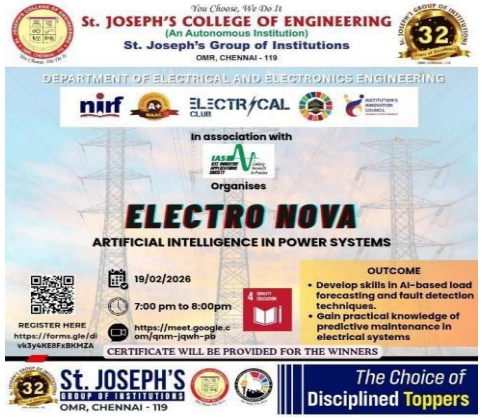
3.	 **GUEST LECTURE**	A guest lecture on Robotic Modelling and Simulation was conducted on **20 February 2026** at the Library AV Hall. The session was delivered by **Dr.Santhakumar Mohan, Professor, Department of Mechanical Engineering, Indian Institute of Technology Palakkad**. He explained the fundamentals of robot modeling, kinematic and dynamic analysis, and behavior-based robotics. The resource person demonstrated MATLAB-based simulation for trajectory planning, motion control, and robotic behavior. He also discussed control strategies and industrial applications of robotic simulation in research and automation. The session was highly interactive, and students actively participated by asking questions and clarifying their doubts.

4.	  **INDUSTRIAL VISIT**	Department of Electrical and Electronics engineering arranged for industrial visit to ***National Institute of Wind Energy, Pallikaranai, Chennai on 12th, 13th of February 2026 for 2nd year A&B section respectively.*** Visit enabled student to gain practical knowledge about aerodynamic design of wind blades, savonious and darrieus type wind mill, solar and wind energy conversion systems integration.

5.	 **NGO Visit** ***PIC: EVENT PHOTO***	St. Joseph's College of Engineering organized a community service initiative for III Year Electrical and Electronics Engineering students on 09 February 2026. **'A' Section students visited *Holy heart home mission, Avadi*** providing electrical maintenance support, basic health assistance, and interactive sessions for residents**. 'B' Section students** engaged with underprivileged individuals at **Vetri old age home*, Sithalapakkam*** leading health awareness programs and recreational activities.
6.	**Student Achievements**	1. The Team Zircons [Bhuvaneshwari T, Arulmozhi R, Harish M S-(III years), Aishwarya R, Deepika S, Monisha R. Amirtha Varshini, Dhwarakanath D, Guhan B, Anto Jeffrey A, Kritna Senan M – (II Years)] **won Fifth Place in the Motocross Competition conducted on 13/02/2026 at SSN College of Engineering.** They were also honored with the Excellence Award in recognition of their technical performance, innovation, and teamwork. 2. Hariprasath S, Deepak Prabhu C-IV Years, Jeslin Anista J, Rithesha R - III Years, Hariprasath C, Irfana Nazmeen J -II Years **won First Prize with a cash prize of Rs. 8,000/- for their outstanding project presentation and innovative contribution in the Rural India Engineering Drive – Project Competition held on 14.02.2026 at IIT Madras.**

7.	**IEEE activities**  ***PIC: EVENT POSTER***	The speaker, **Ms. LATHIKA A.M** spoke on "**PROTECTING THE POWER GRID FROM SOLAR STORMS**" on **08th February 2026** between 6:00 p.m. and 7:00 p.m. The speaker enlightened us with the idea that solar storms, caused by coronal mass ejections and solar flares, can induce geomagnetically induced currents (GICs) in power transmission lines, leading to transformer damage, voltage instability, and large-scale blackouts. She explained the importance of continuous space weather monitoring, early warning systems, grid resilience planning, and the installation of GIC blocking devices to safeguard critical infrastructure. Advanced forecasting techniques, real-time grid monitoring, and improved transformer design were also discussed as key strategies to enhance the reliability and stability of modern power systems. The session was conducted for 2nd, 3rd, and final year students. A total of 35 participants actively took part and had an insightful experience during the meet, thoroughly engaging with the topic and interactive discussion. The speaker was honored with an E-memento as a token of appreciation.	4

8.	**IEEE activities**  ***PIC: EVENT POSTER***	The speaker, **Ms. Amirtha Varshini Purushothaman** spoke on **"CAN DIAMOND SOLVE THE CHIP HEAT DILEMMA"** on **22nd February 2026** between 6:00 p.m. and 7:00 p.m. The speaker enlightened us with the concept that excessive heat generation is one of the major challenges in modern high-performance chips. As transistor density increases, efficient thermal management becomes critical to maintain performance and reliability. She explained how diamond, being an exceptional thermal conductor, can act as an effective heat spreader in semiconductor devices. The session highlighted the use of synthetic diamond substrates, diamond heat sinks, and diamond-on-silicon integration to dissipate heat more efficiently. Advanced packaging techniques and the potential of diamond-based materials in next-generation electronics were also discussed, emphasizing improved chip lifespan, energy efficiency, and enhanced processing speeds.The session was conducted for 2nd, 3rd, and final year students. A total of 25 participants actively participated and gained valuable insights into emerging thermal management technologies.	4

9.	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The Department of Electrical and Electronics Engineering, in association with the IEEE St. Joseph's College of Engineering Student Branch and IEEE Women in Engineering Affinity Group, organized CRESCENDO to commemorate the International Day of Women and Girls in Science. The session, titled **"Beyond the Codes: Women in Engineering – A New World,"** emphasized the vital role of women in advancing technology and innovation. The keynote address was delivered by **Dr. Gunjan Varshney, an expert in Robotics and Artificial Intelligence,** who shared her professional insights and experiences. She highlighted emerging opportunities, industry trends, and the importance of leadership and continuous learning in engineering. The session motivated students to build confidence, think creatively, and explore diverse career pathways. It also promoted inclusivity and encouraged young engineers to contribute meaningfully to research and innovation. CRESCENDO served as an inspiring platform for students to learn, connect, and envision their role in shaping the future of engineering.
10.	**CLUB Activities**  ***PIC: EVENT POSTER***	The **ELECTRICAL CLUB**, in collaboration with the **IEEE IAS SOCIETY**, at **St. Joseph's College of Engineering**, organized a technical event on February 19, 2026. This exclusive online event started at 7:00 pm to 8:00 pm, via Google Meet with all the members of our club and society. **OUTCOME** • Develop skills in AI based load forecasting and fault detection techniques. • Gain practical knowledge of predictive maintenance in electrical systems.

11.	 **CLUB Activities**	The **SOCIAL AWARENESS CLUB**, in collaboration with the **IEEE SPECIAL INTEREST GROUP ON HUMANITARIAN TECHNOLOGY**, at **St. Joseph's College of Engineering**, specializing in Electrical & Electronics Engineering, hosted a technical event on FEBRUARY 11, 2026. This exclusive online event started at 6:00 pm to 7:00 pm, via Google Meet with all the members of our club and society. **Outcome** • Participants developed a deeper understanding of current social issues affecting society • The Program encouraged youth to actively participate in community service and social initiatives

12.	 **CLUB Activities**	St. Joseph's College of Engineering, (Electrical & Electronics Engineering) **CHOPPERS CLUB IN ASSOCIATION WITH IEEE POWER ELECTRONICS SOCIETY** organized a technical event " **MOTOCROSS** " on **19/02/2026.** This exclusive online event started at 6:00 pm to 7:00 pm, via Google Meet with all the members of our club and society. The event focused on exploring the hidden technical talents of students by encouraging them to analyse and understand existing electrical Bike. It enhanced participants' analytical thinking, technical decision-making skills, and provided exposure to relevant engineering tools and workflows, making the session both engaging and insightful. **OUTCOME** • Participants developed technical understanding of EV components and performance optimization • Student Explored real-world application of hybrid system in motocross and racing bikes.

13.	 **ISTE Activities**	The **St.Joseph's ISTE Student Chapter in association with IEEE PHOTONICS & AUTOMATION SOCIETY** at St. Joseph's College of Engineering, specializing in Electrical & Electronics Engineering, hosted a technical event on FEBRUARY 12 2026. This exclusive online event started at 6:00 pm to 7:00 pm, via Google Meet with all the members of our club and society. **OUTCOME** • Understanding real-world applications of AR, VR, and MR across industries**.** • Enhancing learning experiences through immersive and interactive technology.

14.	 **Alumni Interaction** ***PIC: EVENT PHOTO***	An Alumni Talk on “AI and ML for Electrical Engineers” was delivered by our distinguished alumnus T.N.Velayudham (Batch: 2011-2015), Associate Consultant, Observability Track,HCL Tech. (currently pursuing MS degree in Woolf University, Malta, Europe specialization in Data science and Machine Learning) on 5th February 2026 for third-year EEE students. The speaker shared practical insights on Artificial Intelligence, Machine Learning, and their real-world applications in the electrical engineering field. The session enabled students of St. Joseph’s College of Engineering to gain knowledge on emerging technologies and explore future career opportunities in AI-based industries.

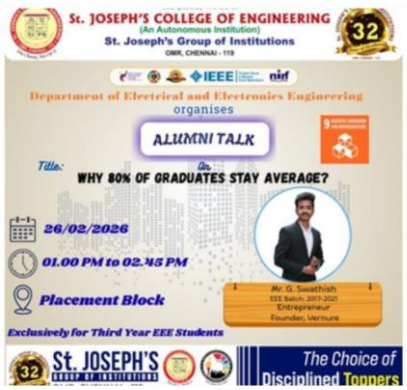
15.	 **Alumni InteractioN***PIC: EVENT PHOTO*	An Alumni Talk on “Trends and Opportunities in Robotics and Automation” was delivered by G. Kaushik (Batch: 2016 - 2020) Industrial Automation and Robotic Engineer, ARI Automotive Robotic India Pvt Ltd.,Porur, Chennai, India on 12th February 2026 for second-year students. The speaker shared insights on current advancements in robotics, automation technologies, and industry expectations for aspiring engineers.The session helped the students to understand emerging career opportunities and the skills required to succeed in the automation sector.

16.	 **Alumni Interaction**	A Career Guidance Session on “Master the Fundamentals of C Programming” was delivered by our alumnus Shamrutha J A, (Batch: 2021 - 2025) Associate Technical Consultant at WNS Global Services Pvt. Ltd., on 17th February 2026. The session focused on strengthening core programming concepts and emphasized their importance in technical interviews and industry applications.

17.	**Alumni**  **Interaction** ***PIC: EVENT POSTER***	A preparatory session on "Bridging Academia and Industry: Soliton Technologies Recruitment" was delivered by our alumnus Mr.Abishlal N S, (Batch: 2019 - 2023) Senior Project Engineer at Soliton Technologies, on 18th February 2026. The speaker shared insights on recruitment processes, required technical competencies, and industry expectations for aspiring engineers.

18.		An Alumni Career Empowerment Program on “Core Over Code” was delivered by Mr.Kathir D, Graduate Engineer Trainee at Renault Nissan Automotive India Pvt. Ltd., on 20th February 2026 for first year students. The session provided insights on core engineering career opportunities, higher education pathways, and industry expectations.

19.	**Alumni**  **Interaction** ***PIC: EVENT POSTER***	A motivational talk on "Insight and Opportunities through GATE Exam" was delivered by Ms.Jayasuriya TJ, (Batch: 2015 - 2019) Assistant Manager at REDL Delta Electronics, on 21st February 2026. The speaker highlighted the importance of the GATE examination for higher studies, career advancement, and opportunities in core engineering sectors. The session motivated students to prepare effectively for competitive exams and explore diverse pathways in higher education and professional growth.

20.	**Alumni Interaction**  ***PIC: EVENT POSTER***	An Alumni Talk on "Why 80% of Graduates Stay Average?" was delivered by G. Swathish, Founder of Venure, on 26th February 2026. The speaker shared insights on personal growth, skill development, and the mindset required to excel beyond average performance. The session inspired students to enhance their competencies, set clear career goals, and strive for excellence in their professional journey.	4
21.	**Faculty Recognition**	1. Dr Jayarama Pradeep, Professor and Head has acted as reviewer for Iranian Journal of Science and Technology and in International Conference on Emerging Challenges and Research Frontiers in Digital Transformation organized by Vikrant University, Gwalior. 2. Dr.T.D.Sudhakar, Associate professor presided as chief guest and inaugurated the BVM science expo 2026 at Bharatha vidyalaya mat.hr.sec.school, Tiruporur, on 4th February 2026. 3. Dr.N.Chidambararaj and Mr.R.Sreekanth fot selected for AICTE sponsored QIP-PG certification program on Machine learning and cyber physical systems @IIIT Tirchy.	5

22.	**Faculty Publications**	1. Dr V Krishnakumar, Associate Professor has published a paper titled "Otsu And Kapur Entropy Based Optimal Multilevel Image Thresholding Using Jaya and Stochastic Fractal Search Algorithms For Enhanced Image Segmentation" in journal "**Archives for Technical Sciences**" 2. Dr.M.Ramesh Babu published a patent titled "Developing an Bluetooth Car controller using Arduino UNO" 3. Dr.N.Chidambararaj published a patent "Smart Logistics Vehicle" 4. Dr.T.D.Sudhakar published patent titled "An IOT enabled cloud-based Machine learning framework for early breast cancer detection with automated risk assessment." 5. Ms.S.Gomathi published patent titled "Machine learning based system for predicting Academic performance using Social media addiction indicators in higher education."	5
23.	PLACEMENT DETAILS FOR THE MONTH OF FEBRUARY 2026	**2022-2026 Batch** No of students placed = 114 Students Total No of Offers = 167 Offers Total No of Students (UG) = 171 Total No of Students Sports Causals (UG) = 01 Total No of Eligible Students (UG) = 141 (All Clear) % of students Placed (UG) = 114/171 = 66.67% No of students having single offers = 70 No of students having Double offers = 37 No of students having Triple offers = 5 No of students having 4 offers =2	**4**

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DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks
4	**FDP/Workshop/Conference**	***Invited Talk*** 1. Dr. K. Dhanaraj had delivered an invited talk at the "International Conference on Advanced Nanomaterials and their applications" held on 21-02-26, conducted by "Thirukoilur College of Arts and Science, Thirukoilur".
9	**Awards/Prize won by students / Staff**	***Staff*** 1. Dr. S. Suresh, Dr. N.R. Rajagopalan and Dr. G. Sasiskumar had received NPTEL Discipline Star certificates from IIT Madras – NPTEL Chapter, 01.02.2026. 2. Dr. P. Saravanan and Dr. P. Krishnan had received IGEN energethon awards, from "The Institution of Green Engineers" on 03.02.2026. 3. Dr. S. Rama had received "Best Teacher Award" from "Skyline Global Publishers" on 16.02.2026. ***Students*** 1. Mr. A. Maharishi, Mr. J. Lawrence of I ADS, had secured "First prize, with a cash award of Rs. 50,000" in "Codethaon 2.0- Hackathon event" conducted by "Sri Eshwar College of Engineering, Coimbatore" held from 04.02.2026 to 05.02.2026. 2. Mr. P. Sharad of I Cyber Security had secured "Second prize" in "Technical symposoium – Glitched event" conducted by "Chennai Institute of Technology,

		Chennai" held on 09.02.2026. 3. Ms. B. Gunaselvi of I AML, had secured "Second prize" in "Technical symposoium - Quantix '26 – Cinemosaic event" conducted by "Agni College of Technology, Chennai" held on 14.02.2026. 4. Ms. K.R. Sai Pooja, Ms. S. Vishnu Priya of I EEE, had secured "First prize" in "Technical symposoium - Quantix '26 – Pulse IQ event" conducted by "Agni College of Technology, Chennai" held on 14.02.2026. 5. Mr. S. Thanneermalai, Mr. S. Sai Sushi of I EEE, had secured "First prize" in "Technical symposoium - Quantix '26 – Rapid Hardware event" conducted by "Agni College of Technology, Chennai" held on 14.02.2026. 6. Mr. Viswath Manikandan, Mr. Trishith Arjun, Mr. Sushanth Muralikrishnan of I Cyber Security, had secured "First prize, with Cash prize of Rs. 2000" in "Technical symposoium - Techblaze '26 – Crossword event" conducted by "Hindustan Institute of Technology & Science, Chennai" held from 27.02.26 to 28.02.26. 7. Mr. Maharishi A of I ADS, had secured "Second prize" in "Technical symposoium - Techblaze '26 – Crossword event" conducted by "Hindustan Institute of Technology & Science, Chennai" held from 27.02.26 to 28.02.26. 8. Ms. Akshaya Sri Nimmagadda, Ms. Renee Sharon of I Cyber Security, had secured "Second Prize" in "Technical symposoium - Virtuza 2K26 – Cryptic Hunt event" conducted by "Thangavelu Engineering College, Chennai" held on 28.02.26. 9. Ms. Angeline Marry, Ms. Sherine David of I Cyber Security, had secured "Thrid

		Prize" in "Technical symposoium - Virtuza 2K26 – Bug Hunters event" conducted by "Thangavelu Engineering College, Chennai" held on 28.02.26.
11	**Publications(only published) details**	***Journal Publications:*** 1. Dr. P. Saravanan published a research article titled "Engineered ZSM-5 Zeolite Composites for Advanced Water Purification: Recent Progress and Future Perspectives" in the Journal "Journal of Water Process Engineering". Doi: https://doi.org/10.1016/j.jwpe.2026.109726 2. Dr. P. Saravanan published a research article titled "Z Scheme-Inspired Lanthanide-Infused WO_3/g-C_3N_4 Photocatalyst for Rapid Sunlight Degradation of Fluoroquinolone Antibiotics" in the journal "Topics in Catalysis" Doi: https://doi.org/10.1007/s11244-026-02270-9 3. Dr. P. Saravanan published a research article titled "Nanogeochemical photocatalyssis for mitigating Antibiotic Pollution for Visible-Light degradation of Moxifloxacin via Rare-Earth-Integrated Mxene/g-C3N4 Heterostructures" in the journal "Environmental Geochemistry and Health" . Doi: 10.1007/s10653-026-03067-1 4. Dr. P. Saravanan published a research article titled "Impact of Thermal Treatment on Bandgap and Morphological Properties of α-Fe_2O_3 Nanoparticles for Photocatalysis" in the journal "Topics in Catalysis" Doi: https://doi.org/10.1007/s11244-025-02263-0 5. Dr. P. Saravanan published a research article titled "From Nature to Nanostructures: Advances in Green and Bio-Inspired Catalysts for Renewable Energy and Pollution Mitigation" in the journal "Ionics"

		Doi: 10.1007/s11581-026-07023-y 6. Dr. P. Saravanan published a research article titled “Innovative Routes for Hydrogen Production from Waste Plastics: A Comprehensive Review of Thermochemical, Photocatalytic, and Electrocatalytic Technologies” in the journal “Green Chemistry” Doi: 10.1039/D5GC04989J 7. Dr. S. Suresh published a research article titled “Enhanced Electrochemical Performance of α-MnO_2 through Sr^{2+} & Cd^{2+} Co-doping for Advanced Energy Storage Applications ” in the journal “Advanced Composite Materials” Doi: 10.1080/09243046.2026.2624962 8. Dr. N.R. Rajagopalan published a research article titled “Biogenic Synthesis of Iron Oxide Nanoparticles Using Soymida febrifuga Bark Extract: Characterization, Antibacterial, and Antioxidant Evaluation” in the journal “Results in Chemistry” Doi: https://doi.org/10.1016/j.rechem.2026.103115 9. Dr. N. Punitha published a research article titled “Investigation of dynamic mechanical, fatigue, and creep behavior of squid fish–derived collagen and Alpinia galanga stalk fiber–reinforced vinyl resin composites” in the journal “Journal of Composite Materials” Doi: https://doi.org/10.1177/00219983261424435 10. Dr. P. Krishnan published a research article titled “(E)-2-[(2,4-Dihydroxybenzylidene)amino]-3-hydroxypyridine: Synthesis, Anti-microbial, Antioxidant Activity and Binding Interactions with SARS-CoV-2 ” in the journal “Rasayan Journal of Chemistry” Doi: http://doi.org/10.31788/RJC.2026.1919462

		Patents 1. Dr. P. Saravanan published a patent titled "Advanced Lipid Nanoparticle Platforms for mRNA-Based Vaccines and Therapeutics" - in the "Patent Office Journal 07/2026" – Application Number 202641010323, dt 13.02.26 2. Dr. A. Uma Devi published a patent titled "Polymer Nanocomposite-Based Ammonia Gas Sensor with AI Pattern Recognition" - in the "Patent Office Journal 08/2026" – Application Number 202541127999, dt 20.02.26. 3. Dr. S. Manikandan published a patent titled "Unsupervised Intrusion Detection Engine Using Sparse Autoencoders for Security Data" - in the "Patent Office Journal 08/2026" – Application Number 202641013587, dt 20.02.26. ***Reviewers:*** 1. Dr. N.R. Rajagopalan – American Journal of Applied and Industrial Chemistry 2. Dr. S.M. Prakash – Discover Chemistry 3. Dr. K. Dhanaraj – Ceramic International
13	**Other activities(if any)**	The Department of Science has conducted the following activities. 1. Alumni Talk - Ms. Shevanie Shupreeya - (CSE - Batch 2020-2024) Topic – From Campus to Corporate – My Journey – on 16.02.2026 2. Alumni Talk – Mr. D. Kathir - (EEE - Batch 2021-2025) Topic – Core over code – on 20.02.2026 3. Music & Instruments club activities – on 24.02.2026 4. Science club activities – 26.02.2026

DEPARTMENT OF MATHEMATICS AND ENGLISH

<table>
<tr><th>Events</th><th>Remarks</th></tr>
<tr><td colspan="2">FDP/Workshop/Conference</td></tr>
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<tr><th>S.No</th><th>Staff Name</th><th>NPTEL Course Name</th><th>Organized by</th><th>Duration</th></tr>
<tr><td>1</td><td>Dr.G.Venkat Narayanan</td><td rowspan="3">Accreditation and Outcome Based Learning</td><td rowspan="3">IIT Kharagpur</td><td rowspan="3">July – Oct 2025</td></tr>
<tr><td>2</td><td>Dr. P. Agilan</td></tr>
<tr><td>3.</td><td>Dr. S. Aruna</td></tr>
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<tr><td>Awards/Prize won by staff</td><td>1. Joycelyn S, Manasha G, and Karthikeyan C K from the Department of Information Technology (First Year) secured the 3rd Prize in the Paper Presentation event at the Talos 5.0 Symposium, conducted at CIT College on 04- 02-2026. Their paper titled “Early Prediction of Student Dropout Using Machine Learning for Proactive Academic Intervention” received a cash prize of Rs. 1000.
2. Mohit Khanna, a first-year student from the Department of Information Technology, secured 2nd place in the Paper Presentation event at Cyberfest 26, held at KCG College on February 26, 2026. His paper, "Life Threat Prediction using AI," earned him a cash prize of ₹1,000
3. G. Gopika, First year Information Technology, secured the IIIrd position in the Web Development Symposium event organized by SRM Valliammai Engineering College on 27.02.2026. She also received a cash prize of Rs. 1,000.</td></tr>
<tr><td>Publications(only published) details</td><td>1. S. Prabhu, T. Jenifer Janany, M. Arulperumjothi, I.G. Yero, Edge metric basis and its fault tolerance over certain interconnection networks, Journal of Parallel and Distributed Computing, Volume 204, 2025,105141,https://doi.org/10.1016/j.jpdc.2025.105141.

2. Alhazmi, Muflih, Gangatharan Venkat Narayanan, Perumal Chellamani, and Shreefa O. Hilali. 2025. "Exploring Symmetry Structures in Integrity-Based Vulnerability Analysis Using Bipolar Fuzzy Graph Theory" Symmetry 17, no. 9: 1552. https://doi.org/10.3390/sym17091552, SCIE</td></tr>
</table>

	3. Sridhar, A., Kudiyarasudevi, C., **Venkat Narayanan, G**. et al. Breast Cancer Detection Using a Graph-Steerable Network and Bio- Inspired Optimization. Biomedical Materials & Devices (2025). https://doi.org/10.1007/s44174-025-00500-4 (SCOPUS)
Funded Projects	
Other activities	Department of Mathematics & English organized an Alumni Talk titled "Heavy Equipment Maintenance and Industry 4.0: Insights from Caterpillar" exclusively for First Year Mechanical and Mechatronics students on 13 February 2026 at the Library AV Hall (08.00–09.30 am). The session was delivered by Mr. Merage Fernando SVA, Service Information Developer and alumnus (Batch 2017–2021, Mechanical Engineering). He shared insights on industry practices, heavy equipment maintenance, and career opportunities related to Industry 4.0.Dr.