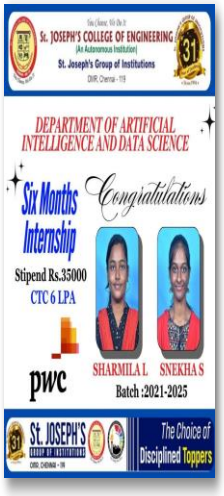
JANUARY 2025

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

S.No.	Title of the Events and Photographs	Details of the Event
1.	**INDUSTRIAL PROJECTS DONE BY STUDENTS/ / INTERNSHIP WITH STIPEND**	***Final year Students Ms Sharmila L and Ms Snekha S from the Department of Artificial Intelligence and Data Science have secured Six Months Paid Internship with stipend Rs.35,000 per month at PWC.***



Final year Student Mr Vishal G B from the Department of Artificial Intelligence and Data Science has secured Four Months Paid Internship with stipend Rs 15,000 per month at BLUEPOND.

Final year Student Ms Diviya Sri S from the Department of Artificial Intelligence and Data Science had a chance to meet Dr. S Somnath – The Chairman of ISRO after the successful launch of SPADEX Mission.

2.	 **PUBLICATIONS(ONLY PUBLISHED) DETAILS**	***Dr. R Pugalenthi, Head and Professor from the Department of Artificial Intelligence and Data Science has successfully published a paper titled "A Novel Approach for Lung Cancer Segmentation and Classification using MSF- Customized ResNet152" in the Journal "IETE Journal of Research" and indexed in WoS.***

		Dr. R Pugalenthi, Head and Professor from the Department of Artificial Intelligence and Data Science has successfully published a paper titled "An Improved Cyber-Attack Detection and Classification Model for the Internet of Things Systems using Fine – Tuned Deep Learning Model" in "International Journal of Sensor Networks". ***Ms. V. Sathya, Assistant Professor from the Department of Artificial Intelligence and Data Science has successfully published a paper titled "IoT enabled smart healthcare system for COVID-19 classification using optimized robust spatiotemporal graph Convolutional networks" in Q1 Journal with an impact factor of 4.9 and indexed in WoS.***
3.	**FUNDED PROJECTS**	-
4.	**STAFF CONFERENCE PRESENTATION /PATENT PUBLISHED/STAFF NPTEL ONLINE CERTIFICATION/STAFF ACHIEVEMENTS**	

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/12/2024

(21) Application No.202441096097 A

(43) Publication Date : 13/12/2024

(54) Title of the invention : DYNAMIC TRAFFIC CONTROL METHODOLOGY WITH IOT AND MACHINE LEARNING INTEGRATION

(51) International classification :G08G0001010000, G06N0020000000, H04L0067120000, G08G0001080000, G06Q0050260000

(86) International Application No :NA
Filing Date :NA

(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

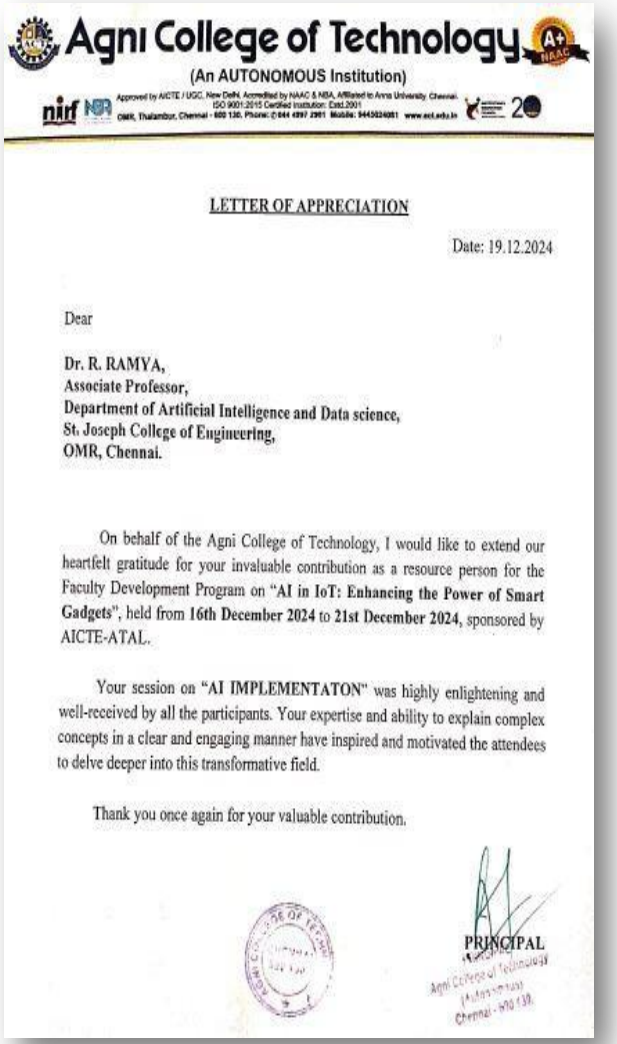
(71)**Name of Applicant :**
1)Shaziya Banu S
Address of Applicant :JNNCE, Navule, Shimoga, Karnataka,577204 ---------- ----------
2)Dr. Ram murat singh
3)Ramprashath R
4)S. Ananthi
5)Yellanki Deepti
6)Dr. Amandeep Sharma
7)Dr. Sachin Kumar
8)Dr. Rohit Kumar
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Shaziya Banu S
Address of Applicant :JNNCE, Navule, Shimoga, Karnataka,577204 ---------- ---------- ------
2)Dr. Ram murat singh
Address of Applicant :Woxsen University, Kamkole, Sadasivpet, Sangareddy district, Hyderabad, India, Telangana. 502345 ---------- ----------
3)Ramprashath R
Address of Applicant :Karpagam College of Engineering, School of Computer Applications, Myleripalayam Village, Othakkal Mandapam Post, Coimbatore - 641032, Tamilnadu, India ---------- ----------
4)S. Ananthi
Address of Applicant :Assistant Professor Artificial intelligence and data science St.Joseph's college of engineering Chennai-119 ---------- ----------
5)Yellanki Deepti
Address of Applicant :House no- 3, Yellanki Sri Nivasam, Bank Colony, Jamshedpur, Jharkhand 831002, India ---------- ----------
6)Dr. Amandeep Sharma
Address of Applicant :Assistant Professor Dept. Electrical and Electronics and Communication Engineering Rayat Bahra University, Mohali, Haryana- 134112 --- ---------- ----------
7)Dr. Sachin Kumar
Address of Applicant :Assistant professor, Chandigarh University, Mohali-140413, Punjab ---------- ----------
8)Dr. Rohit Kumar
Address of Applicant :Assistant professor Chandigarh University, Mohali-140413, Punjab ---------- ----------

(57) Abstract :
Dynamic Traffic Control Methodology (DTCM) leveraging the integration of Internet of Things (IoT) and Machine Learning (ML) offers a transformative approach to managing urban traffic systems. This methodology utilizes a network of IoT devices such as sensors, cameras, and connected vehicles to collect real-time data on traffic flow, vehicle speeds, and environmental conditions. This data is transmitted to cloud or edge computing platforms where it undergoes preprocessing, including cleaning and normalization, before being analyzed using ML algorithms. Machine learning models detect patterns, predict congestion, and adjust traffic signals through reinforcement learning, optimizing traffic flow and reducing congestion. The system also enables the proactive identification of incidents such as accidents, rerouting traffic and alerting emergency services to minimize disruption. The adaptive nature of DTCM allows for seamless signal adjustments, reducing travel times, improving road safety, and lowering fuel consumption, thus contributing to a reduction in emissions and promoting sustainability. Furthermore, the system prioritizes emergency vehicles, ensures optimal lane management, and facilitates a connected transportation network within smart city ecosystems. With continuous feedback loops, the system evolves through real-time data updates, learning from new patterns and user interactions to enhance decision-making. Overall, DTCM with IoT and ML integration fosters smarter, more efficient, and safer urban transportation, setting the foundation for future innovations in intelligent mobility and sustainable city planning.

No. of Pages : 19 No. of Claims : 8

Mrs. S.ANANTHI**, Assistant Professor from the Department of Artificial Intelligence and Data Science has successfully **published** a patent on title **"Dynamic Traffic Control Methodology With IOT and Machine Learning Integration"

		***Mrs. Deepa**, Assistant Professor from the Department of Artificial Intelligence and Data Science has successfully published a patent on title "Smart Robotic Arm with Machine Learning for Adaptive Construction and Structural Assembly Task* ***Dr. Ramya R**, Associate Professor from the Department of Artificial Intelligence and Data Science has been invited as the Resource Person for the FDP on "AI in IoT: Enhancing the Power of Smart Gadgets", held from 16th December to 21st December 2024, Sponsored by AICTE - ATAL.* ***Dr. Ramya R**, Associate Professor from the Department of Artificial Intelligence and Data Science has presented a paper entitled "Vehicle Prediction for BUS Identification Output from our Route Testing Real Time Algorithm" in Fifth International Conference on Sustainable Communication Networks and Application ICSCNA 2024.*



Agni College of Technology

(An AUTONOMOUS Institution)

Approved by AICTE / UGC, New Delhi. Accredited by NAAC & NBA, Affiliated to Anna University, Chennai.
ISO 9001:2015 Certified Institution. Estd.2001
OMR, Thalambur, Chennai - 600 130. Phone: 044 4997 2001 Mobile: 9443024081 www.act.edu.in

LETTER OF APPRECIATION

Date: 19.12.2024

Dear

Dr. R. RAMYA,
Associate Professor,
Department of Artificial Intelligence and Data science,
St. Joseph College of Engineering,
OMR, Chennai.

On behalf of the Agni College of Technology, I would like to extend our heartfelt gratitude for your invaluable contribution as a resource person for the Faculty Development Program on "**AI in IoT: Enhancing the Power of Smart Gadgets**", held from **16th December 2024** to **21st December 2024**, sponsored by AICTE-ATAL.

Your session on "**AI IMPLEMENTATON**" was highly enlightening and well-received by all the participants. Your expertise and ability to explain complex concepts in a clear and engaging manner have inspired and motivated the attendees to delve deeper into this transformative field.

Thank you once again for your valuable contribution.

PRINCIPAL

Agni College of Technology
Thalambur
Chennai - 600 130.

***Ms. Siva Shankari B**, Assistant Professor from the Department of Artificial Intelligence and Data Science has presented the research paper entitled " **Detection of Autism Spectrum Disorder using Deep Learning Model**" in 4th International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems(ICSES 2024).*

XPLORE COMPLIANT ISBN
979-8-3315-3001-3

Fifth International Conference on Sustainable Communication Networks and Application
ICSCNA 2024

Organised by

Bharath Niketan Engineering College, India

Date: December 11-13, 2024

Certificate of Presentation

This is to certify that

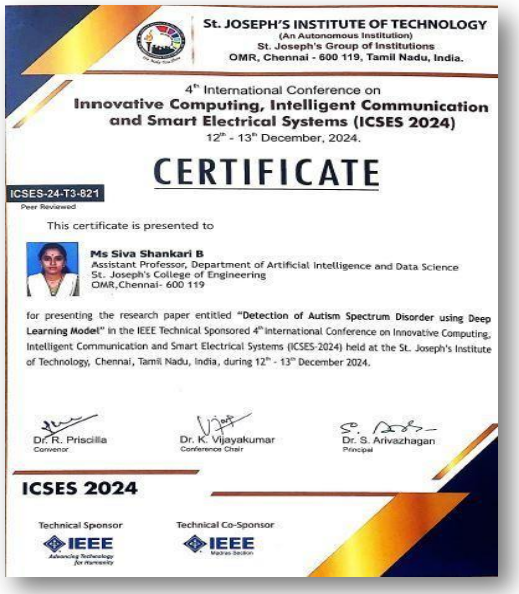
R Ramya

has presented a paper entitled

Vehicle Prediction for BUS Identification Output from our Route Testing Real Time Algorithm

in the Three-day International Conference on Sustainable Communication Networks and Application held during December 11-13, 2024.

Session Chair	*Conference Chair*	*Principal*
	Dr. K. Pounraj	**Dr. P. V. Arul Kumar**



St. JOSEPH'S INSTITUTE OF TECHNOLOGY
(An Autonomous Institution)
St. Joseph's Group of Institutions
OMR, Chennai - 600 119, Tamil Nadu, India.

4th International Conference on
Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES 2024)
12th - 13th December, 2024.

CERTIFICATE

ICSES-24-T3-821
Peer Reviewed

This certificate is presented to

Ms Siva Shankari B
Assistant Professor, Department of Artificial Intelligence and Data Science
St. Joseph's College of Engineering
OMR,Chennai- 600 119

for presenting the research paper entitled **"Detection of Autism Spectrum Disorder using Deep Learning Model"** in the IEEE Technical Sponsored 4th international Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES-2024) held at the St. Joseph's Institute of Technology, Chennai, Tamil Nadu, India, during 12th - 13th December 2024.

Dr. R. Priscilla
Convenor

Dr. K. Vijayakumar
Conference Chair

Dr. S. Arivazhagan
Principal

ICSES 2024

Technical Sponsor
IEEE
Advancing Technology for Humanity

Technical Co-Sponsor
IEEE
Madras Section

DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	**COLLABARATIVE QUALITY INITIATIVES WITH OTHER INSTITUTIONS**  ***copy of proof***	**Dr. G. Baskar has been to Karpaga Vinayaga College of Engineering and Technology as a resource person for the inauguration of BRSI - Karpaga Vinayaga Unit.** **Dr. G. Baskar has delivered a technical talk on "Marine Microalgae Biorefinery for Biofuels production" in the 4 days VGST-FDP on Advances and Recent Trends in Environmental and Energy Application of Nanomaterials** Received certificate of recognition and appreciation for Peer Reviewer 2024 from Journal of Inorganic and Organometallic Polymers and Materials, Springer Nature Publications

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MANIPAL - 576104, KARNATAKA, INDIA

DEPARTMENT OF CHEMICAL ENGINEERING

INSTITUTION'S INNOVATION COUNCIL

DEPARTMENT OF ELECTRONICS, INFORMATION TECHNOLOGY, BIOTECHNOLOGY AND SCIENCE & TECHNOLOGY
KARNATAKA SCIENCE AND TECHNOLOGY PROMOTION SOCIETY
Vision Group on Science and Technology (VGST)
5th Floor, 5th Cots, M.S.Building, Dr. B.R.Ambedkar Veedhi, Bengaluru-560001
Ph: 080-22032013 Email: visiongroup.st@gmail.com

KSTePS

4-Day VGST/KSTePS Sponsored Faculty Development Programme

on

Advances and Recent Trends in Environmental and Energy Applications of Nanomaterials

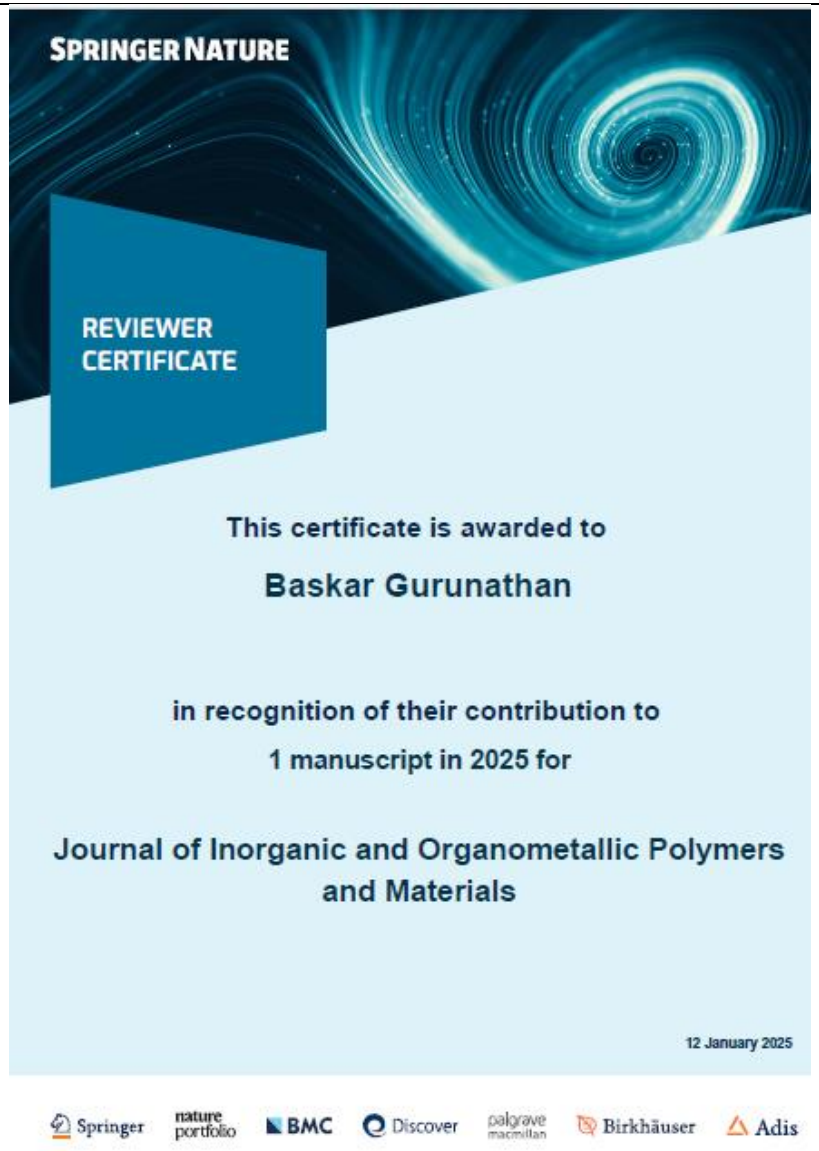
04 – 07 December 2024

Certificate of Appreciation for Session Speaker/Technical Talk

This is to certify that Dr./Prof. G. Baskar has delivered a technical talk / hands on session on the topic titled," Marine Macroalgal Biorefinery for Biofuels Production "in the 4-Day VGST-FDP on "Advances and Recent Trends in Environmental and Energy Applications of Nanomaterials" conducted by the Department of Chemical Engineering, Manipal Institute of Technology, Manipal, in coordination with VGST, Department of Electronics, IT, BT, S&T, KSTePS, GoK - from 04 - 07 December 2024.

Dr. S. Raja, Convener | Dr. V. Ramesh, Co-Convener | Dr. M. Srinivas Kini, Organizing Chairman | Cdr. Dr. Anil Rana, Director, MIT

a copy of certificate



Dr. G. Baskar – a copy of proof

2.	**BIOTECH CLUB ACTIVITY**	**-**
3.	**FDP/WORKSHOP/CONFERENCE/SKILL DEVELOPMENT**  BIODEAVOUR CERTIFICATE OF PARTICIPATION This is to certify hereby bestowed upon We Proudly Presented to Ms. Anli Dino A from St.Joseph's College of Engineering participated in Master Class Cum Workshop on Quality Control in Food &Pharma Industry which was organized and conducted by Biodeavour Research Lab on 13 January 2025. Biodeavour Research Lab wishes you all the best in your future endeavours. Er. S. Poojasri Founder & Director *Biodeavour Research Lab* **Ms. Anli Dino – a copy of proof**	**Ms. A. Anli Dino, has participated in workshop "Quality Control in Food and Pharma Industry" organized by Biodeavour Research lab on 13th January**

4.	**CONFERENECE**  	**Department of Biotechnology organized 2nd International Conference on Frontiers in Industrial Biotechnology (ICFIBT-2025) on 27 - 28th January 2025**
5.	**COMPETITIONS ATTENDED BY STUDENTS**	**Ilakiya T participated in the Petri Dish Challenge conducted by IIT Madras and won cash award of Rs. 35000 (first prize) under the guidance of Dr. Justin Packia Jacob** **Bhavasri S, Krithika V and Mayuri Anand have**

won 2nd position in " Biogeneius Challenge" conducted by Shaastra, IIT Madras on 6th January under mentorship of Ms. S. Yuwvaranni

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<td>6.</td>
<td>PAPER PUBLICATIONS/ BOOK CHAPTERS

Article
ENERGY & ENVIRONMENT

Process optimization and kinetics of biodiesel production from microalgal oil using potassium doped biochar heterogeneous catalyst

Energy & Environment
1–24
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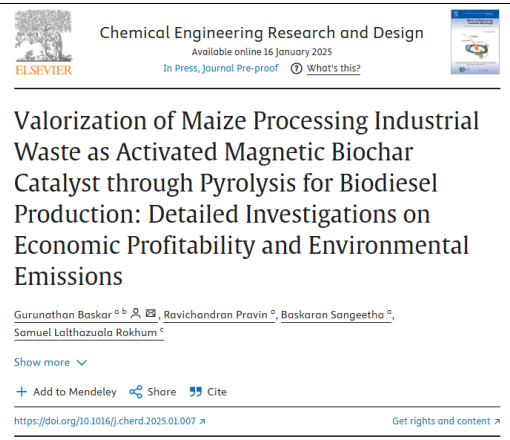
DOI: 10.1177/0958305X241300430
journals.sagepub.com/home/eae
Sage

T. Devi[1], Gurunathan Baskar[2] and Ravichandran Pravin[2]

Dr. G. Baskar – a copy of proof</td>
<td>Dr. G. Baskar published a paper title “Process Optimization and kinetics of Biodiesel Production from Microalgal Oil Using Potassium Doped Biochar heterogeneous Catalyst in Energy and Environment Journal

Dr. G. Baskar published a paper titled “Valorization of Maize Processing Industrial Waste as Activated Magnetic Biochar Catalyst through Pyrolysis for Biodiesel Production: Detailed Investigations on Economic Profitability and Environmental Emissions in Chemical Engineering Research and Design.

Dr. Chamundeeswari, has published 2 book chapters entitled “Nanotechnology in Gene Delivery” and “Contamination and Impact of Urban Effluents on the Antimicrobial Resistance of Microbes”</td>
</tr>
</table>



Chemical Engineering Research and Design

Available online 16 January 2025

In Press, Journal Pre-proof What's this?

Valorization of Maize Processing Industrial Waste as Activated Magnetic Biochar Catalyst through Pyrolysis for Biodiesel Production: Detailed Investigations on Economic Profitability and Environmental Emissions

Gurunathan Baskar [a b], Ravichandran Pravin [a], Baskaran Sangeetha [a], Samuel Lalthazuala Rokhum [c]

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https://doi.org/10.1016/j.cherd.2025.01.007 Get rights and content

Dr. G. Baskar – a copy of proof

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Dr.M. Chamundeeswari - a copy of proof

Dr. Chamundeeswari has published a research article titled **"Sustainable strategy of biowaste into graphene-based zinc oxide nanocomposite using green nanotechnology for topical applications"** in the journal of **Biotechnology and applied biochemistry**

Ms. A. Anli Dino, has published a patent entitled "Bioengineered Plant-Microbe Interaction for Sustainable Agriculture and Environmental Remediation"

Dr. M. Shree Rama, has published a patent entitled "Methods and Compositions for Enhancing Plant Stress Tolerance through Genetic Modifications"

Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

INTELLECTUAL PROPERTY INDIA

Application Details

APPLICATION NUMBER	202441105346
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	26/12/2024
APPLICANT NAME	1 . Dr. Rajani Narayan 2 . Dr. Aradhna Sagwal 3 . Dr. Kavita Khatana 4 . Dr. G. Rajendar 5 . Dr. K. Sowmya 6 . Dr. Pasikanti Damodar 7 . B. Rukmini Devi 8 . Mr. B. Sakthivel 9 . Ms. A. Anli Dino 10 . Dr. Belsam Jeba Ananth, M
TITLE OF INVENTION	BIOENGINEERED PLANT-MICROBE INTERACTIONS FOR SUSTAINABLE AGRICULTURE AND ENVIRONMENTAL REMEDIATION
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	patentipr23@gmail.com
ADDITIONAL E-MAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	24/01/2025

Application Status

Ms. Anli Dino – a copy of proof

FULL TEXT LINKS

WILEY Full Text Article

Biotechnol Appl Biochem. 2024 Dec 2. doi: 10.1002/bab.2702. Online ahead of print.

Sustainable strategy of biowaste into graphene–based zinc oxide nanocomposite using green nanotechnology for topical applications

Chamundeeswari M [1], Preethy Kr [2]

Affiliations
PMID: 39623884 DOI: 10.1002/bab.2702

Abstract

Metal-based nanoparticles have been extensively researched for their distinctive characteristics. Among them, zinc oxide nanoparticles have numerous applications in the field of biomedicine. The phytoextract of Ixora coccinea flowers was used in the synthesis of ZnO nanoparticles replacing the use of harmful reducing chemicals. In the current research, the carbonaceous material from biowaste of Setaria italica was used to synthesize graphene oxide (GO) by Improved Hummer's method. The synthesized GO was converted to reduced GO via green nanotechnology using phytoextract of Prosopis juliflora. The synthesis of reduced Graphene Oxide - Zinc Oxide Nanocomposite (rGO)-ZnO nanocomposite involves a simple, economical one-step magnetic stirring method. UV-visible spectroscopy was used to characterize the synthesized materials, with the maximal absorbance range for ZInc Oxide (ZnO) being 384 nm and for rGO-ZnO composite at 243 and 366 nm, respectively. The x-ray diffraction (XRD) revealed 2θ peaks for ZnO at 31.54°, 34.22°, and 36.08°. For reduced Graphene Oxide (rGO) in rGO-ZnO composite, the XRD revealed 2θ peaks at 21.25°, 21.56°, 23.14°, and for ZnO at 31.74°, 33.24°, 34.29°, 36.23°. The FT-IR demonstrated the vibrational modes of functional groups: -OH stretching, symmetric and antisymmetric $-CH_2$ stretching, C = C stretching, and C-O stretching. The elemental composition of samples has been analyzed using Energy Dispersive x-ray spectroscop (EDX), and the high percentage of zinc in the composite shows a good loading rate of ZnO on the rGO's surface. By morphological investigation, monolayer sheet structures of rGO loaded with clusters of ZnO are clearly demonstrated. Positive results from therapeutic assays and biocompatibility were found with reduced hemolysis and good anticoagulation abilities proved with statistical approach. Our research is distinctive because a realistic formulation of an rGO-ZnO skin care cream with enhanced therapeutic properties, such as effective stability, spreadability, and significant moisture retention, can be recommended.

Keywords: agro waste; biocompatible; green method; reduced graphene oxide; skin care cream.

PubMed Disclaimer

Dr. M. chamundeeswari – a copy of proof

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/11/2024

(21) Application No.202441086280 A

(43) Publication Date : 15/11/2024

(54) Title of the invention : METHODS AND COMPOSITIONS FOR ENHANCING PLANT STRESS TOLERANCE THROUGH GENETIC MODIFICATIONS

(51) International classification	:C12N0015820000, C12N0015113000, C12N0009220000, C07K0014415000, C12N0015100000
(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

(71)**Name of Applicant :**

1)Dr. R. Vinolya Kumari
Address of Applicant :Assistant Professor, Department of Botany, Silver Jubilee Government College, Cluster University, Kurnool, Pin: 518002, Andhra Pradesh, India. ---------- ----------

2)Dr. Lata Sharma

3)Dr. Alok Ranjan Sahu

4)Mrs. M Siddeshwari

5)Dr. Kavita Khatana

6)Dr. Muthaiah U

7)Dr. M. Shree Rama

8)Dr. R. Sudhakar

9)Dr. K. Murugan

10)Dr. Ravi Mishra

Name of Applicant : NA

Address of Applicant : NA

(72)**Name of Inventor :**

1)Dr. R. Vinolya Kumari
Address of Applicant :Assistant Professor, Department of Botany, Silver Jubilee Government College, Cluster University, Kurnool, Pin: 518002, Andhra Pradesh, India. ---------- ----------

2)Dr. Lata Sharma
Address of Applicant :Associate Professor, Department of Botany, Dr. C.V. Raman University, Kota, Bilaspur, Pin: 495001, Chhattisgarh, India. ---------- ----------

3)Dr. Alok Ranjan Sahu
Address of Applicant :Assignment Professor, Department of Botany, Vikash Degree College, Bargarh, Pin: 768040, Odisha, India. ---------- ----------

4)Mrs. M Siddeshwari
Address of Applicant :Assistant Professor, P.G Department of Botany, Vijayanagara Sri Krishnadevaraya University, Ballari, Pin: 583105, Karnataka, India. ---------- ----------

5)Dr. Kavita Khatana
Address of Applicant :Assistant Professor, G L Bajaj Institute of Technology and Management, Greater Noida, Gautam Budhha Nagar, Pin: 201306, Uttar Pradesh, India. ---------- ----------

6)Dr. Muthaiah U
Address of Applicant :Assistant Professor (SLGr), Amrita School of Computing, Amrita Vishwa Vidyapeetham, Vengal, Chennai Campus, Thiruvallur, Pin: 601103, Tamil Nadu, India. ---------- ----------

7)Dr. M. Shree Rama
Address of Applicant :Assistant Professor, St. Joseph's College of Engineering, OMR, Chennai, Pin: 600119, Tamil Nadu, India. ---------- ----------

8)Dr. R. Sudhakar
Address of Applicant :Associate Professor, Department of Computer Science & Engineering, Madanapalle Institute of Technology and Sciences, Kadiri Road Angallu, Madanapalle, Pin: 517325, Andhra Pradesh, India. ---------- ----------

9)Dr. K. Murugan
Address of Applicant :Associate Professor, KPR Institute of Engineering and Technology, Arasur, Coimbatore, Pin: 641407, Tamil Nadu, India. ---------- ----------

10)Dr. Ravi Mishra
Address of Applicant :Director and Scientist, Namo Namah Shiv Pvt Ltd and Scientist at Yellow Eyes Biotech, Juggaur Near Anandi Water Park, Chinhat, Lucknow-226028, Yellow Eyes Biotech Address: Khasra No-288/286, Sarai Damu, BKT, Itunja, Pin: 226203, Uttar Pradesh, India. ---------- ----------

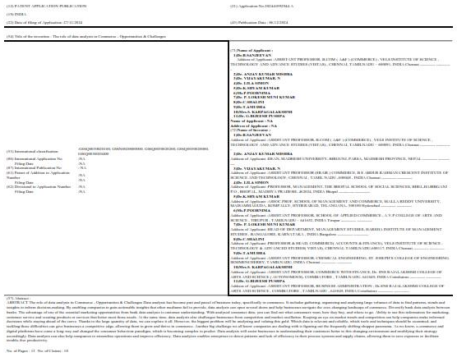
(57) Abstract :

The present invention provides methods and compositions for enhancing plant tolerance to environmental stresses, such as drought, salinity, extreme temperatures, and oxidative damage, through targeted genetic modifications. This invention involves identifying and modifying stress-responsive genes in plants using advanced gene-editing tools like CRISPR-Cas, RNA interference (RNAi), or traditional transformation techniques. Additionally, it includes novel recombinant DNA compositions, vectors, and stress-inducible promoters to enable precise control of gene expression in response to environmental triggers. By creating transgenic plants with improved resilience to multiple stress factors, this invention supports sustainable agriculture by enhancing crop productivity and stability in challenging growing conditions.

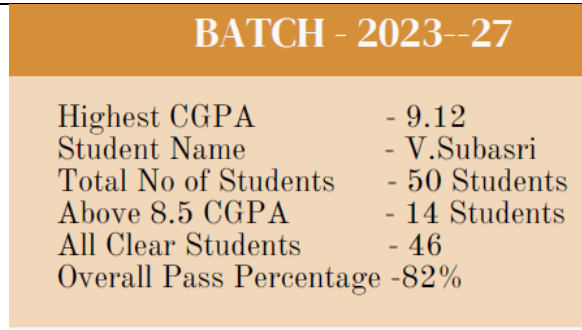
Dr. M. Shree Rama – a copy of proof

DEPARTMENT OF CHEMICAL ENGINEERING

S.No.	Title of the Events and Photographs	Details of the Event
1.	**FDP/WORKSHOP/CONFERENCE**	ChemicalEngineeringDr. Venkatesh N, Head of the Department of Chemical Engineering at St. Joseph's College of Engineering, has successfully completed the AICTE Training and Learning(ATAL) Academy Faculty Development Program on "Recent Advances in EnergyHarvesting and Sustainable Developments. The program, organized by the All India Council for Technical Education (AICTE), tookplace at The National Institute of Engineering from January 6 to January 11, 2025. Itfocused on the latest advancements in sustainable energy solutions and energy harvestingtechnologies.  ATAL/2024/173562833 ALL INDIA COUNCIL FOR TECHNICAL EDUCATION Nelson Mandela Marg, Vasant Kunj, New Delhi -110070 AICTE Training and Learning (ATAL) Academy Certificate
2.	**PLACEMENT**	Mr. Subash, a final-year student (Batch 2021-25) has achieved a significant milestone bysecuring a placement at SPIC (Southern PetrochemicalIndustries Corporation). He is the 8th candidate from his batch to be selected by the prestigious company, marking animportant achievement for both him and the department. Santosh K J, a III-year student has secured a paid summer internship at IIT Madras with a stipend of ₹ 15,000 for four weeks. This opportunity was awarded to him for being a topper in an NPTEL course, showcasing his academic excellence.

3.	**PUBLICATIONS(ONLY PUBLISHED) DETAILS**	Dr. T. Amudha has published a patent on the topic of ": The role of data analysis in Commerce - Opportunities & Challenges 
4.	**FUNDED PROJECTS**	-
5.	**STAFF CONFERENCE PRESENTATION/EXPERT TALK**	Dr. S. Sujatha Honored for Expert Talk on Nanomaterials at Faculty Development ProgramNagapattinam, received a Certificate of Appreciation fordelivering an expert talk on "Nanomaterials in Mechanical Engineering" during an eight-dayVirtual Faculty Development Program (FDP).The FDP, titled "Material Innovation Shaping the Future," was organized by the Departmentof Mechanical Engineering at E.G.S. Pillay Engineering College, Nagapattinam, and tookplace from December 23, 2024, to January 3, 2025. The program aimed to provide facultymembers with valuable insights into the latest advancements in materials science andengineering.

		
6.	**INDUSTRIAL TRAINING**	Dr. P. Renuka, Professor, Department ofChemical Engineering, St. Joseph's College ofEngineering, successfully completed anindustry training program at Nippo India PvtLtd, Tada. The training provided valuableexposure to industrial practices, advancedtechnologies, and real-world applications inchemical engineering. This initiative enhancesacademic-industry collaboration, enabling theintegration of practical insights into teachingand research.
7.	**STUDENT RESULT**	**BATCH - 2021-25** Highest CGPA - 9.35 Student Name - S.Samiha Total No of Students - 63 Students Above 8.5 CGPA - 19 Students All Clear Students - 52 Overall Pass Percentage - 82.5% **BATCH - 2022-26** Highest CGPA - 9.25 Student Name - D.Dynisha Total No of Students - 44 Students Above 8.5 CGPA - 15 Students All Clear Students - 37 Overall Pass Percentage -79.55%

		
8.	**Alumni Talk**	Mr.Senthil Kumar TK, Delivery Lead at NielsenIQ and a 2011-2015batch alumnus. He emphasized the importance of mastering engineering fundamentalsfor career success and shared insights on industry expectations, problem-solving, andcontinuous learning. Students actively participated in discussions on career prospectsand skill development. Such interactions continue to inspire students, bridging the gapbetween academics and industry. Mr. Praveenkumar V (Batch 2020-24), Graduate Engineer Trainee at iFluidsEngineering. Held in the Smart Classroom, the session provided students with valuableinsights into industry-relevant software tools, process simulation, and emerging trends inchemical engineering. Mr. Praveenkumar shared his professional experiences, bridging thegap between academic learning and inustrial expectations

		 
9.	**Career Guidance**	Career Guidance Program for first-year students and their parents. The initiative aimed to provide insights into career opportunities, academic planning, and industry expectations, while strengthening the collaboration between students, faculty, and parents.   

DEPARTMENT OF CIVIL ENGINEERING

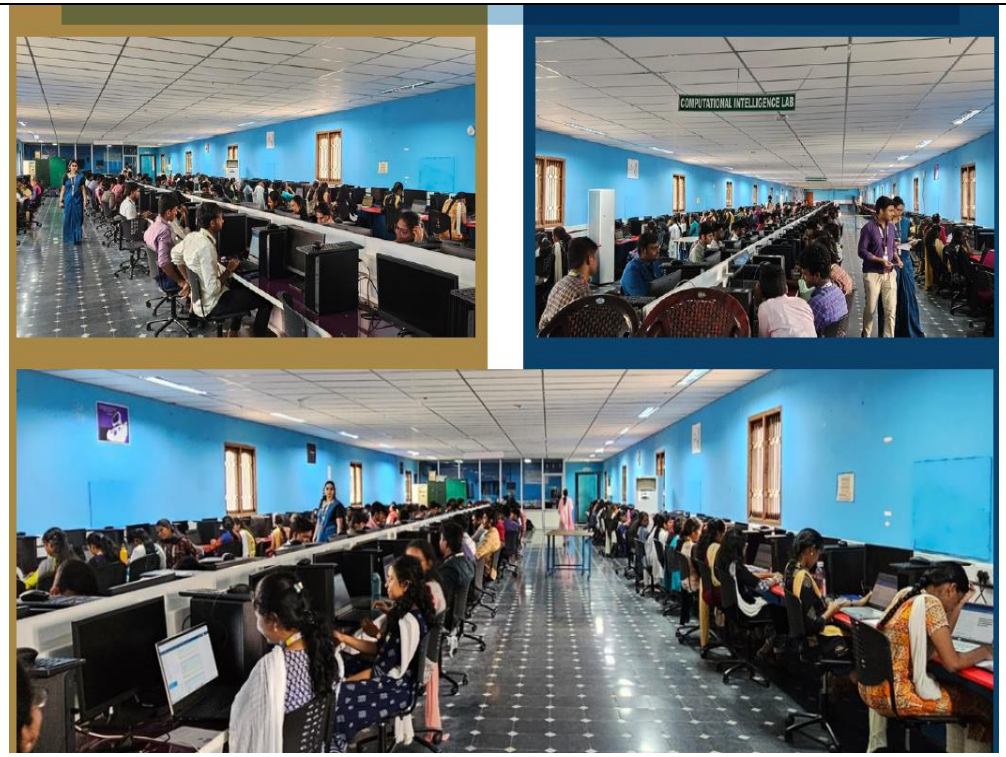
Sl. No.	Photographs Captured During Events (Briefs About the Photographs)	Corresponding remarks (Minimum 300 words) in regarding the status of activity execution stating
1.	**Publications (only published) details**	Dr.K.Vijai has published an Web of Science indexed paper titled as "Investigation on corrosion and flexural Behaviour of reinforced concrete using Marine sand" in Jurnal Teknologi,87:1(2025) 189–202
2.	**Other activities (if any)**	1.Ms.S.Banupriya has published the patent titled "AI-ENHANCED TOOLS FOR MANAGING TECHNOSTRESS AND PROMOTING TECHNO-EUSTRESS AMONG TEACHERS IN HIGHER EDUCATION INSTITUTIONS" on 23/01/2025 2.Ms.R.Ruthra has published the patent titled"A MACHINE LEARNING FRAMEWORK FOR ENHANCING TEACHER TRAINING TO ENGAGE STUDENTS IN CHALLENGING AND COMPLEX ISHIGHER EDUCATION" on 23/01/2025. 3.Mrs.S.Banupriya and Mrs.R.Ruthra acted as an Resource Person for an 9-week upskilling program organized by the Tamil Nadu Unmanned Aerial Vehicle Corporation (TNUAVC) under the Naan Mudhalvan initiative in Government Arts College.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	**INNOFEAST**	Date: 10-1-2025 Venue: Placement block - perwinkle Nature of Event: INNOFEAST Participants: II &III &IV Year STUDENTS Organized by: Department of CSE **Objective:** • This event is mainly conducted to expose the intra college students with their innovative ideas • Encourage students from diverse backgrounds and colleges to interact, exchange ideas, and form networks. • Organize competitions that motivate students to push their limits, promoting excellence and teamwork. • Offer recognition and prizes to the winners, motivating them to excel in their fields and take pride in their achievements. **Outcome:** • Students learn how to lead projects, manage events, and work in teams. • Students gain skills and knowledge that help them get ready for jobs or internships. • Students can get involved in research or creative problem-solving activities.
		

2	**ALUMINI TALK**	
	 	**Date : 10.1.2025** **Venue : Conference Hall** **Nature of Event : Alumni Talk** **Participants : Engineering III year Students** **Organized by : Department of CSE** **Objective:** • Alumni talks often aim to provide current students with valuable insights into various career paths, industries, and professional experiences. • Alumni may share their career journeys, lessons learned and advice for navigating the job market. • Alumni talks can facilitate networking opportunities between current students and alumni. Outcome: • Alumni talks create opportunities for attendees to connect with alumni who may serve as valuable mentors, advisors, or contacts in their desired field. • Building relationships with alumni can lead to internships, job opportunities, and professional connections that can benefit attendees throughout their careers.

3	**AMAZON VISIT**	
		**Date:** 3-1-2025 **Venue:** Bengaluru **Nature of Event:** Exploring Innovation at **Microsoft** Participant: III year Students Organized by: Department of CSE Objective: • To provide a platform for students to exchange ideas, knowledge, and experiences across a variety of academic and professional fields. • To promote learning through workshops, seminars, and keynote speeches by experts in different areas. • To encourage students to think creatively and develop innovative ideas or projects that can address real-world challenges. • To create a space for students to collaborate on problem-solving and entrepreneurial ideas that can lead to new initiatives or ventures. Outcome: • Students improve their ability to lead discussions, manage teams, and take on leadership roles during the event, which enhances their confidence and leadership abilities. • The summit encourages students to think critically about global and local issues, helping them approach problems from various angles.

4	**NIELIT - IOT : Bootcamp**	
		Date: 6-1-2025 to 10-1-2025 Venue: CSE Lab Nature of Event: NIELIT - IOT : Bootcamp Participant: III year Students Organized by: Department of CSE **Objective:** • It focus on hands-on projects and real-world scenarios. • Help participants gain the skills to shift into a new career or industry • Provide opportunities to connect with industry professionals and potential employers. • Prepare participants for employment through portfolio-building, mock interviews, and job search support. Outcome: • Participants develop hands-on, marketable skills that are immediately applicable in their chosen field. This could include coding, UX/UI design, data analysis, or marketing strategies, depending on the bootcamp focus. • Many bootcamps involve creating real-world projects that participants can showcase in a portfolio, which is a powerful tool for demonstrating their abilities to potential employers.

DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name of the Activity	Remarks
1	**ISHRAE:**  	• The ISHRAE SJCE Student Chapter, in collaboration with the ISHRAE Chennai Chapter, proudly hosted Refresh 2025, a National-Level Technical Symposium, on **9th January 2025** at St. Joseph's College of Engineering, Chennai. This event was a resounding success, bringing together over 200 participants from across Tamil Nadu for an enriching experience of technical competitions, insightful workshops, and knowledge sharing. • The presence and support of esteemed representatives from the **ISHRAE Chennai Chapter** were instrumental in the success of this event. • We are deeply honored to have had the guidance of these accomplished leaders: • **Mr. Elamurugan - Treasurer, Mr. Raja S - Immediate Past President , Mr. T. Goghulnath- Student Activities Chair, Mr. Mahesh Kumar - Digital Activities Chair, Mr. Manikandan- CWC Member.** • The event featured exciting technical sessions, including Chill-Xpert, Chill & Create, and Chill Speak, engaging participants in hands-on challenges and discussions. A highlight of the event was the workshop on "Automation in HVAC with the Power of

		IoT," led by industry experts **Mr. T. Goghulnath** and **Mr. A. Akash** from ZedBee Technologies, an IIT Madras-incubated company. Adding to the excitement, the audience was treated to an inspiring surprise guest lecture by **Ms. Sangeetha Kanagaraj**, a trailblazing entrepreneur, making the session both informative and motivational.
2	AICTE IDEA lab Workshop:  	• The Department of Mechanical Engineering, in collaboration with the **AICTE Idea Lab**, conducted a two-day workshop titled "Master Autodesk Fusion 360 and 3D Printing" on January 9-10, 2025, for **second-year Mechanical Engineering students**. • The workshop was conducted by Assistant Professors **Mr. N. Sathishkumar and Mr. M. Siva**, who shared insights from their "***AICTE QIP PG certification program on 3D printing at IIT Palakkad***".

3		Department of Mechanical Engineering **SAE H-BAJA 2025**, Team Aurelian Racing H-1.0 participated in a national level mega event in **NATRAX, Pithampur, Indore, Madhya Pradesh** from 5th January 2025 to 15th January 2025 organized by SAE INDIA. . they had driven 11 laps in final endurance race. Total 19 teams was selected from 30 teams shortlisted after design and validation.
5		• The Department of Mechanical Engineering at St. Joseph's College of Engineering, in collaboration with the Institution of Engineers (India), hosted the "**Manufacturing Mastery Quiz Contest**" on **January 29, 2025**. • Twenty-two second-year students competed in two rounds, testing their knowledge of manufacturing concepts like Industry 4.0, automation, and lean practices. After intense competition, **Kathirvel Raja L**. and **Justin I**. secured first place, with **Sathish S**. and **Vijay Kanagaraja S**. finishing second. • The event fostered innovation and skill development, empowering future industry leaders.

6		• Bootcamp **3D Printing Course** (5 days) for 44 Mechanical students have been successfully completed. • Students received Certificate from the NIELIT Chennai once submitting assignments & clearing the final test.
7	Alumni Talk: 	• Department of Mechanical Engineering, Organized a Alumni Talk on title Innovation Research Directions in **Mechanical Engineering for Future Oil and Gas Technologies** on 22/01/2025. **Mr.J. Navin Sales Michael**, Proud Alumni of batch 2019-2023, working in Saipem India Projects Private limited as Piping Design Engineer.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Events conducted:

The following events have been conducted during January2025 at College Level

1. NIELIT BOOTCAMP:IoT	**Report**
	NIELIT conducted a 40-hour blended (offline and online) bootcamp on IoT from January 6th to 10th, 2025, targeting 52 pre-final year students. The primary objective was to introduce students to the fundamentals of IoT, including IoT system architecture, hardware platforms (like Raspberry Pi), sensor interfacing, and communication protocols. The bootcamp aimed to provide hands-on experience and equip students with the practical knowledge necessary to work on real-world IoT applications and pursue careers in this burgeoning field. Upon successful completion, participants received a graded certificate that enhances their professional profiles.
1. B) NIELIT BOOTCAMP:Robotics	**Report**

	A 40-hour blended (offline and online) Robotic Process Automation (RPA) bootcamp was conducted from January 6th to 10th, 2025, targeting 53 pre-final year students. The program, organized by NIELIT, aimed to equip participants with the skills and knowledge necessary to understand, design, and implement RPA solutions. Upon completion, participants demonstrated a comprehensive understanding of RPA concepts and their applications. They gained proficiency in identifying and analyzing business processes suitable for automation, using leading RPA tools, and designing, developing, and deploying RPA bots. Hands-on projects and case studies provided practical experience, preparing them for a career in automation.
2. OPTICA STUDENT CHAPTER	**Report**

The OPTICA Student Chapter of St. Joseph's College of Engineering successfully organized an engaging outreach event at St. John's Matriculation Hr. Sec. School, New Perungalathur aimed at introducing advanced engineering concepts to students from classes 9 through 12. The event, held on 24th January 2025, focused on practical demonstrations and interactive projects to inspire and educate young minds about engineering and technology. The primary objective of the event was to provide students with hands-on learning experiences in the fields of Industry 4.0, IoT (Internet of Things), and AI (Artificial Intelligence). The OPTICA team, comprising 50 enthusiastic and dedicated members, brought 20 diverse engineering projects to showcase to the students. Each project was carefully designed to highlight fundamental engineering principles in a hands-on, interactive manner. These included real-world applications of engineering, enabling students to witness firsthand how theory translates into practice.

	
3. Virtual Workshop	**Report**

	St. Joseph's College of Engineering (Chennai), in association with IIT Kharagpur and supported by the Ministry of Education, successfully conducted a one-day virtual workshop on January 24, 2025, from 1:00 PM to 3:00 PM for students of Electronics and Communication Engineering (ECE). The workshop provided participants with hands-on experience using advanced virtual lab platforms developed by IIT Kharagpur, allowing them to conduct experiments remotely and explore concepts in a dynamic environment. Sessions focused on the impact of virtual labs on modern education, emphasizing their potential to enhance learning outcomes, improve accessibility to resources, and bridge geographical limitations for students. The collaboration with IIT Kharagpur ensured participants received high-quality instruction and insights into the latest advancements in virtual laboratory technology.

	
4. Workshop on Drone Technology	**Report**

The ED Cell and OPTICA, in association with Vaayusastra Aerospace Ltd, organized a 2-day workshop on Drone Technology for second-year ECE students on 27th and 28th January 2025. The workshop provided hands-on training and theoretical insights into drone design, assembly, and programming. Students actively engaged in practical sessions, gaining expertise in flight mechanics and control systems. Industry experts from Vaayusastra shared their knowledge, inspiring students to explore the rapidly evolving field of drone technology. The event concluded with a demonstration of drones developed during the workshop, receiving positive feedback from participants.

5. Workshop on Industrial Automation	**Report**
	The Entrepreneurship Development (ED) Cell and Optica, in collaboration with Pumo Technovations, organized a one-day workshop on Industrial Automation, 7th January 2025. The event was held exclusively for the II-year ECE students, aiming to enhance their understanding of automation technologies in modern industries. Mr. E. Nikilan, Automation Engineer at Pumo Technovations, Chennai served as the resource person for the workshop. His sessions were insightful and focused on

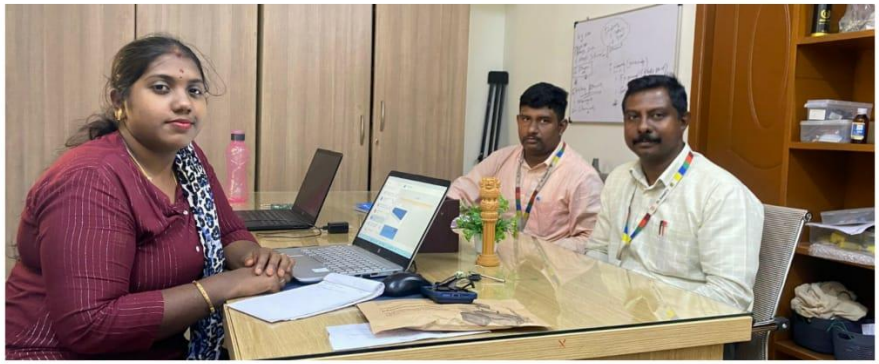
the latest trends in industrial automation, including the integration of sensors, actuators, and control systems in manufacturing processes. The workshop provided students with exposure to cutting-edge automation tools and software, fostering practical knowledge

and problem-solving skills.

6. VENTURE VISION	**Report**
	The VENTURE VISION - Idea pitching event for II ECE students was held on January 29th, 2025. The event aimed to foster innovation and entrepreneurship among second year Electronics and Communication Engineering students. Participants presented their ideas focused on solving real-world challenges through technology. The pitches were evaluated based on creativity, feasibility, and technical depth. A diverse range of ideas was presented, including advancements in IoT, communication systems, and wearable tech.


INDUSTRY SUPPORTED LAB
(IoT & ROBOTICS)
EMBLOCK
VENTURE VISION
START UP IDEA PITCHING COMPETITION

7. PLACEMENT EMPOWERMENT PROGRAM	**Report**
	Shaik Aleem Ur Rehaman, an ASIC Design and Verification Engineer at Microsoft (formerly AMD and Intel), delivered an insightful session on ASIC design and semiconductor technology advancements at Periwinkle, placement block, on January 25, 2025, from 11:00 AM to 1:00 PM. The session covered key topics including the cost-effectiveness of ASICs versus FPGAs, the intricacies of CISC and RISC processor architectures, a deep dive into AMD's chipset architecture, and the importance of AI accelerators like TPUs and DPUs. Shaik also explained the ASIC design flow, the differences between CPU and GPU processing along with memory types, and the latest developments in AI chips, including TPUs, DPUs, NPUs, IPUs, and AMD-Xilinx AI engines.

	
8. INDUSTRIAL INTERACTION	**Report**
	Our ECE faculty members, Mr. G.D. Vignesh and Dr. R. Niruban, visited Glonix Electronics Private Limited,Velachery & Pumo Technovations Tambaram specailzed in PCB design, testing, and Industrial Automation. During this visit, they engaged in a productive discussion with Mrs. K. Agalya, Managing Director and Mr. E. Nikilan, Automation Engineer to explore potential collaborations aimed at bridging the gap between academia and industry.

9. OUTREACH PROGRAM	
	Dr. P. Latha, Associate Professor in the Department of ECE, attended the VLSI Design Conference 2025 held at Leela Palace, Bangalore, on 4th and 5th January 2025. The event featured insightful sessions, inspiring speakers, and excellent networking opportunities. Dr. Latha interacted with several industry veterans, including: Dr. Indranil Sengupta, Professor at IIT Kharagpur
	Mr.M.Lingeshwaran, Assistant Professor, Department of ECE has participated in the Faculty Development Program on " Current Trends and Future Evolution in Telecom" from January 8-10 at Nokia in Chennai

G D Vignesh, Assistant Professor, Department of ECE, St. Joseph's College of Engineering, Chennai, Tamil Nadu, India. have received Inspirational Educator Award from NTL Technology, Tamil Nadu, India, for his academic contribution in innovative teaching practices under the category of "Inspirational Educator Award", having been adjudicated during the academic year 2024-2025. NTL Technology congratulates G.D.Vignesh for his outstanding performance and wishes him many more laurels in the years to come, which will, in turn, contribute significantly to the promotion of higher education in India.

Patent Published

The following staff member have published patent during the month of January2025.

S. No.	Country and Application No.	Name of the Applicants	Name of the Patentee	Patent Title	Date of Filing	Date of Publication	Date of Grant
1.	202541005529	M.Angelin Ponrani	M.Angelin Ponrani	A Convolutional Neural Network-Based System for the Recognition and Voice Alert of Traffic Sign Boards	23/01/2025	31.1.25	-

11.Publications

The following staff member have published the research papers in Journal/Conferences organized during the month of January at International/National Level.

Latha, P., “Multicast On-Route cluster propagation to detect network intrusion detection systems on MANET using Deep Operator Neural networks”, Expert Systems with Applications (Elsevier Journal with Impact Factor:7.5).

Mrs. P. Thenmozhi, Assistant Professor, Department of ECE has published a book titled “Biomedical instrumentation”. ISBN number: 978-81-981910-**7-6**

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Sl. No.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)	Criterion
1	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE St. Joseph's College of Engineering Student Branch (SBC60101) Student Branch successfully organized a webinar titled **"Introduction to Control Systems"** as part Session 1 of the **Insegnante-2** series on 04.01.2025. The session led by **Dr. BABU T** Associate Professor of the Department of Electrical and Electronics Engineering, St. Joseph's College of Engineering.	4

2	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE St. Joseph's College of Engineering Student Branch (SBC60101) Student Branch successfully organized a webinar titled "**Convolutional Neural Networks for V2G**" as part Session 2 of the **Insegnante**-2 series on 10.01.2025. The session was led by **Ms.Vedavalli S P**, Assistant Professor of the Department of Electrical and Electronics Engineering. The event witnessed active participation from over 30 students, who engaged enthusiastically with the topic Convolutional Neural Networks for V2G.	4
3	**IEEE activities**	The IEEE St. Joseph's College of Engineering Student Branch (SBC60101) Student Branch successfully organized a webinar titled **"Introduction About Medical Image Processing"** as part Session 3 of the Insegnante-2 series on 21.01.2025. The session was led by **Ms.C.Ramadevi**, Assistant Professor of the Department of Electrical and Electronics Engineering, St. Joseph's College of Engineering.	4

	 *PIC: EVENT POSTER & PHOTO*		
4	**IEEE activities**	The IEEE St. Joseph's College of Engineering Student Branch (SBC60101) successfully organized a webinar titled **"Multiport for PV Applications"** as part of Session 4 of the Insegnante 2 series on 23.01.2025. The session was led by **Dr.Venmathi M**, Associate Professor of the Department of Electrical and Electronics Engineering, St. Joseph's College of Engineering.	4

	 ***PIC: EVENT POSTER & PHOTO***		
5	**IEEE activities**	The pivotal meeting brought together key members of the executive committee, including the newly announced **chairperson, secretary, and other ExeCom members** for various IEEE societies. The gathering's primary focus was to strategically plan future events and initiatives, fostering growth and innovation. During the session on 22 January 2025, participants outlined actionable strategies for the upcoming year, deliberating on challenges, potential opportunities, and the roadmap for shaping impactful initiatives	4

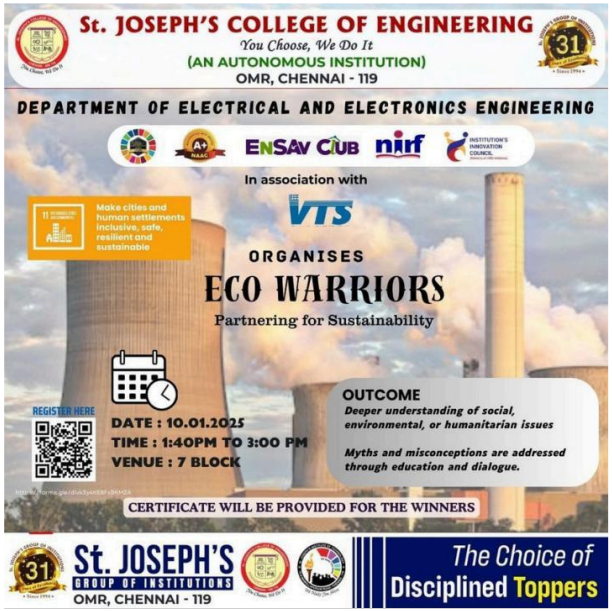
	 *PIC: EVENT POSTER & PHOTO*		
6	**ISTE activities**  *PIC: EVENT POSTER & PHOTO*	The **St. JOSEPH'S ISTE STUDENT CHAPTER**, in collaboration with the IEEE Photonics & Automation Society, at St. Joseph's College of Engineering (specializing in Electrical & Electronics Engineering), organized a technical event **IDEAS TO IMPACT** on January 24, 2025. The Event Consist of 2 Rounds **ROUND 1- TECH TREASURE HUNT** **ROUND 2 – CODING RELAY** The Robo Rev event featured two exciting rounds. In the **first round**, participants showcased their technical prowess by solving a challenging **tech treasure hunt**. The **second round**, titled "Coding Relay" required teams to exhibit their creativity and communication skills by speaking about a **Industrial-related topic** for one minute. The event	4

		emphasized innovation, technical knowledge, and effective communication, fostering a spirit of learning and competition	
7	**Club activities**  	The **"CHOPPERS CLUB"** in collaboration with PELS at St. Joseph's College of Engineering, specializing in Electrical & Electronics Engineering, hosted a technical event **ELECTRAVERSE** on January 08, 2025. The event consist of 3 rounds which are: **ROUND 1- ELECTRIC QUIZ, ROUND 2 -SPEAK SPHERE and ROUND 3-DEBATE** Hands-on activities like circuit building, debugging, and prototyping enhance practical skills and problem-solving abilities and promotes effective communication and collaboration among team members during group tasks.	4

	PIC: EVENT POSTER & PHOTO		
8	**Club activities**    ***PIC: EVENT POSTER & PHOTO***	The **"ELECTRICAL CLUB"** in collaboration with PELS at St. Joseph's College of Engineering, specializing in Electrical & Electronics Engineering, hosted a technical event **ELECTRIC BLITZ** on **08-01-2025**. The event consist of 3 rounds as follows: **ROUND 1- CIRCUIT CHALLENGE, ROUND 2 – ARDUINO ADVENTURE,ROUND 3- SEMICONDUCTOR PUZZLE** Hands-on activities like circuit building, debugging, and prototyping enhance practical skills and problem-solving abilities and promotes effective communication and collaboration among team members during group tasks.	4

9	**Club activities**  ***PIC: EVENT POSTER & PHOTO***	The **ROBOTICS CLUB in association with IEEE ROBOTICS & AUTOMATION SOCIETY** at St. Joseph's College of Engineering, specializing in Electrical & Electronics Engineering, hosted a technical event **ROBO REV** on January 04 2025.The event consist of 2 Rounds as follows: **ROUND 1- SENSOR-BASED TREASURE HUNT** **ROUND 2 - AI &VISION BASED ROBOTICS CHALLENGE** The Robo Rev event featured two exciting rounds. In the **first round**, participants showcased their technical prowess by solving a challenging **sensor-based treasure hunt** The **second round**, titled "AI &Vision based robotics challenge" required teams to exhibit their creativity and communication skills by speaking about a **robotics-related topic** for one minute.	4

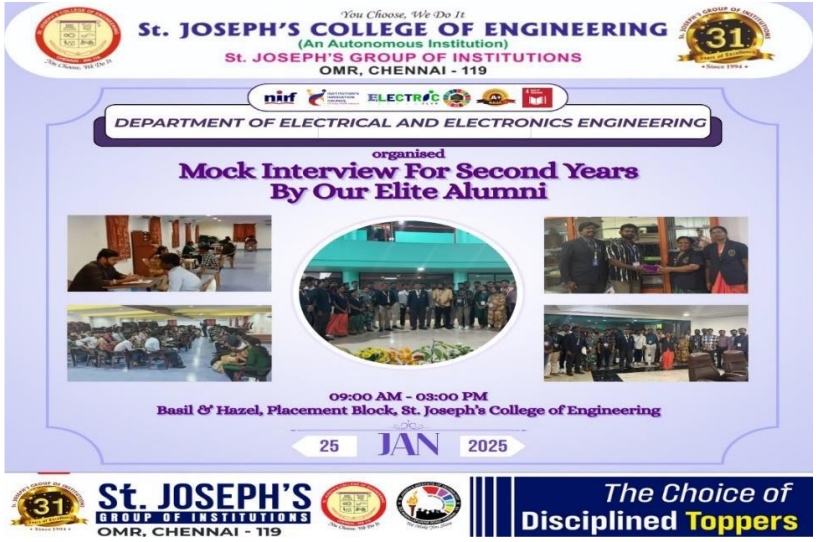
1	**Club activities**  *PIC: EVENT POSTER*	The "**SOCIAL AWARENESS CLUB**" in collaboration with IEEE SIGHT at St. Joseph's College of Engineering, specializing in Electrical & Electronics Engineering, organized a technical event **THE AWARENESS WAVE** on **January 21, 2025**.The event consist of 3 rounds **ROUND 1-PANEL DISCUSSION** **ROUND 2 –QUIZ ADVENTURE** **ROUND 3 - PRESENTATION ON CARBON FOOTPRINT**	4
1	**Club activities**	The **"ENSAVE CLUB"** in collaboration with IEEE PES at St. Joseph's College of Engineering, specializing in Electrical & Electronics Engineering, hosted a technical event **ECO WARRIORS** on January 10, 2025. The event consist of 3 rounds which are: **ROUND 1- ECO QUIZ** **ROUND 2 –THE VOICE ARENA** **ROUND 3-TECH FINDERS**	4

	 *PIC: EVENT POSTER*		
1	**Market yourself**	Mock Interview was conducted for our second year students, by our staff members on **10th January 2025**. Prior to that an exclusive presentation **"Market Yourself"** was done by every student to showcase their achievements and improvements since last semester. During mock interview, **faculties provided constructive feedback, enabling students to identify their weaknesses and improve before real interviews**.	4

	 *PIC: EVENT POSTER & PHOTO*		
1	**Placement club activities**	The Department of EEE has conducted the SEERA training program for second year students through Lingual clique and Bright Byte Coders Club om 03/01/2025. The speakers of the event are also from Second year students **R. Anirudh,** on the topic Cybersecurity, **Loshini R** on the topic Problems on Ages, Coding And Decoding, **Rithesa,** on the topic Smart Grid And Energy Management & **Aksaya R,** on Bridging the Gap Between Hardware and Software. The program is organized to enrich programming skills, workspace strategies skills and various topics on aptitude for the students and provides the placement drive procedures for various companies.	4

	 *PIC: EVENT PHOTO*		
1	**Placement club activities**	The Department of EEE has conducted the SEERA training program for second year students through Lingual Clique and Bright Byte Coders Club on 10/1/2025. The speakers of the event are also from second year students **S R Goutham** on the topic **AR and VR Applications in Electrical Domain**, **Harishitha Vani** on the topic **Introduction to SQL**, **Rithesha**, on the topic **Smart Grid and Energry Management** & **Sowndharya M** on the topic **Software and Hardware Job Opportunities**. The program is organized to enrich on aptitude for the students and provides the placement drive procedures for various companies.	4

	 ***PIC: EVENT PHOTO***		
1	**Placement club activities** 	Two days Pre-interview Coaching for Core subject has been given for the final year students. The objective of is to tailor the coaching to include practical applications of core subjects, especially those relevant to Hitachi Energy's work, such as smart grids, energy efficiency, and industrial automation solutions.	4

	PIC: EVENT POSTER		
1	**Alumni achievements**  *PIC: EVENT POSTER*	Our department of EEE of St. Joseph's College of Engineering organized Mock Interview for Second year students on **25th January 2025** .Around 28 Alumni from Core as well as Software Companies came to motivate out second year students. A mock interview with a seasoned alumnus will transforms preparation into a learning experience, offering real-world insights that are crucial for succeeding in today competitive job market.	4

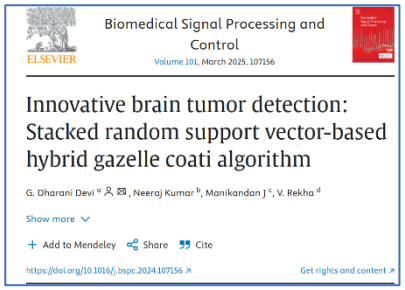
1	**ALUMNI TALK**  ***PIC: EVENT POSTER & PHOTO***	Department of EEE of St. Joseph's College of Engineering organized an Alumni Talk on "Electrifying Mobility "on 6th January 2025. Our esteemed alumni **Mr. Sakthish Pethanesh Nagarajan (Batch: 2010-2014) Product Software developer (Electrical Drives), and Suresh Babu Munirathinam (Batch: 2010 - 2014) Senior Team Leader, Valeo India Private Limited** gave insightful thoughts on how electrical engineers use their talent in the field of automobile industry.	4

1	**Student achievements**  St. JOSEPH'S COLLEGE OF ENGINEERING DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING Academic Year 2024 - 2028 (Even Semester) CONGRATULATIONS SECOND PRIZE Prize Amount Rs. 75,000/- CHAIRMAN   Pic: *EVENT PHOTO* PRIZE	• We congratulate our third year student **Sanchana L** for winning **Second Prize with prize amount Rs.75,000** (rupees seventy five thousand only) in the சொல் தமிழா சொல் organized by **SRM** தமிழ்ப்பேராயம் at **SRM UNIVERSITY- KATTANKULATHUR** on **January 26, 2025** and also selected for the State Level Competition • We congratulate our students **Sanmitha V** (III/EEE) ,**Samyuktha Y** (III/EEE).**Bhuvaneshwari T** (II/EEE).**Arulmozhi R** (II/EEE) ,**Shreelekha K** (II/EEE).**Ramya K** (II/EEE). **Yazhini S** (II/EEE) who had won the **Sixth Place** with Cash Award of Rs 5000 in the Final Round of **Explore EVenture National Level Hackathon** held on 24th and 25th January 2025 at the center for electrical mobility, **SRM Institute of Science and Technology,** Kattankulathur. **Mohamed Zeeyath S.S (III EEE A) and Samrutha J (IV EEE C)** received **grant of Rs 25000** from **Solar Decathlon India** which is a Government of India supported National level competition. Solar Decathlon. • We congratulate our students **Arjun .P and Gokularaman S.R** of II EEE A for presenting a conference paper titled **" Implementation of PV based Converter Control for Plugin Hybrid Electric Vehicle"** on 4th International conference on Innovative Computing ,Intelligent Communication and smart Electrical Systems.	4

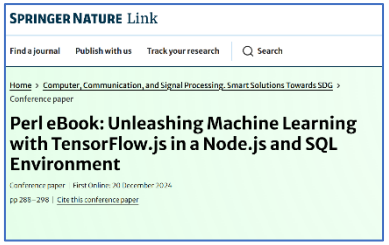
1	**Faculty awards and recognitions**  Pic: *EVENT POSTER*	➢ **Ms.S.Gomathi** delivered a lecture on the topic " The Evolution of Electric Vehicle : From Concept to Reality" on 28/01/2025 at St.Mother Theresa Engineering College. ➢ **Mr. R.Elanthirayan** received membership in "The Institute of Engineers " (India) professional Society	5
2	**Faculty Publication**	• **Dr.S.Sridharan** has published an article titled **"Life Time Prediction of an Electromagnet Relay using Clustering based Principal Component Analysis with Hybrid Deep Learning Model"** in Journal of Applied Engineering and Technological Science (JAETS) • **Dr.C.Venkatesh Kumar** published an article titled **"Comparison Between UPFC and HPFC Controller of Optimal Power Flow Calculation Using Genetic Algorithm"** in Journal of Electrical Systems • **Dr. Babu** T published an article titled **"Sensor based EEG Signal based Dementia Disease detection using Artificial Intelligence"** in Journal of New Materials for Electrochemical Systems and another article **"Integrated Early Flood Prediction using Sentinel-2** Imagery with **VANET-MARL-based Deep Neural RNN"** in Global NEST Journal. • **Dr.V. Chamundeeswari** published an article titled **"An efficient hybrid approach for high-gain DC–DC converter for hydropower operated plants on DC load with super-lift converters"** in (Springer Nature) Electrical Engineering Journal.	**5**

		• **Ms. Rama Devi C** published an article titled **"Enhancing Deep Learning Models With Hybrid Neural Architectures For Image Classification"** in Machine Intelligence Research Journal • **Dr. V. Balasubramanian** published a paper titled **"Design and Development of Motor Module for the Advancements in Smartlift"** in 2024 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI)	
2	PLACEMENT DETAILS FOR THE MONTH OF JANUARY 2025	**2021-2025 Batch** Total No of students placed = 65 Students Total No of Offers = 80 Offers Total No of Students (UG) = 194 Total No of Eligible Students (UG) = 160 (All Clear) % of students Placed (UG) = 65/194 = 33.5 % No of students having single offers = 52 No of students having Double offers = 11 No of students having Triple offers = 2	**4**

DEPARTMENT OF INFORMATION TECHNOLOGY

Sl. No.	Photographs Captured During Event/Screenshot	Corresponding remarks in regarding the status of activity execution
1.	 **Co-Authors** **Mr. Manikandan J** Published a paper in SCIE	**Staff Publication** G. Dharani Devi, Neeraj Kumar, **Manikandan J**, V. Rekha, "Innovative brain tumor detection: Stacked random support vector-based hybrid gazelle coati algorithm", Biomedical Signal Processing and Control, Volume 101, 2025, 107156, ISSN 1746-8094, https://doi.org/10.1016/j.bspc.2024.107156 **(Impact Factor: 4.9, Q1, SCIE)** **Abstract:** The process of detecting brain tumors entails capturing brain images, which are then scrutinized to identify any abnormalities. It is crucial to develop and validate medical image classification models in collaboration with healthcare professionals to ensure their safety and effectiveness in clinical settings. These models aid in categorizing the disease based on its type, facilitating appropriate treatment decisions. While traditional methods for brain tumor detection have been useful, they often face limitations in terms of accuracy, scalability, time sensitivity, and cost. To overcome these complexities, a novel Stacked Random Support Vector-based Hybrid Gazelle Coati (SRS-HGC) algorithm is developed to detect brain tumors. This method utilizes feature extraction to capture the shape and size of the tumor. The analysis are carried out using the Brain Tumor Segmentation (BraTS2020), Br35H, Figshare Brain tumor and REMBRANDT datasets. The results are then compared by demonstrating the efficiency of the SRS-HGC technique in detecting brain tumor diseases.

2.



Authors

Nivethitha Devi, M., Jeyaprakash, N., Sanjay, R., Shashwat, B.R Published a paper in Scopus indexed Conference

Staff-Student Conference Publication

Nivethitha Devi, M., Jeyaprakash, N., Sanjay, R., Shashwat, B.R. (2025). Perl eBook: Unleashing Machine Learning with TensorFlow.js in a Node.js and SQL Environment. In: Chandrabose, A., Fernando, X., Mercier-Laurent, E. (eds) Computer, Communication, and Signal Processing. Smart Solutions Towards SDG. ICCCSP 2024. IFIP Advances in Information and Communication Technology, vol 723. Springer, Cham. https://doi.org/10.1007/978-3-031-73617-9_23, Print ISBN: 978-3-031-73616-2, Online ISBN:

978-3-031-73617-9, 20 December 2024**(Indexed in Scopus)**

Abstract:

The Perl eBook platform revolutionizes the digital reading experience by seamlessly merging traditional thematic values encapsulated in the Perl acronym (Publish, Enlighten, Read, and Listen) with cutting-edge technologies. This dynamic platform not only provides free access to a diverse collection of books, encouraging the exploration of various genres, but also introduces an innovative shopping feature for users to purchase books. In addition to freely reading ebooks, users can actively contribute to the platform by publishing their own works, subject to evaluation, thereby fostering a collaborative and enriching literary community. To ensure inclusivity and promote quality education, the platform offers audio books for the visually impaired, further expanding its accessibility. The integration of Node.js, SQL, and TensorFlow.js enhances the user experience, providing personalized content recommendations. A central aspect is the inclusion of a chatbot for real-time assistance, contributing to a user-friendly environment.

2.	 **Ms. Kavitha A** Published an India Patent	***Patent Published*** ***Title of the invention:*** ***SURFACE DEFECT IDENTIFICATION AND QUALITY CONTROL SYSTEM USING CONVOLUTIONAL NEURAL NETWORKS*** ***Name of Inventor:*** 1. Dr. SRINIVAS L. N. B 2. Dr. K. Saravanan 3. Dr. Guna G **4. Kavitha A** 5. Shijo Thomas 6. Sathya P **Patent Application Number:** 202441100845 **Date of filing of Application:** 19/12/2024 **Publication Date: S**03/01/2025

3.	 **Ms. J.Thresa Jeniffer** Published an India Patent	***Title of the invention:*** ***ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING SYSTEM FOR RISK ASSESSMENT AND EARLY PREDICTION OF LUNG AND HEART CANCER*** ***Name of Inventor:*** ***1. Dr Rupali Narendra Chandewar*** ***2. Dr P. Parimala*** ***3. J. Thresa Jeniffer*** ***4. Areddy Divya Reddy*** ***5. Dr T. Venugopala Swamy*** ***6. Surya Suresh*** ***7. B. Deepak*** ***Patent Application Number: 202421101020*** **Date of filing of Application:**19/12/2024 **Publication Date:** 17/01/2025

<table>
<tr>
<td>4.</td>
<td>

Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India
INTELLECTUAL PROPERTY INDIA
<table>
<tr><th colspan="2">Application Details</th></tr>
<tr><td>APPLICATION NUMBER</td><td>202411074302</td></tr>
<tr><td>APPLICATION TYPE</td><td>ORDINARY APPLICATION</td></tr>
<tr><td>DATE OF FILING</td><td>02/10/2024</td></tr>
<tr><td>APPLICANT NAME</td><td>1 . Varun Kr. Singh
2 . Dr. Manoj Kumar Sharma
3 . Dr. Santosh Kumar Sharma
4 . Charpreet Kaur Gulati
5 . Benisha S
6 . Dr. Priyadarshan Sham Garvir
7 . Dr. Bimla Pandey
8 . Dr. R. Mekala
9 . K Rani
10 . Navaneethakrishnan
11 . Priyadharshan S
12 . Harshavardhan B</td></tr>
<tr><td>TITLE OF INVENTION</td><td>THE ROLE OF MACHINE LEARNING IN REDUCING TEACHERS' PSYCHOLOGICAL STRESS AND IMPROVING EDUCATIONAL QUALITY IN HIGHER EDUCATION</td></tr>
<tr><td>FIELD OF INVENTION</td><td>COMPUTER SCIENCE</td></tr>
<tr><td>E-MAIL (As Per Record)</td><td>[illegible]@gmail.com</td></tr>
<tr><td>ADDITIONAL-EMAIL (As Per Record)</td><td></td></tr>
<tr><td>E-MAIL (UPDATED Online)</td><td></td></tr>
<tr><td>PRIORITY DATE</td><td></td></tr>
<tr><td>REQUEST FOR EXAMINATION DATE</td><td></td></tr>
<tr><td>PUBLICATION DATE (U/S 11A)</td><td>[illegible]</td></tr>
</table>
Mrs. G. Sathyadevi
Published an India Patent
</td>
<td>
Title of the invention: ADVANCED MACHINE LEARNING MODELS FOR PREDICTING ELECTRIC VEHICLE SALES CONSIDERING ENERGY DEMANDS
Name of Inventor:
1. Dr. T. Hussain
2. Dr RVS Praveen
3. Dr Neeraj kumar
4. Dr Gangapuram Srikanth
5. G. Sathyadevi
6. Gautham Krishna
7. Dr I. D. Soubache
8. Dr Deepa Jananakumar
Patent Application Number: 202541001966
Date of filing of Application: 09/01/2025
Publication Date: 17/01/2025
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Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

INTELLECTUAL PROPERTY INDIA

Application Details

APPLICATION NUMBER	202441098831
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	13/12/2024
APPLICANT NAME	1 . Mr. Ramanakar Reddy Danda 2 . R Saraswathi 3 . Dipesh Popli 4 . Subhashini Shanmugam 5 . E.Elakkiya 6 . Desetti Srinuvasa Rao 7 . M.Meena 8 . R.Sharmikha Sree 9 . S. Meera 10 . Dr. S. Dinesh Kumar
TITLE OF INVENTION	Deep Learning-Powered Intelligent Video Analytics System for Real-Time Surveillance and Threat Detection in Public Spaces
FIELD OF INVENTION	ELECTRONICS
E-MAIL (As Per Record)	senoninda@gmail.com
ADDITIONAL E-MAIL (As Per Record)	editorpetfile@gmail.com
E-MAIL (UPON REQUEST)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	20/12/2024

Mrs. E.Elakkiya
Published an India Patent

Title of the invention: ***DEEP LEARNING-POWERED INTELLIGENT VIDEO ANALYTICS SYSTEM FOR REAL-TIME SURVEILLANCE AND THREAT DETECTION IN PUBLIC SPACES***

Name of Inventor:

1. Mr. Ramanakar Reddy Danda
2. R Saraswathi
3. Dipesh Popli
4. Subhashini Shanmugam
5. E.Elakkiya
6. Desetti Srinuvasa Rao
7. M.Meena
8. R.Sharmikha Sree
9. S. Meera
10. Dr. S. Dinesh Kumar

Patent Application Number: 202441098831
Date of filing of Application:13/12/2024
Publication Date: ***20/12/2024***


ALL INDIA COUNCIL FOR TECHNICAL EDUCATION
Nelson Mandela Marg, Vasant Kunj, New Delhi -110070
AICTE Training and Learning (ATAL) Academy
Certificate

Sample FDP Certificate

Seminar/ FDP Attended by Faculty

S.No	Name	Title of the Topic	Online/ Offline	No of Days	Conducted By
1.	Dr,C Heltin Genitha	Xposure - Unveiling the Magic	Seminar	8-1-2025	ICT Academy in Association with PhantomFX
2.	Ms. Domilin Shyni I	Financial Planning	Online Workshop	22-01-2025	HKBK college
3.	Ms. Sathyadevi G	AI-driven Innovations: Transforming Core Engineering Disciplines	Online FDP	20-01-25 to 25-01-25	SSN College

DEPARTMENT OF MATHEMATICS AND ENGLISH

<table>
<tr><th>Events</th><th>Remarks</th></tr>
<tr><td>  </td><td>Conference Presented
<table>
<tr><th>S.No</th><th>Staff Name</th><th>Paper Title</th><th>Organized by</th><th>Date</th></tr>
<tr><td>1</td><td>Mr. S. Manikanda Prabhu</td><td>Relatively Prime Domination Number In Triangular Snake Graphs</td><td>Recent Trends in Pure and Applied Mathematics, Kristu Jayanti College</td><td>30-01-2025 to 31-01-2025</td></tr>
<tr><td>2</td><td>Dr. B. Amudha</td><td>Innovative Key exchange Protocols utilizing anti duo matrices and their application</td><td>SRMIST, Kattankulathur</td><td>09-01-2025 to 10-01-2025</td></tr>
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<tr><td>Awards/Prize won by staff</td><td></td></tr>
<tr><td>Awards/Prize won by students</td><td>
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<tr><th>S.No.</th><th>Name of the Student</th><th>Branch & Sec</th><th>Event</th><th>Organized by</th><th>Date</th><th>Place</th><th>Cash</th></tr>
<tr><td>1</td><td>AADHIRAMAN R</td><td>I CSE A</td><td>Math-A-Thon</td><td>“EMF 2025”
SRM Institute of Science and Technology</td><td>24th Jan 2025</td><td>II</td><td>Rs.1000</td></tr>
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<tr><td>Industial Projects done</td><td></td></tr>
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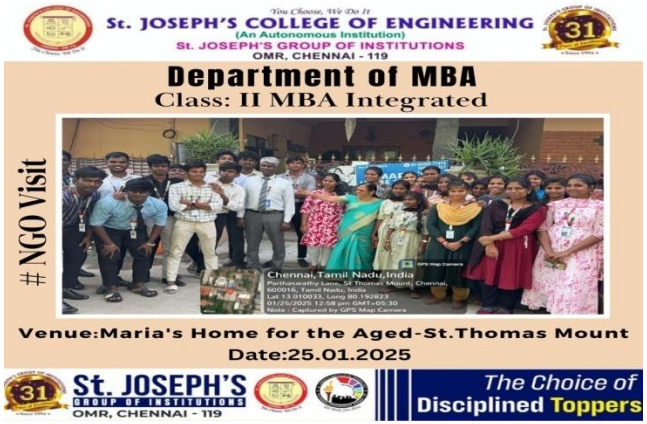
by students	
Publications(only published) details	1. Abraham, D.E.L., Rajkumar, A. Jose Parvin Praveena, N. Said, B., Entropy Measure on Selection of Cloud Computing using Bipolar Neutrosophic Environment Utilizing Topsis Method, International Journal of Neutrosophic Science., Vol 25, No.3, Page No. 511-539, Scopus 2. R. Deepa, V. Jayalakshmi, K. Karpagalakshmi , **S. Manikanda Prabhu**, P.Thilakavathy, Survey on Resume Parsing Models for JOBCONNECT+: Enhancing Recruitment Efficiency using Natural language processing and Machine Learning, International Journal of Computational and Experimental Science and Engineering, Vol 10, No.4, Page : 1394-1403, SCOPUS 3. **Amutha Boopathy**, Perumal Ramachandran, A Novel Methodology For Determining Row And Column Ranks Of Tropical Matrices, Applied Mathematics E – Notes, Vol 25, No .1, Page No: 31-44, SCOPUS 4. N.Sriram, Jayalakshmi V, P.Preethi, **B.Shoba**, K.Shenbagavalli, Navigating the future with YOLOv9 for advanced traffic sign recognition in Autonomous vehicles, International Journal of computational and experimental science and engineering, Vol.10, No.4, Page:1424-1436, SCOPUS
Funded Projects	-
Other activities	

DEPARTMENT OF MBA

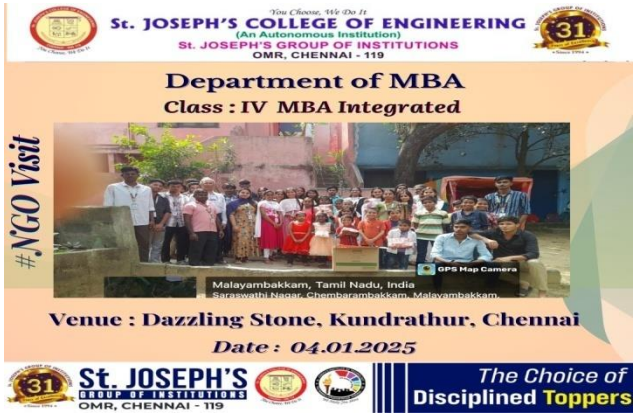
FACULTY PUBLICATION / PATENT:	Dr.S.Ajit has published a Patent on "PREDICTING THE STABILITY OF PEROVSKITE SOLAR CELLS WITH ADVANCED MACHINE LEARNING" Mr.S.Aravinth has published a Patent on "SMART CARDIAC DISEASE DETECTION USING 6G NETWORKS, WIRELESS COMMUNICATION, AND MACHINE LEARNING MODELS"
FACULTY FDP / STTP / CONFERENCE / SEMINAR PARTICIPATION:   	Dr.A. Menaga has presented a paper titled "The impact of augmented reality on consumer purchase intention: the mediating role of hedonic and utilitarian value" in the Two days International Conference on "Entrepreneurship and Innovation in the Digital Economy: Shaping the future of Global Business" organized by the School of Management Studies, Sathyabama Institute of Science and Technology on 23rd and 24th January 2025. *Dr.S.Ajit has participated in the one week FDP on "Leveraging AI in Academic writing and Research" from 13 to 17th January 2025 conducted by Indian Institute of Industrial and Social Research.*

FACULTY AS RESOURCE PERSONS:  	Dr.S.Ajit was a resource person in the 6 Days Atal FDP conducted by Department of Science, SJCE from 20-25 January 2025. TOPIC: Creating customer delight: Benefits and Challenges

NGO VISITS:



55 Second Year MBA Integrated students accompanied by Dr. S. Ajit and Dr.Monisha visited Maria's Home for the Aged, Chennai on 25.01.2025. There were 50 inmates in the home. Provisional needs for the inmates were provided by our students. The students voluntarily served the college sponsored lunch to the inmates with vegetarian and non-vegetarian dishes.



35 Fourth Year MBA Integrated students accompanied by Dr. Nadanasabai and Dr.Vani visited Dazzling Stone on 04.01.2025. There were 60 inmates in the home. Provisional needs for the inmates were provided by our students. The students voluntarily served the college sponsored lunch to the inmates with vegetarian and non-vegetarian dishes.

43 Third Year MBA Integrated students accompanied by Dr. Joel Jebadurai and Dr.Poovizhi visited Webbs Memorial Orphanage on 04.01.2025. There were 100 inmates in the home. Provisional needs for the inmates were provided by our students. The students voluntarily served the college sponsored lunch to the inmates with vegetarian and non-vegetarian dishes.

DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks
4	**FDP/Workshop/Conference**	***ATAL FDP CONDUCTED*** 1. Dr.P. Saravanan (Coordinator) , Dr. N.R. Rajagopalan (Co-Cordinator) organized a 6-day Online ATAL Faculty Development Program (FDP) titled "Innovations in Manufacturing: Bridging Academia and Industry 4.0 in a Virtual Environment," between 20-01-2025 TO 25-01-2025. ***ATAL FDP ATTENDED*** 1. Dr. S. Kiruba, Dr. N. Punitha, Dr. S. Suresh, Dr. A. Arulmozhi, Dr. A. Mahalakshmi, Mr. S. Kaleel Mohamed Ibrahim, Dr. S. Manikandan, Dr. P. Krishnan, Dr. S. Rama, Dr. K. Satheshkumar, Dr. K. Dhanaraj, Dr. G. Senthilmurugan, Dr. G. Murugan, Dr. V. Swarnalatha, Dr. A. Uma Devi, Dr. J. Sharmila, Ms. S. Savitha, Dr. K. Jayamoorthy, Dr. B. Subash, Dr. G. Sasikumar, Dr. A. Dhivya, Dr. C. Chandrasatheesh attended 6-day Online ATAL Faculty Development Program (FDP) titled "Innovations in Manufacturing: Bridging Academia and Industry 4.0 in a Virtual Environment," conducted by “Department of Science, St. Joseph’s College of Engineering, Chennai” held between 20-01-2025 TO 25-01-2025. ***SWAYAM CERTIFICATION / FDP*** 1.Mr. S. Kaleel Mohamed Ibrahim completed a certificate course on “Environmental Sustainability” conducted by SWAYAM-IGNOU certificate dated 26-01-2025. ***CONFERENCE CHAIR*** 1. Dr. P. Saravanan, has Chaired a session at the " International Conference on Innovations in Engineering, Management, and Science (ICIEMS)2025" organized by Harcourt Butler Technical University (HBTU), Kanpur, Uttar Pradesh, held on 31-01-25. ***PRESENTED PAPER*** 1. Dr. P. Saravanan has presented a paper titled “Valorization of Diverse Waste-Derived Nanocellulose for multifaceted Applications: A Review.” In the “9th International Conference on Global Practice of Multidisciplinary Scientific Studies”, organized by

		Ege University, Türkiye, which was held between 21.01.2025 and 28.01.2025.
5	**Symposium**	-
6	**STTP**	-
7	**Value added Courses/Courses other than VAC**	-
8	**Competitions attended by students**	-
9	**Awards/Prize won by students / Staff**	1. Dr. P. Krishnan, Associate Professor in the Department of Science, served as the Chief Guest at the 2025 Naahar TechFest organized by Naahar Public School Senior Secondary (CBSE), Viluppuram on 25-01-2025. 2. Dr. K. Jayamoorthy acted as reviewer for the following journals: • Journal of Molecular Structure • Photochemistry and Photobiology B • Current Organic Chemistry
10	**Industrial Projects done by students**	-
11	**Publications(only published) details**	**Journal Publications:** 1. Dr. P. Saravanan, has published an article titled "Carbon-Supported Photocatalytic Sponges for CO_2 Reduction and H_2 Production" in the journal of "Materials Chemistry and Physics",(2025) (DOI: https://doi.org/10.1016/j.matchemphys.2025.130376) 2. Dr. P. Saravanan, has published an article titled " Multifunctional Nitrogen-Doped Carbon Nanodots: A New Paradigm in Anticounterfeiting and Fingerprint Forensics Imaging" in the journal of "Waste and Biomass Valorization",(2025) (DOI: https://doi.org/10.1007/s12649024-02877-7) 3. Dr. P. Saravanan, has published an article titled " Fluorescent N-Doped Carbon Dots as a Biocompatible Sensor for Thiophanate-Methyl Detection" in the journal of "Journal of Fluorescence",(2025)(DOI: https://doi.org/10.1007/s10895-024-04095-9.) 4. Dr. P. Saravanan, has published an article titled " Emerging Trends in Food Process Engineering: Integrating Sensing Technologies for Health, Sustainability, and Consumer Preferences" in the journal of "Food Process Engineering",(2025) (DOI: https://doi.org/10.1111/jfpe.70035.) 5. Dr. P. Saravanan, has published an article titled " "Polysaccharides and Proteins-Based Edible Coatings for Food Protection: Classification, Properties, & Public Demands

		(2020–2024)" in the journal of “Food Measurement and Characterization”,(2025) (DOI: https://doi.org/10.1007/s11694-024-03090-9.) 6. Dr. P. Saravanan, has published an article titled " Catalytic Hydroprocessing of Mixed Plastic Waste Using Ni-Ce/ZSM5:Performance and Emission Analysis of Diesel Blends Across Blending Ratios" in the journal of “Energy Reports”,(2025) (DOI: https://doi.org/10.1016/j.egyr.2025.01.016) 7. Dr. S. Rama, has published an article titled " Bifunctional Applications of Magnesium Oxide Nanoparticles Using Chitosan via Green Nanoengineering" in the journal of “Ionics”,(2025) (DOI: https://link.springer.com/article/10.1007/s11581-02506096-5.) 8. Dr. G. Senthil Murugan, has published an article titled " Intriguing Magnetic and Electronic Behaviors in La and Ru Doped Sr_2IrO" in “Journal of Physics: Condensed Matter”,(2025) (DOI: https://l 10.1088/1361-648X/ada47a.) **Patents** 1. Dr. G. Sasikumar has published a patent titled “Innovative Characterization Techniques for Copper Oxide Nanoparticles and Their Practical Uses” in the “Official Journal of the Patent Office – Journal issue 54/2024” – Application No. 202441104655, dated 10-01-2025. 2. Dr. S. Manikandan has published a patent titled “High Performance Electrode Fabrication. New approaches in Synthesizing MgO Carbon Nanocomposites” in the “Official Journal of the Patent Office – Journal issue 54/2024” – Application No. 202441104651, dated 10-01-2025.
12	**Funded Projects**	--
13	**Other activities(if any)**	1. The Career Guidance Meeting for first-year Engineering students (ADS, AML, ECE, EEE, Cyber, and Chemical) was held from January 20 to January 24, 2025. Organized by the Department of Science.