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St. JOSEPH'S COLLEGE OF ENGINEERING

(An Autonomous Institution)

St. Joseph's Group of Institutions

OMR, Chennai - 119.

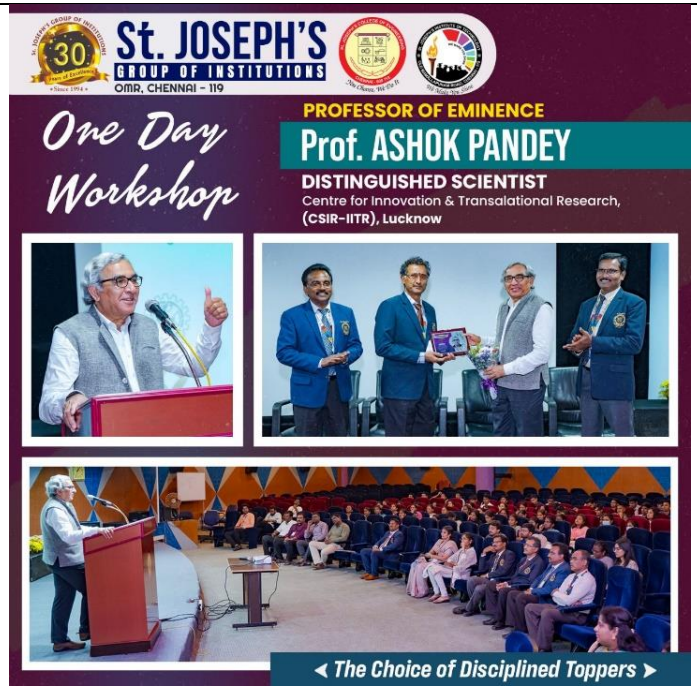
30 Years of Excellence

* Since 1994 *

JUNE 2023
DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	**INDUSTRIAL VISIT**  *Industrial visit photo of IIIrd year Biotech students*	III year students of Biotechnology were taken on a one day Industrial visit on 23/06/2023 to Quantum Biomedicals, Madhavaram.
2.	**GUEST LECTURE**	**Dr.S.Renganathan, Professor, Center for Biotechnology, Anna University , Chennai** delivered a talk on "Biofuels from Microalgae" on the Guest Lecture held on 27/06/2023 at Central Library Auditorium, St.Joseph's College of Engineering, Chennai

	  *Guest lecture by Dr.S. Renganathan*	
3.	**FDP/WORKSHOP/CONFERENCE**	Dr. G. Bhaskar organized a one-day national workshop on Algal Biorefinery and Circular Bioeconomy (ABCB 2023)

	 *Brochure of One day workshop*	Chennai on 27th June 2023. The workshop was supported by the Biotech Research Society of India (BRSI), the Indian Society for Technical Education (ISTE) and the Indian Institute for Chemical Engineers (IIChE)
4.	**PUBLICATIONS(ONLY PUBLISHED) DETAILS**	1. Dr. **G. Baskar**, published a paper on A comprehensive outlook on topical processing methods for biofuel production and its thermal applications: Current advances, sustainability and challenges, Fuel, 349 (2023) 128690. (IF-8.035). https://doi.org/10.1016/j.fuel.2023.128690 2. Dr. **G Baskar**, published a paper on Utilization of zinc doped biochar catalyst for biodiesel production from waste cooking oil: process optimization and characterization, Biofuels, Published online: 01 Jun 2023. (IF-2.693). https://doi.org/10.1080/17597269.2023.2215629

Fuel

Volume 349, 1 October 2023, 128690

Review article

A comprehensive outlook on topical processing methods for biofuel production and its thermal applications: Current advances, sustainability and challenges

Mani Jayakumar [a], Kaleab Bizuneh Gebeyehu [b], Lata Deso Abo [a], Amberbir Wondimu Tadesse [c], B. Vivekanandan [d], Venkatesa Prabhu Sundramurthy [e], Workisa Bacha [a], Veeramuthu Ashokkumar [f], Gurunathan Baskar [g]

Research Article

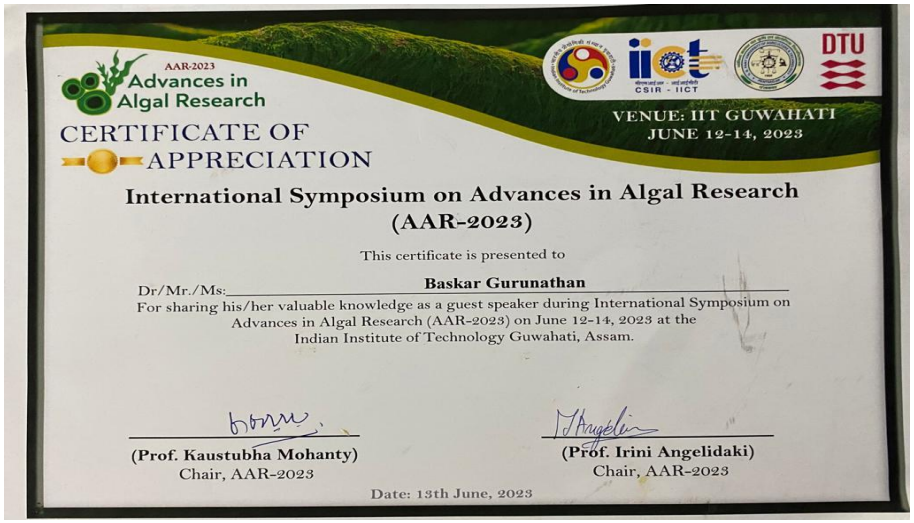
Utilization of zinc doped biochar catalyst for biodiesel production from waste cooking oil: process optimization and characterization

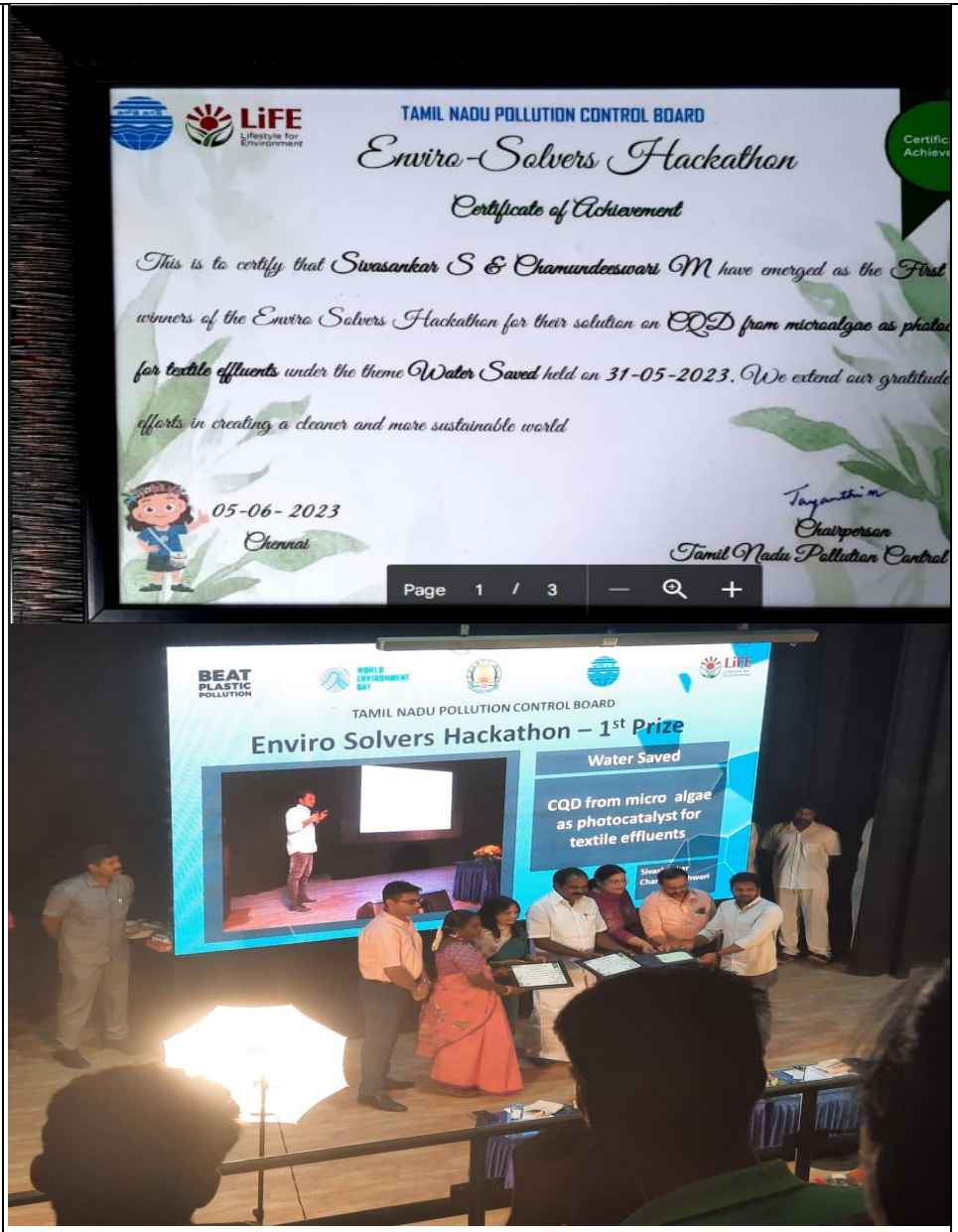
Kasinathan Cholapandian, Rajendran Naveenkumar & **Gurunathan Baskar**

Received 19 Jan 2023,Accepted 15 May 2023,Published online: 01 Jun 2023

Download citation https://doi.org/10.1080/17597269.2023.2215629 Check for updates

Paper published by Dr.G.Baskar

5.	**STAFF CONFERENCE PRESENTATION**  *Dr. G. Baskar certificate copy*	Dr. Baskar Gurunathan delivered the presentation on the topic of "Biofuels production from Marine macroalgae – A Biorefinery approach" in the international symposium on Advances in algal research (AAR-20203) was jointly organized by DTU (Copenhagen), CSIR-IICT (Hyderabad), GBPUAT (Pantnagar) at IIT Guwahati between 12-14 June, 2023. **Dr.M.Chamundeeswari** has won 1st prize of cash award Rs. 3Lakhs in a Hackathon entitled as **"Envirosolvers"** on 31/05/2023 organised by "The Tamilnadu Pollution Control Board, Guindy, Chennai. She has received prize on 06/06/2023 from the Tamilnadu State Minister Thiru S.V.Meyyanathan - Minister of Pollution Control Board and Climatic Change . Ms.Yuwvaranni.S has presented a paper in the ICAICEESS-2023, itled on Formulation of Green synthesized Iron nanospray as an effective Antimicrobial and Hemolytic agent in menstrual pad disposal – A novel approach on 9th June, 2023. Ms.Yuwvararanni.S has attended 1day online Faculty webinar Organized by American Society of Civil Engineers - India Section Southern Region. n association with Marine Technology Society - India Section. 05.06.2023



Dr.M.Chamundeeswari Certificate copy

Ms.S. Yuwvaranni certificate copy

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Ms.S. Yuwvaranni certificate copy

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	Event with Photo	Description
1	A one Day Event on **"IEEE Orientation"**	**Date** : 7.06.2023 **Venue** : Laurel **Nature of Event :** IEEE Orientation **Participants** : Engineering III year Students (CSE & ADS) **Organized by** : IEEE Computer society student chapter **Objective:** • To get exposure on benefits of becoming a IEEE member. **Outcome:** • Gained knowledge about the IEEE • Developed a fully functioning personal blog.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

1. Events conducted:

The following events have been conducted during June 2023 at College Level

1. IEEE Event	**Report**
	The members of the Institute of Electrical and Electronics Engineers Student Chapter (IEEE) from St. Joseph's College of Engineering was successful in conducting a technical event, GONNECT on behalf of the ECE department. The event was held on June 06th 2023, within the college premises exclusively for the IEEE members in IIIrd years. **Totally 45 students participated. There were around 15 teams, each team comprising of 3 members.** The event GO-NNECT was held in three rounds. The prelims round had tasks with medium level of difficulty. The points for each round increased as the difficulty got harder and harder. Around 6 teams were qualified for the finale. The team that pressed the buzzer first were given priority to answer the question. Innovative, thought provoking and inquisitive questions from various topics on the core subjects were asked. The final round was a bit harder and all the participants cracked them enthusiastically. The fastest players who answered the question correctly were declared the winners by the judge.
2. ISF - Distinguished Lecture	**Report**

	ISF at St.Joseph's College of Engineering, OMR, Chennai organized a Distinguished Lecture on June 9th , 2023 at AV Hall, Central Library. We had the privilege of hosting **Mr. M Deepan Raj**, Lead Data Scientist, HCL Technologies, Chennai. His lecture was on the topic "**Architectural Advancements in Deep Learning**". With his profound technical expertise, Mr. Deepan Raj delved into advanced AI algorithms, focusing on the practical applications of ML models in solving complex problems. He provided valuable insights into complex NLP models such as GPT, BERT. The members was captivated by his demonstrations of state-of – the- art ML frameworks like TensorFlow highlighting their ability to train deep neural networks for image classification tasks. ISF - SJCE is pleased to report that this event benefited **120** members.	
3. Guest Lecture – Future of IoT	**Report**	

	Department of ECE organized a guest lecture on Future of IoT on June 9th ,2023, 10.00AM at AV Hall. The guest lecture on AI integration in IoT explored the transformative potential of combining AI with IoT. Attendees gained insights into real time data analysis, predictive modelling and autonomous decision-making system. The lecture highlighted the applications of AI techniques in optimizing resource allocation, improving efficiency and enhancing user experience in various sectors. **Number of Students Benefitted: 190(III Year)**	
4. Career Guidance	**Report**	
	Department of ECE, organized a career guidance program for our final year students on June 9th, 2023, 1.00PM at AV Hall. The speaker emphasized the transformative potential of combining AI with IoT. The lecture covered various AI techniques such as Machine Learning, Deep Learning and Natural Language Processing. Emphasized the importance of AI in optimizing resource allocation and enhancing user experience in smart homes, cities, healthcare and industrial sectors. **Number of Students Benefitted: 190(IV Year)**	
5. OPTICA – YETENEK'23	**Report**	

	A fun-filled non-technical event for the Electronics and Communication Engineering Students titled "**YETENEK"** was organized by the department of ECE in association with the **OPTICA** student chapter on **12.06.2023**. The event started with a welcome speech and instructions on the rulesand regulations of the event. Nearly more than **120 students** participated from **III** and **IV** year students of **St.Joseph's College of Engineering of the department of ECE** and benefited. There were a total of 3 rounds. **8 Teams** got selected in the first round and moved onto the second round. Dr. B. Vasudevan**, Co-Ordinator of Optica STUDENT CHAPTER,** monitored and judged the entire event.
6. IEEE Event	**Report**
	The Student Chapter of the Institute of Electrical and Electronics Engineers (IEEE), St. Joseph's College of Engineering, Coordinated and conducted a technical event for the IEEE SBC members on 17th May 2022. The event kept all the audience engaged for three hours. The event was held in the AV hall, within the college premises. Dr. R. Avudaiammal, Ph.D., and Dr. K. Venkatesan, Ph.D., being the advisors of the IEEE student chapter of the department, headed the event. Around 60 IEEE members participated in the event. The students showed active participation. The event was based by brainstorming the so far known technical topics. The students expressed more enthusiasm and encouraged more upcoming events. Students who performed exceeding well were awarded with merit certificates.

2. FDP/Workshop:

The following staff members have participated in various FDP/Workshop conducted by other institutions during the

month of May at National/International level.

S. No.	Name of the Staff	FDP/ Workshop Program Title	Host Institution	Date	Duration
1.	Dr. J. Martin Leo manickam	AI for Intelligent Optical Communication Systems - Workshop	NIT. Trichy	31.5.2023	1 Day
2.	Dr.R.Avudaiammal	Cloud Computing Technology	C-DAC Office, Tidel Park, Chennai	08.05.2023 to 12.05.2023	5 days
3.	Dr.P.Ezhilarasi	Development of Entrepreneurship and Innovation	AMET University	29.05.23 to 09.06.2023	2 weeks
		Introduction To Industry 4.0 And Industrial Internet Of Things	IIT Bombay	JAN – APRIL 2023	16 weeks
4.	Dr.S.Rajeshkannan	Development of Entrepreneurship and Innovation	AMET University	29.05.23 to 09.06.2023	2 weeks
		Introduction To Industry 4.0 And Industrial Internet Of Things	IIT Bombay	JAN – APRIL 2023	16 weeks
5.	Dr.A.M.Balamurugan	Development of Entrepreneurship and Innovation	AMET University	29.05.23 to 09.06.2023	2 weeks
6.	Dr.J.Sivakumar	Development of Entrepreneurship and Innovation	AMET University	29.05.23 to 09.06.2023	2 weeks

3. Publications:

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

S. No.	Name of the Author	Paper Title	Name of the Conference/Journal	Publication Details	Date of Publication
1.	Devipriya S., Martin Leo Manickam J.	Outage Performance and Ergodic Capacity of User Pairing in Downlink MIMO-NOMA systems with Imperfect SIC Over Nakagami-m Fading Channels	IETE Journal of Research	Sci Indexed	June 2023
2.	Elaveni P, Shirley Selvan	Integrated mixture model and ensemble learning geographic object-based image analysis for road network extraction	Journal of Spatial Science	Sci Indexed	June 2023
3.	C. Narmadha , R. Muthuselvi , P.	Cloud-based Detection of Malware and Software Privacy Threats in	International Journal of Electronics and	Scopus Indexed	July 2023 to be

	Somasundari , G. Sivagurunathan , Malini K V , Sathishkannan	Internet of Things using Deep Learning Approach	Communication Engineering		indexed

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Sl. No.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)
1.	**Guest Lecture- IV year**  *Pic: Event photo*	**Date:** 24/06/2023, 11:00 am **TOPIC: "**Armored Fighting Vehicles -Electrical systems" **Guest:** Smt.R.Prabhavathy IEEE St. Joseph's College of Engineering Group organized "**A Guest Lecture**", which was presented by Smt. R. Prabhavathy On the topic of "**Armored Fighting Vehicles-Electrical Systems**". The event covered crucial ideas about armored vehicles and their Salient features. It is without an inch of doubt that the students greatly benefited from the wisdom that was imparted by the speaker. It also pushed the students to take action toward their dreams and goals and bring whatever was planned for them to fruition in the near future. Overall the session was useful for all the participants.
2.	**Guest Lecture- III year**  *PIC: EVENT PHOTO*	**Date:** 24/06/2023, 01:00 pm **TOPIC: "**Armored Fighting Vehicles -Electrical systems" **Guest:** Smt.R.Prabhavathy Explanation of Electrical system of Main battle tank(MBT) Students had an insight into the concept and development of arjun MBT MK1

3.	**Alumni Talk**  ***Pic: EVENT POSTER***	**Date:** 15/06/2023 **TOPIC:** How to build your career **Alumnus**: Mr. Abdul Ashik N, (Batch : 2016-2020) Co- Founder, Sytech IT Service & Solutions **OBJECTIVE:** Career building and motivating to IV year students.
4.	**Alumni Talk**  ***Pic: EVENT POSTER***	**Date:** 23/06/2023 **TOPIC:** Let us talk **Alumnus**: Mr. Amudhan S, (Batch : 2012-2016) Tech lead, Infosys Ltd **OBJECTIVE:** Open discussion on Career guidance to IV year students.
5.	**Alumni Talk**	**Date:** 26/06/2023 **TOPIC:** Confusion to clarity **Alumnus**: Ms. Dhivya Nandhini, (Batch : 2011-2015) Founder, Divine education Abroad Consultancy and change academy **OBJECTIVE:** Guidance to higher studies in abroad to IV year students.

	 *Pic: EVENT POSTER*	
6.	**INDUSTRIAL VISIT**  *PIC: EVENT PHOTO*	**he session was conducted by Wiztech Automation Solutions which was Organized by IEEE on** **A- June 20, 2023.** IV C- June 21, 2023. IV B- June 22, 2023. **he Students Of the IV Year acquired knowledge about PLC, SCADA, DCS, Embedded Systems, VLSI, and practical hands-on experience in PLC Automation. A total of 62 Students attended this Event. A Staff accompanied the Students throughout the session. The Session was filled with hands-on training.**

7.	**Yoga Workshop**  ***PIC: EVENT PHOTO***	**Date:** 21/6/2023 The Yoga workshop offered simple but powerful practices, to help eliminate lethargy and fostered mental clarity and focus.
8.	**Club activities**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's "**ROBOTICS CLUB** "organized an event "**ROBOCON"** on 03/06/23. Around 58 students participated in the event with enthusiasm and acquired knowledge also the winners received merit certificates.

9.	**Club activities**  ***Pic: EVENT POSTER***	Our department electrical and electronics engineering's **St. Joseph's ISTE Student Chapter** organized an event "**FUNKY FEST"** on 05/06/23. Around 36 students eagerly participated in the event and gained knowledge also the winners received merit certificates.
10.	**Club activities**  ***Pic: EVENT POSTER***	Our department electrical and electronics engineering's "**CHOPPERS CLUB** "organized an event "**TECHNOVATION"** on 08/06/23. Around 34 students participated in the event with keen interest and gained experience, also the winners received merit certificates.

11.	**Club activities**  *PIC: EVENT POSTER*	Our department electrical and electronics engineering's "**ELECTRICAL CLUB** "organized an event "**JUZZ ENERGY"** on 09/06/23. Around 38 students eagerly participated in the event and gained knowledge also the winners received merit certificates.
12.	**Club activities**  *PIC: EVENT POSTER*	Our department electrical and electronics engineering's "**ENSAV CLUB"** organized an event **"JUNE DAZE"** on 12/06/23. Around 40 students participated in the event with enthusiasm and acquired knowledge also the winners received merit certificates.

13.	**Club activities**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's "**SOCIAL AWARENESS CLUB** organized an event **"QUANTUM QUIVER"** on 15/06/23. Around 40 participated in the event with keen interest and gained also the winners received merit certificates.
14.	**Club activities**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's "**ENSAV CLUB** "organized an event "**FANTASTIC FIESTA"** on 16/06/23. Around 40 students eagerly participated in the event and gained knowledge also the winners received merit certificates.

15.	**Club activities**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's "**SOCIAL AWARENESS CLUB** "organized an event "**ELECTRO SPECTRA"** on 21/06/23. Around 40 students participated in the event with enthusiasm and acquired knowledge also the winners received merit certificates.
16.	**Club activities**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's "**CHOPPERS CLUB** "organized an event **"ELECTRIFYING"** on 26/06/23. Around 30 participated in the event with keen interest and gained experience also the winners received merit certificates.

17.	**Club activities**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's "**SOCIAL AWARENESS CLUB** "organized an event **"DEXTRIX"** on 27/06/23. Around 38 students participated in the event with enthusiasm and acquired knowledge also the winners received merit certificates.
18.	**ISTE Activity**  ***PIC: EVENT POSTER***	Our department electrical and electronics engineering's **St. Joseph's ISTE Student Chapter** organized a live seminar on **"INTRO TO QUANTUM COMPUTING"** by final year student **J. Blesso Abraham** on 24/06/23 which took place in the A.V hall, around 340 students attended the seminar and got benefited.

19.	**IEEE activities**  ***PIC: EVENT POSTER***	The IEEE Photonics Society of St.Joseph's College of Engineering Conducted 'Luminous Inception', a technical hybrid mode webinar for 3rd and 4th year EEE students on June 09, 2022. The event aimed to inspire and motivate students to explore the field of photonics and foster collaboration among enthusiasts and featured a keynote address by Dr. C. Arunachalaperumal, The current chairperson of The IEEE Photonics Society, Madras Section, highlighting the significance of photonics and its potential. The event saw the cumulative participation of 40 students over the Gmeet and Offline. The session was generally well received by the participants and was very informative. Participants were also allowed to interact with the speaker and got to resolve their queries regarding The Photonics Society and IEEE as a whole. E-Certificates were provided to all who participated in the event. The Student coordinators for this event were Sanjay S, Arisudan TH, Nithin Joel J, Srishakthi S R. Harini S, Soundhariya G, Abinesh G, Harish Goutham K U, Siva Malavan E S.
20.	**IEEE activities**  ***PIC: EVENT POSTER***	Date: 15th June,2023 IEEE St.Joseph's College of Engineering in collaboration with College Of Engineering,Munnar IEEE Student Branch organised a webinar session for a duration of one hour. The eminent speaker for the session was Dr.Biju K. Ms. Harini and Ms.Jasmine welcomed the speaker with a brief note of his achievements. The speaker kick started the session with an introduction about the power Electronics and its wide range of importance in the domain. He gave insights about the key features on specific topics related to the field, such as emerging technologies, design techniques, applications, and advancements in power semiconductor devices.. Ms. Jasmine , from our IEEE Student Branch handled the queries session effectively. The answers which was given by the speaker benefited the participants. Ms. Harini thanked the speaker for his presence and presentation and he was felicitated with a E-Momento. The session ended with a group photo session.

21.	**IEEE activities**  ***PIC: EVENT POSTER***	Alumni interaction session for final year students on June 3rd, 2023. This Session covered the main Objectives of IEEE and his Experience and achievements in IEEE. The session was conducted by 2023 passed-out alumni Mr. Tiruvel. He explained his volunteering experience in IEEE. Around 50 students participated in this session.
22.	**IEEE activities**  ***PIC: EVENT POSTER***	St. Joseph's College of Engineering Student Branch Chapter conducted a session to explain the upcoming events of IEEE for IEEE students on June 15th 2023. Our SB advisor Dr.Jayarama pradeep gave a fruitful talk about IEEE and also explained the upcoming events that was planned. Around 50 students participated in this session. From this session, students was about to know the upcoming events planned for them.

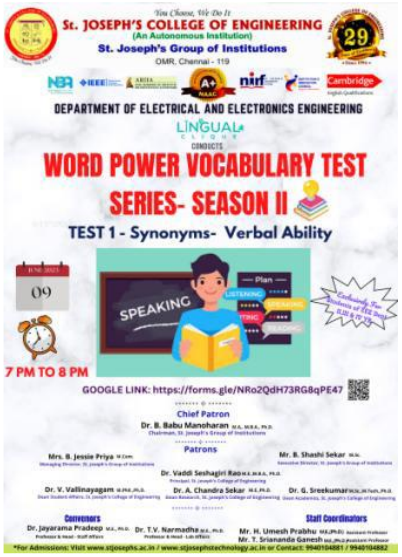
23.	**IEEE activities**  ***PIC: EVENT POSTER***	Date: 07/06/2023 IEEE Spectrum, is the world's largest professional organisation devoted to engineering and the applied sciences. It contains peer-reviewed feature articles pertaining to technology and science trends affecting business and society. This spectrum was conducted to enlighten the young minds and some skillful knowledge out of it. The speaker **Mr. A. Alex** spoke on the "Floating Wind Farms Aim for Open Ocean".The speaker enlightened us with the idea that "To address this issue, Hu's team designed a hybrid approach, which relies on both the internal machine windings and external bleeder circuits to achieve the quick and safe discharge. The participants had an amazing experience in the meet and enjoyed the entire session.
24.	**IEEE activities**  ***PIC: EVENT POSTER***	Date: 08/06/2023 IEEE Spectrum, is the world's largest professional organisation devoted to engineering and the applied sciences. It contains peer-reviewed feature articles pertaining to technology and science trends affecting business and society. This spectrum was conducted to enlighten the young minds and some skillful knowledge out of it. The speaker Mr. Dhyaneshwar E spoke on the "Floating Wind Farms Aim for Open Ocean". The speaker enlightened us with the idea that "With nothing in their path to slow them down, winds over the ocean can consistently blow at higher speeds than is possible on land. This makes them attractive to harness for electricity. The participants had an amazing experience in the meet and enjoyed the entire session.

25.	**IEEE activities**  ***PIC: EVENT POSTER***	12/06/2023 IEEE Spectrum, is the world's largest professional organisation devoted to engineering and the applied sciences. It contains peer-reviewed feature articles pertaining to technology and science trends affecting business and society. This spectrum was conducted to enlighten the young minds and some skillful knowledge out of it. The speaker **Mr. F. Jaison Alexander** spoke on the "**Open Source Eyewear Is AR without walls?**". The speaker enlightened us with the idea that "Monocle offers a small, 640-by-400-pixel micro OLED display and a slim 20-degree field of view, limitations that make the visual experience inferior to alternatives with a wider field of view." The participants had an amazing experience in the meet and enjoyed the entire session.
26.	**IEEE activities**  ***PIC: EVENT POSTER***	16/06/2023 IEEE Spectrum, is the world's largest professional organisation devoted to engineering and the applied sciences. It contains peer-reviewed feature articles pertaining to technology and science trends affecting business and society. This spectrum was conducted to enlighten the young minds and some skillful knowledge out of it. The speaker **Mr. N. Rupesh** spoke on the "**How DNA, AI Facial Reconstruction, and Sheer Grift Cracked a 75- Years old Cold Case".** The Speaker enlightened us with the idea that "Police distributed a photograph, but no one came forward to claim the body. Eyewitnesses reported having seen the man, whom the newspapers dubbed the Somerton Man and who appeared to be in his early 40s, lying on the beach earlier, perhaps at one point moving his arm, and had concluded that he was drunk. The place of death led the police to treat the case as a suicide, despite the apparent lack of a suicide note."The participants had an amazing experience in the meet and enjoyed the entire session.

27.	**IEEE activities**  ***PIC: EVENT POSTER***	26/06/2023 IEEE Spectrum, is the world's largest professional organisation devoted to engineering and the applied sciences. It contains peer-reviewed feature articles pertaining to technology and science trends affecting business and society. This spectrum was conducted to enlighten the young minds and some skillful knowledge out of it. The speaker **Ms. M. J. Jayavarshini** spoke on the "**Machine Learning turns up COVID**". The speaker enlightened us with the idea that "A hospital visit can be boiled down to an initial ailment and an outcome. But health records tell a different story, full of doctors' notes and patient histories, vital signs and test results, potentially spanning weeks of a stay. In health studies, all of that data is multiplied by hundreds of patients. It's no wonder, then, that as AI data processing techniques grow increasingly sophisticated, doctors are treating health as an AI and big-data problem." The participants had an amazing experience in the meet and enjoyed the entire session.

28.	**IEEE activities**  ***PIC: EVENT POSTER***	The IEEE SJCE SB Maanavar Mandram and IEEE SJCE SB Women In Engineering of St. Joseph's College of Engineering collaborated and conducted a quiz event **"Tamil Thedal"** on 23rd June 2023 between 10 am to 11:30 am. In that event, We conducted three rounds and at the end of the final round three teams were selected and honoured by certificate. Overall, 60 people registered through the registration form and 50 of them participated in the event. The best three were given winners certificates and the others were provided with participation certificates, the 1 st prize won by Shreya and Shamrutha, the first runner up were Bharathraj and Gokul Kumar and the second runner up were Navina and Abinaya. Through this collaboration events, new ideas were implemented by the organizing team to the participants and the participants could experience a different session than a normal events. The student coordinators for this event are Deepika U, Jamuna U, Abinaya Priya R A,Madhu Malani M K,Kaviya P ,Sunil Kumar M,Jayavarshini M J, Harini N, Adirai D, Kanimozhi G, Madhumitha S,Shiva D .
29.	**Placement club activities**  ***PIC: EVENT POSTER***	**Date**: 16/06/2023 **Title:** Screening test Conducted Screening test to all final Year students. **Objectives**: Identify the strength and weakness of the students

30.	**Placement club activities**  ***PIC: EVENT POSTER***	**Date:** 21/06/2023 **Title**: Placement club training Bright Byte Coders Club Given hands on session on Pointers, looping, Operators, Structures and Union, Functions and Recursion. **Objectives**: To improve the coding skills of the students
31.	**Placement club activities**  ***PIC: EVENT POSTER***	Lingual Clique 22/06/2023 Communication Club Training Carried out Group discussion to all the students by segregating students into 10 batches

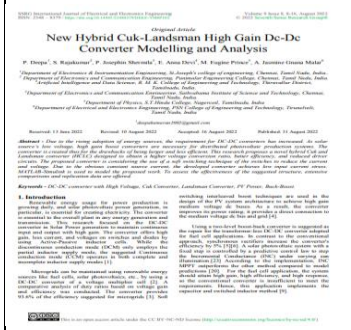
32.	**Placement club activities**  ***PIC: EVENT POSTER***	Electric Kernal Club 23/06/2023 Core Club Traning Explanation given on fundamental concepts for core company placements.
33.	 ***PIC: EVENT POSTER***	**Date**: 09/06/2023 & 17/06/2023 Title: ENGLISH VOCABULARY TEST SERIES-II Objective: Students get some insight about preparing for Higher studies competitive exams such as TOEFL, IELTS,GRE, etc. Online tests are conducted to make students aware of some English vocabulary parts which are important in preparing for competitive exams for doing higher studies in India and abroad.

34.	 ***PIC: EVENT POSTER***	**Date:** 19/06/2023 **Title**: GATE CARNIVAL SEASON- IV GATE-2024 Preparation Test Series **Objective:** Encourage student to write GATE 2024, to enter into PSU, IIT's, NIT's.
35.	 ***PIC: EVENT POSTER***	**Date:** 23/06/2023 **Title:** "A Scrutiny to Sculpt Your Destiny" **Objective:** Resume Building Students were able to get ideas on successful resume building and how to express their professional profile and skills vide a resume.

36.	 ***PIC: EVENT POSTER***	**Date:** 28/06/2023 **Title:** Exploring Opportunities beyond campus Seeking Job Opportunities Students were able to get ideas on using social media professional platforms to seek jobs.
37.	 ***PIC: EVENT POSTER***	Date: 03/06/2023; 02:20 to 03:00 pm Discussing activities done during the previous academic year. Suggestions given to the students on how to improve the performance during the upcoming academic year.

38.	 ***PIC: EVENT POSTER***	Placement Empowerment program **Date**: 08/06/2023 INNOVATIONS IN ELECTRIC VEHICLES Why do EV? Innovations in Battery Technology.
39.	PLACEMENT DETAILS FOR THE MONTH OF JUNE 2023	**2019-2023 Batch** Total No of students placed = 122 UG + 4 (PG) =126 Students Total No of Offers = 185 + 03 (PG) = 188 Offers % of students Placed (UG) = 126/144 = 87.5 % % of students Placed (PG) = 04/06 = 66.66% No of students having single offers = 79 + 04 (PG) No of students having Double offers = 28 No of students having Triple offers = 13 No of students having Quadruple offers = 02 **2020-2024 Batch** Total No of students placed = 5 UG =5 Students Total No of Offers = 5 = 5 Offers No of students having single offers = 5 No of students having Double offers = No of students having Triple offers = No of students having Quadruple offers =

DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING

<table>
<tr><th>Sl. No.</th><th>Title</th><th>Detail</th></tr>
<tr><td>I</td><td>Journal Publication</td><td>
<table>
<tr><th>S.No</th><th>Name of Authors</th><th>Title of the paper</th><th>Published Month and year</th><th>Journal Name and proof link</th></tr>
<tr><td>1.</td><td>P. Deepa, S. Rajakumar, P. Josephin Shermila, E. Anna Devi, M. Eugine Prince, A. Jasmine Gnana Malar</td><td>New Hybrid Cuk-Landsman High Gain Dc-Dc Converter Modelling and Analysis</td><td>AUGUST 2022</td><td> 
Original Article
New Hybrid Cuk-Landsman High Gain Dc-Dc Converter Modelling and Analysis</td></tr>
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<tr><td>II</td><td>Patent</td><td>
<table>
<tr><th>S.No</th><th>Faculty Name</th><th>Published date</th><th>Published/Granted/Revenue generatedPatent Ready to apply</th><th>Type (patent Or copyrights)</th><th>Proof</th></tr>
<tr><td>1.</td><td>R. Sivakumar</td><td>16/06/23</td><td>Published</td><td>Patent</td><td> 
(12) PATENT APPLICATION PUBLICATION
(54) Title of the invention : EDU GO: A VISUAL POSITIONING SYSTEM-BASED AUGMENTED REALITY NAV GUIDE FOR EDUCATIONAL INSTITUTIONS</td></tr>
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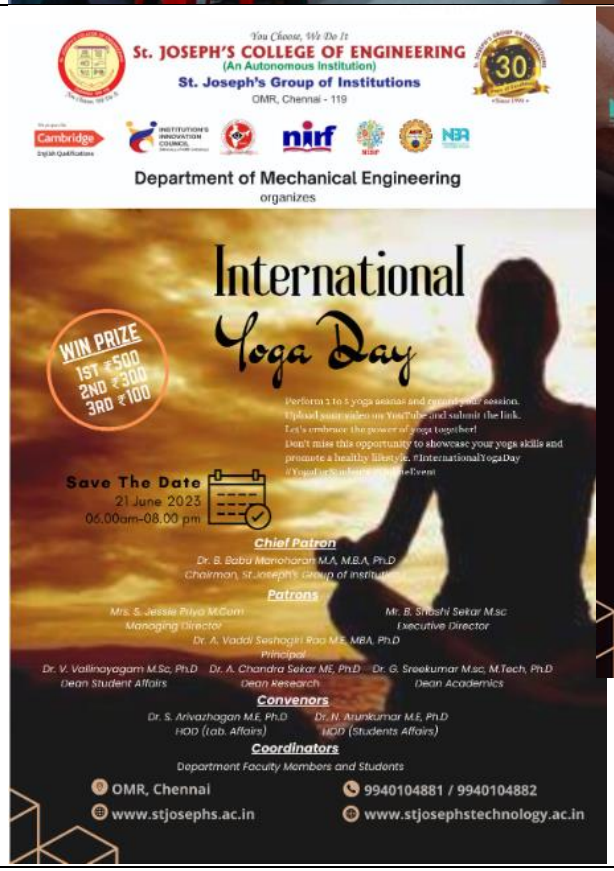
DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name of the Activity	Remarks
1		Faculties Visited Industry founded by Alumni Mr.V.M.K.Shanmugan(2006-10) Mr.K.Gangatharam(2011-15)
2	**NGO Activities:**  	II Mech C visited Thiruvalluvar Gurukulam, Uthiramerur. & III Mech B visited Annai Theresa welfare trust-Thiruvotriyur in the month of June 2023

3	 	IV year B Section Visited AGIIT.Students had a brief view on various robots used in the industry on 23 June 2023.
4.		**Alumni Interaction:** Mr.Jose Samuel sasthrigal (Batch :2015-19) Interacted with the students on 22/06/23

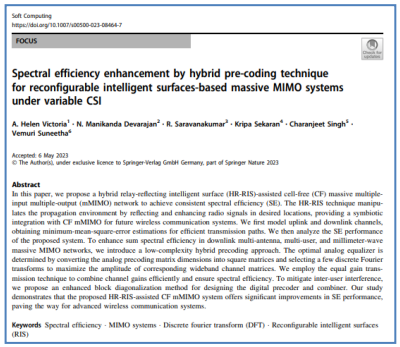
			
5	 	Various Programs was organized to encourage the school students on the eve of International Yoga day, World Refugee Day . SAE Chapter organized an event called Gearage**.**

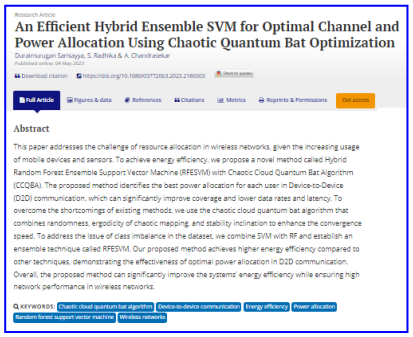
6		CAD/3D Printing lab was inaugurated on 22 June 2023 to empower the students in the field of 3d printing.
7		Our Alumni Mr. Kashyap Suresh gave a seminar for third year students at placement block on 19 June 2023

DEPARTMENT OF SCIENCE

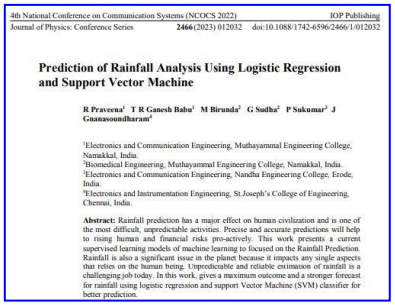
Sl. No.	Events	Remarks
1	**FDP/Workshop/Conference**	1. Dr. T.L. Ajeesha attended National FDP on "Research Funding opportunities" conducted by "SRM TRP Engineering College -Tiruchirappalli" held on 23.06.23. 2. Dr. B. Subash attended online workshop on "Analytical Software – EIS Spectrum Analyser & Mathematica" conducted by "Vellore Institute of Technology - Chennai" held on 25.05.23. (Certificate received in the month of June). 3. Dr. N.R. Rajagopalan, Dr. J. Sharmila attended National FDP on "Polymer Composites For Engineering Applications (PCEA-2023)" conducted by "B.M.S. College of Engineerig, Bengaluru" held between 22.5.23 and 26.5.23. (Certificate received in the month of June).
2	**Awards/Prize won by students / Staff**	***Reviewers:*** Dr. K. Jayamoorthy has acted as reviewer for the following reputed journals. 1. Journal of Flourescence (2 articles)– June 2023 2. Current Organic Chemistry (2 articles) – June 2023 3. Environmental Advances – June 2023 ***Editors*** Dr. K. Jayamoorthy has acted as Editor for the "Journal of New Developments in Chemistry".
3	**Publications(only published) details**	1. Dr. N. Punitha, Dr. K. Jayamoorthy published a paper titled "Investigations on capping-induced changes in structural, optical, and thermal properties of Zn0.96Ni0.04S nanoparticles" in the "Journal of Energy Storage" https://doi.org/10.1016/j.chphi.2023.100260" ***Patents:*** 1. Dr. S. Rama, Dr. P. Saravanan, Dr. A. Uma Devi, Dr. J. Sharmila, Ms. S. Savitha, Dr. G. Sasikumar published a patent titled "Zinc oxide Nanostructures based Electrochemical Biosensor for Detection of Hydrogen peroxide Analysis" dated 23.6.23 – application number 202341033460 A – Vol 25/2023.

DEPARTMENT OF INFORMATION TECHNOLOGY

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
1	 **Co-author: Kripa Sekaran** Published a paper in SCIE Journal	**Staff Paper Publication** A. Helen Victoria, N. Manikanda Devarajan, R. Saravanakumar, **Kripa Sekaran**, Charanjeet Singh, Vemuri Suneetha, "Spectral efficiency enhancement by hybrid pre-coding technique for reconfigurable intelligent surfaces-based massive MIMO systems under variable CSI" , Soft Computing, Publisher: Springer, E ISSN: 1433-7479, Print ISSN: 1433-7479, https://doi.org/10.1007/s00500-023-08464-7, May 2023**.(Indexed in Scopus and SCIE, Impact factor: 3.732)** **Abstract:** In this paper, we propose a hybrid relay-reflecting intelligent surface (HR-RIS)-assisted cell-free (CF) massive multiple-input multiple-output (mMIMO) network to achieve consistent spectral efficiency (SE). The HR-RIS technique manipulates the propagation environment by reflecting and enhancing radio signals in desired locations, providing a symbiotic integration with CF mMIMO for future wireless communication systems. We first model uplink and downlink channels, obtaining minimum-mean-square- error estimations for efficient transmission paths. We then analyze the SE performance of the proposed system. To enhance sum spectral efficiency in downlink multi-antenna, multi-user, and millimeter-wave massive MIMO networks, we introduce a low-complexity hybrid precoding approach. The optimal analog equalizer is determined by converting the analog precoding matrix dimensions into square matrices and selecting a few discrete Fourier transforms to maximize the amplitude of corresponding wideband channel matrices. We employ the equal gain transmission technique to combine channel gains efficiently and ensure spectral efficiency. To mitigate inter-user interference, we propose an enhanced block diagonalization method for designing the digital precoder and combiner. Our study demonstrates that the proposed HR-RIS- assisted CF mMIMO system offers significant improvements in SE performance, paving the way for advanced wireless communication systems.

2	 **Author:** **Dr.S. Duraimurugan** Published a paper in SCIE Journal	**S. Duraimurugan**, S. Radhika, A. Chandrasekar, "An Efficient Hybrid Ensemble SVM for Optimal Channel and Power Allocation Using Chaotic Quantum Bat Optimization", IETE Journal of Research, Publisher: Taylor and Francis, Print ISSN: 0377-2063, E ISSN: 0974-780X, doi.org/10.1080/03772063.2023.2186503, May 2023. **(Indexed in Scopus, SCIE and WOS, Impact factor: 2.333)** **Abstract:** This paper addresses the challenge of resource allocation in wireless networks, given the increasing usage of mobile devices and sensors. To achieve energy efficiency, we propose a novel method called Hybrid Random Forest Ensemble Support Vector Machine (RFESVM) with Chaotic Cloud Quantum Bat Algorithm (CCQBA). The proposed method identifies the best power allocation for each user in Device-to-Device (D2D) communication, which can significantly improve coverage and lower data rates and latency. To overcome the shortcomings of existing methods, we use the chaotic cloud quantum bat algorithm that combines randomness, ergodicity of chaotic mapping, and stability inclination to enhance the convergence speed. To address the issue of class imbalance in the dataset, we combine SVM with RF and establish an ensemble technique called RFESVM. Our proposed method achieves higher energy efficiency compared to other techniques, demonstrating the effectiveness of optimal power allocation in D2D communication.

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
3	 **Co-author:M. Nivethithadevi published a paper in Scopus Indexed Conference**	N Jeyaprakash; **M. Nivethithadevi**; A Vignesh; L Vignesh; T D Sudhakar, "Detection of Real Time Face Mask using Convolutional Neural Network", International Conference on Electrical Energy Systems, Publisher: IEEE, DOI: 10.1109/ICEES57979.2023.10110053, E ISBN:979-8-3503-4803-3,Print ISBN:979-8-3503-4804-0, May 2023. **(Indexed in Scopus).** **Abstract:** In recent years, the global pandemic like COVID - 19 has changed the lifestyle of people. Wearing face mask is must in order to stay safe and healthy. This paper presents a real-time face mask detector which identifies whether a human is wearing a mask or not. Moreover, this system can also recognize the person wearing a face mask inappropriately or wear other things except a face mask. The proposed algorithm for face mask detection in this system utilizes Haar cascade classifier to detect the face and Convolutional Neural Networks to detect the mask. The whole system has been demonstrated in a practical application for checking people wearing face mask.
4	 **Author:** **D. Dinesh Kumar** Published a paper in WOS Journal	**D. Dinesh Kumar,** A. Balamurugan, K. C. Suresh, R. Suresh Kumar, N. Jayanthi, T. Ramakrishnan, S. K. Hasane Ahammad, S. Mayakannan,and S. Venkatesa Prabhu, "Study of Microstructure and Wear Resistance of AA5052/B4C Nanocomposites as a Function of Volume Fraction Reinforcement to Particle Size Ratio by ANN", Journal of Chemistry, https://doi.org/10.1155/2023/2554098, pp. 1-12, 2023. **(Indexed in Scopus and WOS)** **Abstract:** The effects of the percentage volume of reinforcement, the ratio of reinforcement, and the matrix size of particles on the wear behavior of AA5052/B_4C metal matrix composites (MMCs) examine. This research examines a model function developed from an artificial neural network (ANN). AA5052/B_4C composites bent using a powder metallurgy technique to hardness and ball-on-disc wear testing. There are two exemptions such as (1) when the percentage volume of reinforcement is less than 8% and (2) when the ratio of reinforcement particle size (Rs) and matrix particle size (Ms) increases before decreasing. The results show that wear loss decreases with increasing percentage volume of reinforcement and ratio of Rs and Ms. In the second case, wear loss is increased at high levels of percentage volume (14%) since the proportion of reinforcement and matrix size of the particle is close to 1. When the volume percentage of reinforcement is high (14%) and the matrix and reinforcement particle sizes are substantial (120 m), the reinforcement particles become dislodged and break. Because these broken-up particles are easily removed from the surface, the material's wear resistance is reduced. In this case, raising the volume fraction yields a uniformly higher hardness for all Rs/Ms values; hence, composites with lower reinforcement volume percentages show better wear resistance. Hardness and wear resistance have no relationship with one another.

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
5	 **Co-author: D. Logeshwari published a paper in Scopus Indexed Conference**	M. Suguna, M. Mohan, J. Srikanth, M. Suresh; P G. Banupriya, D. **Logeshwari**, "Detection of EDoS attacks in SDN-based Cloud Model using Deep Learning based SDPN Technique", Proceedings of the 3rd International Conference on Smart Technologies in Computing, Electrical and Electronics, Publisher: IEEE, E ISBN:978-1-6654-5664-7, Print ISBN:978-1-6654-5665-4, doi.10.1109/ICSTCEE56972.2022.10099583, 2022. **(Indexed in Scopus)** **Abstract:** Offering IT services to businesses and consumers via the cloud is increasingly seen as the most cost-effective model. But it is vulnerable to emerging flaws. In particular, a recently identified form of attack known as an economic-denial-of-sustainability (EDoS) takes advantage of the pay-per-use model to gradually increase the utilisation of the cloud's resources, forcing the customer to fork over further money. Therefore, in this learning, we present a novel method for detection and mitigating EDoS assaults in the SDN-based cloud computing setting utilising a Stack Deep Polynomial Network (SDPN). First, the SDPN learns precise representations of multivariate time sequence in order to imitate the typical patterns. Then, the reconstructed input data is compared to the original. Finally, the probabilities derived from the reconstruction process may serve as both a tool for detecting outliers and a source of insight into what those outliers could mean. Existing systems often utilise a hard threshold to examine the anomalies, which leads to growing mistake rates; in contrast, the suggested scheme introduces a threshold value utilising SDPN to lower error rates. When likened to other solutions and our past work, the findings of this extensive analysis indicate remarkable performance.
6	 **Co-author: J. Gnanasoundharam published a paper in Scopus Indexed Conference**	R. Praveena, T R. Ganesh Babu, M. Birunda, G. Sudha, P. Sukumar, **J. Gnanasoundharam**, "Prediction of Rainfall Analysis Using Logistic Regression and Support Vector Machine", Publisher: IOP Publishing, 4th National Conference on Communication Systems (NCOCS 2022), Journal of Physics: Conference Series, doi:10.1088/1742-6596/2466/1/012032, Vol 2466, No. 1, 2023. **(Indexed in Scopus)** **Abstract:** Rainfall prediction has a major effect on human civilization and is one of the most difficult, unpredictable activities. Precise and accurate predictions will help to rising human and financial risks pro-actively. This work presents a current supervised learning models of machine learning to focused on the Rainfall Prediction. Rainfall is also a significant issue in the planet because it impacts any single aspects that relies on the human being. Unpredictable and reliable estimation of rainfall is a challenging job today. In this work, gives a maximum outcome and a stronger forecast for rainfall using logistic regression and support Vector Machine (SVM) classifier for better prediction.

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7	 **Kripa Sekaran and Dr. L. Sherly Puspha Annabel published a paper in Scopus Indexed Conference**	**Kripa Sekaran and L. Sherly Puspha Annabel**, "A Deep Learning Based Model for Defect Prediction in Intra-Project Software," 2023 7th International Conference on Trends in Electronics and Informatics (ICOEI), Tirunelveli, India, publisher: IEEE, E ISBN: 979-8-3503-9728-4, Print ISBN: 979-8-3503-9729-1, doi: 10.1109/ICOEI56765.2023.10126014, pp. 1148-1155, 2023**.(Indexed in Scopus)** **Abstract:** Testing of software ensures the supply of meaningful software and hence prediction of defects in producing high quality software has become an inevitable one. Software defect prediction's main aim is to find out various bugs present in software and focus on testing efforts. Many of existing software defect prediction frameworks are much simple, making it difficult for developers to get detailed reference information. Nowadays, many deep learning models, like the Radial Base Functional Neural Network(RBF) and the Convolutional Neural Network (CNN), are applied to features which are created automatically from deep learning models and abstract syntax trees (AS Ts) to aid in the improved performance of predicting defects. But the results generated using RBF and CNN algorithms are not able to provide much accuracy due to its restricted size of dataset and improper baseline selections. To resolve these state-of-the-art problems, we have constructed a dataset taken from various defect datasets namely the Kamei Dataset, NASA Dataset and the PROMISE Source Code (PSC) dataset. In this research, the dataset is named as Combination Defect Analysis Dataset (CDA). Then, an Enhanced Convolutional Neural Network (ECNN) model is proposed for predicting defects in Intra-Project software (IPDP) and associated results to different models. Experimental results implied that Enhanced CNN(ECNN) model is efficient compared to the other associated models, along with it outclassing the other machine learning models suggested for IPDP.
8	 **Dr. C. J. Raman** Published a patent (India patent)	**<u>Patent Published</u>** **Title of the invention :** AI-assisted Image Recovery for Low-Dose CT Scans **Name of Inventor :** 1. Ms. S. Jayachitra 2. Dr. A. Prasanth 3. Dr. Sandeep Chinta 4. Dr. K. Abhimanyu Kumar Patro 5. **Dr. C. J. Raman** 6. Mr. G. Inbasakaran 7. Dr. K. Kalyani 8. Dr. D. Gouse Peera 9. Mr. Raju Bura 10. Ms. J. Jayalakshmi **Patent Application Number:** 202341031272 A **Date of filing of Application : 2/5/2023** **Publication Date**: 16/6/2023

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
9	 Office of the Controller General of Patents, Designs & Trade Marks Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India INTELLECTUAL PROPERTY INDIA Application Details APPLICATION NUMBER 202341030541 APPLICATION TYPE ORDINARY APPLICATION DATE OF FILING 28/04/2023 APPLICANT NAME 1 . Dr. S Uma Shankari 2 . Mr. P Vishnu Kumar 3 . R. Shanthi 4 . Dr. P. Thilagavathi 5 . Mr. Hiteshkumar Patel 6 . Mr. Kapil Surani 7 . Mr. Sarbojit Mukherjee 8 . Mr. Sandeep Kumar Mathariya 9 . Mrs. M. Shiva Shankari 10 . Mr. Neeraj Prakash Kulkarni 11 . Mr. Priyank Udaybhai Trivedi 12 . Dr. Kannadasan B 13 . Dr. V. Kannan 14 . Mr. J. Logeshwaran TITLE OF INVENTION IOT BASED AUTOMOBILE VEHICLE SPEED DETECTION AND CONTROL FIELD OF INVENTION ELECTRONICS E-MAIL (As Per Record) arinnapatent@gmail.com ADDITIONAL E-MAIL (As Per Record) E-MAIL (UPDATED Online) PRIORITY DATE REQUEST FOR EXAMINATION DATE -- PUBLICATION DATE (U/S 11A) 26/05/2023 **Dr. P. Thilagavathi** Published a patent (India patent)	**<u>Patent Published</u>** **Title of the invention :** IOT based Automobile Vehicle Speed Detection and Control **Name of Inventor :** 1 . Dr. S Uma Shankari 2 . Mr. P Vishnu Kumar 3 . R. Shanthi **4 . Dr. P. Thilagavathi** **5** . Mr. Hiteshkumar Patel 6 . Mr. Kapil Surani 7 . Mr. Sarbojit Mukherjee 8 . Mr. Sandeep Kumar Mathariya 9 . Mrs. M. Shiva Shankari 10 . Mr. Neeraj Prakash Kulkarni 11 . Mr. Priyank Udaybhai Trivedi 12 . Dr. Kannadasan B 13 . Dr. V. Kannan 14 . Mr. J. Logeshwaran **Patent Application Number:** 202341030541 **Date of filing of Application :** 28/04/2023 **Publication Date**: 26/05/2023

10

Sample Certificate

STUDENTS ONLINE CERTIFICATION REPORT

426 online certifications have been obtained by our students from some of the reputed online course platforms.