APRIL 2023
DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	**PUBLICATIONS(ONLY PUBLISHED) DETAILS**	**Dr.M.Chamundeeswari and Ms.S. Yuwvaranni** Published patent titled "Hemolytic nature of green synthesized iron nanoparticle against menstrual blood" dated 29.4.2023 (Application No: 202341023108) **Dr.C.Karthik** received a certificate of excellence in reviewing from the Asian Journal of Research in botany **Dr.C.Karthik** received a certificate of excellence in reviewing from the Asian Journal of Research in biochemistry

Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

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

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

Application Details	
APPLICATION NUMBER	202341023108
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	29/03/2023
APPLICANT NAME	1 . Ms. YUWVARANNI .S 2 . MS. SRUTHI R 3 . MS. MADHU VARSHA S A 4 . DR. M. CHAMUDEESWARI
TITLE OF INVENTION	HEMOLYTIC NATURE OF GREEN SYNTHESIZED IRON NANOPARTICLES AGAINST MENSTRUAL BLOOD
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	yuwvarannis@stjosephs.ac.in
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	29/03/2023
PUBLICATION DATE (U/S 11A)	21/04/2023

Copy of patent published by Dr.M.Chamundeeswari and Ms.S. Yuwvaranni

Asian Journal of Research in Botany

(Indexing: Ebsco, Proquest, Index Copernicus, Google Scholar)

2023

Certificate No: SDI/HQ/PR/Cert/98484/DRC

Certificate of Excellence in Reviewing

awarded to

Dr. C. Karthik

St. Joseph's College of Engineering, India

in recognition of an outstanding contribution to the quality of the journal.

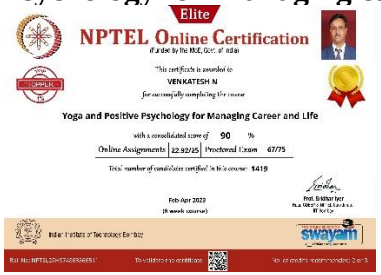
Date: 6-Apr-2023

Dr. M Basumondal
Chief Managing Editor

Copy of certificate Dr.C.Karthik

Copy of certificate Dr.C.Karthik

DEPARTMENT OF CHEMICAL ENGINEERING

S.No.	Title of the Events and Photographs	Details of the Event
	VALUE ADDED COURSES	- **Dr. Venkatesh.N, Professor** has completed a NPTEL cource on "**Yoga and Positive Psychology for Managing carrer and life**"  Elite NPTEL Online Certification This certificate is awarded to VENKATESH N for successfully completing the course Yoga and Positive Psychology for Managing Career and Life with a consolidated score of 90 % Online Assignments 22.92/25 | Proctored Exam 67/75 Total number of candidates certified in this course: 1419 Feb Apr 2023 (8 week course) swayam -**Dr.Sujatha.S, Assistant Professor**, has Completed a NPTEL Cource on "**Biomass Conversion and Biorefinery** "  Elite NPTEL Online Certification This certificate is awarded to DR SUJATHA S for successfully completing the course Biomass Conversion and Biorefinery with a consolidated score of 61 % Online Assignments 16.66/25 | Proctored Exam 48.88/75 Total number of candidates certified in this course: 486 Jan Apr 2023 (12 week course) swayam
	AWARDS/PRIZE WON BY STUDENTS	i. **Mrs. Ananya Munnangai**, IIIrd Year Chemical has been recognised as **NPTEL Discipline Star** award for the month of **Jan-April 2023**.  CERTIFICATE OF APPRECIATION TO ANANYA MUNNANGI Chemical Engineering for being recognized as NPTEL DISCIPLINE STAR JAN-APR 2023 NPTEL swayam

	PUBLICATIONS(ONLY PUBLISHED) DETAILS	**-Mr.Anand Kumar, Assistant Professor,** along with **Mr.Mohamed Arshath.S, IVth year,** and **Mr.Sahaya Michael Hayden R , IIIrd Year.** Published a journal "*Generation of Bio-Hydrogen by Chemical Looping water splitting and Pyrolysis: Role of Catalyst and Recent Advancements*" on **Ethiopian Journal of Applied Science and Technology**.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

1. Publications:

The following staff members have published the research papers during April in Journal at International Level

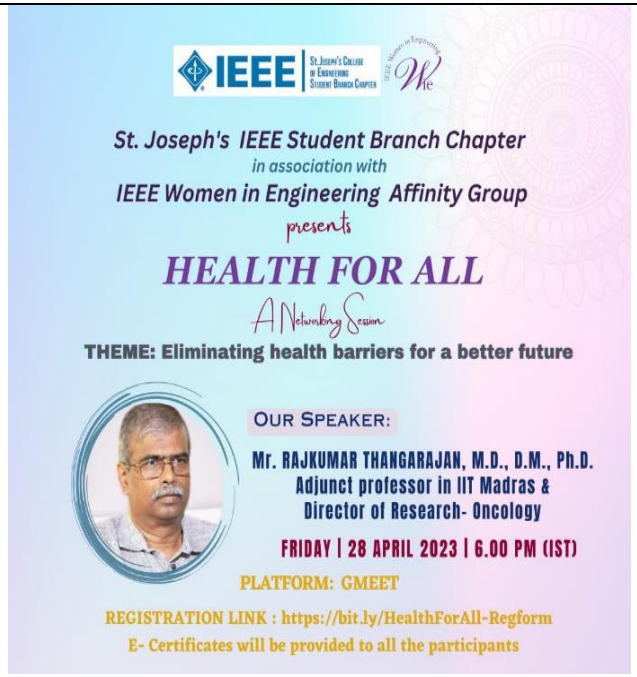
S. No.	Name of the Author	Paper Title	Name of the Conference/Journal	Publication Details	Date of Publication
1.	Shirley Selvan , K. Jaspin, Vaishali	CAD of Brain Abnormalities in MRI Imaging using Texture features	IconDeepCOM-2023	-	April 2023

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

S.No	Events	Remarks
1.	 *PIC: IEEE EVENT POSTER*	The IEEE Power and Energy Society of St. Joseph's College of Engineering hosted a virtual "ATLAS FUTURE!" event. The event occurred on April 16, 2023 on the occasion of 6th IEEE PES DAY 2023 on the theme of "Powering a Climate Safer Future!" Participant's knowledge is tested during the quiz event. This event mainly focusses on the better climate for safer future. Winners are chosen based on the number of correct answers they provide. Winners and participants will receive E-certificates.

2.	 ***PIC: IEEE EVENT POSTER***	Bookaholic was organized by IEEE SJCE SBC under IEEE Robotics and Automation Society for the college students. The event was conducted in Google form. It is a amazing quiz event Conducted for students to make them to know about books and its benefits, conducted on 29th april 2023. Over 18 students participated in it and are benefited. E-Certificates are distributed to the participants. Student Coordinators G.Aparnaa, R.Gokul Kumar,V.Rakshit Roshan,B.Santhosh ,N.Rupesh,T.Sujitha coordinated the event with Mr. R. Sreekanth, IEEE SB Counselor."
3.	 ***PIC: IEEE EVENT POSTER***	The IEEE Power and Energy Society of St. Joseph's College of Engineering hosted a virtual webinar "WEBCAST" event. The event occurred on April 23, 2023 on google meet. The webinar's primary goals are to educate participants about the power and energy industries and to connect them with experts. "Electric vehicle charging infrastructure" is the subject of the webinar, which was presented by Mr P. Sivaraman M.E., a senior member of IEEE. The webinar is quite participatory and engrossing, and it concludes with a question-and-answer session.

4.	 ***PIC: IEEE EVENT POSTER***	The IEEE Power Electronics Society of St Joseph's College of Engineering hosted an event called "DFEPICTION", a TECHNICAL EVENT. The event was conducted on 29.04.2023. In this event, participants were provided with a link of a google form in which an image is attached. The participants are instructed to identify the electronics items that are present in the image and are asked to brief the usage, working and applications of the identified electronics items. The winner is selected based on the best description. E-certificate were given to the winners and participants.

5.	 ***PIC: IEEE EVENT POSTER***	The "HEALTH FOR ALL" is a networking session conducted by IEEE WIE Affinity group St. Joseph's College of Engineering on 28th April 2023. A total of 50 Participants attended the session. The Presenter Dr. Thangarajan Rajkumar, Adjunct professor in IIT Madras and Director of Research - Oncology, enthusiastically started the session with a note on awareness about the ill effects of using tobacco among the youngsters and answered all the questions posted from the participants . Also he discussed many unexplored aspects of breast cancer. Finally, he covered diets and fitness routines.The speaker receives an E-memento at the end of the webinar as a gratitude for sharing his perspective on cancer.

6.	 ***PIC: IEEE EVENT POSTER***	The IEEE SJCE SB Maanavar Mandram of St. Joseph's College of Engineering conducted a quiz event "ப ொது அறிவு" related to Tamil quiz competition on 27 April 2023 The event was conducted in online mode.The rules of the event were explained before each round. Overall, 25 people submitted their response for the event and the best three were given winners' certificates.The winners of the event are Aruthra ,Aparnaa , Abinaya and the others were provided with participation certificates. The student coordinators for this event are Deepika U ,Jayavarshini M J , Abinaya Priya R A , Shiva D Sunil Kumar M

7.	 ***PIC: IEEE EVENT POSTER***	The IEEE SJCE SB Maanavar Mandram of St. Joseph's College of Engineering conducted an essay writing event "எண்ணத்தை எழுத்தாக்கு" related to Tamil essay writing competition on 28 April 2023 The event was conducted in online mode.The rules of the event were explained before each round. Overall, 25 people submitted their response for the event and the best three were given winners' certificates.The winners of the event are Priyanka,Yuvasri, Santhosh and the others were provided with participation certificates. The student coordinators for this event are Deepika U ,Jayavarshini M J , Abinaya Priya R A , Shiva D Sunil Kumar M.

8.	 ***PIC: IEEE EVENT POSTER***	The IEEE Power and Energy Society of St. Joseph's College of Engineering hosted a virtual "GINGER GREEN" event. The event occurred on April 22, 2023 on the occasion of 6th IEEE PES DAY 2023 on the theme of "Powering a Climate Safer Future!" Participants vision through the theme was tested during the photography event. This event mainly focusses on the better climate for safer future. Winners are chosen based on the number of photos and relevant to theme they provide. Winners and participants will receive E-certificates.
9.		The QUIZFEST EVENT was organized by the Department of Electrical and Electronics Engineering for 6 Days which was held from 10.04.2023 to 15.04.2023. X, XII Standard students and Diploma Students from various schools & Colleges took part in this event. Quiz on various topics like physics, Chemistry, Space science, Sports, Biology, World Currency Quiz enhance the knowledge of the students. Events like this help students to relax their mind and engage in useful activities that help students to get away from the negativity. Participation and Merit certificates were given to the participants.

	PIC: SCHOOL EVENT POSTER	
10.	 ***PIC: SCHOOL EVENT POSTER***	The "HUSTLE WITH PUZZLES" EVENT was organized by Department of Electrical and Electronics Engineering for 5 Days which was held from 03.04.2023 to 07.04.2023. The target audience of the event were X, XII and diploma level students. Each day, an online puzzle was conducted on various topics which kindled the student's interest and enriched their mind with logical thinking and Analytical ability. The winners of each day's event were awarded with merit certificate and the participants too were encouraged with participant certificate.

11.	 ***PIC: Award Certificate***	Students as well as staff members from our department's following teams have finished the IGEN Green99 challenge V1.0 project, which is aligned with 50th Earth Day and #ACT4SDGs Phase I and Phase II to raise awareness of electrical energy conservation. They received the IGEN SDG action award G03 in appreciation for this. **Student Name:** SANTHOSH CHAKKARAVARTHY S MANI SHA N JESSE S THIRUPPATHI S MARIA SHIRLEY JOHN LM PRIYANKA J SRUTHI V M SHRUDHURAG KRISHNA KEERTHANA S KARTHIK KUMAR **Staff Name:** Dr. M. Venmathi, Associate Professor R.Elanthirayan, Assistant professor Dr.P.Anabarasan, Assistant professor

12.

PIC: SCHOOL EVENT POSTER

The Photo Collage Competition was organized by Department of Electrical and Electronics Engineering for 6 Days which was held from 17.04.2023 to 22.04.2023. X, XII Standard students and Diploma Students from various schools & Colleges took part in this event. Collage and paper art are very important to students in this period because art helps them to develop their reasoning, creative, imaginative, and problem-solving skills. Doing art enhances their motor skills, hand, and eye coordination, and helps them to make cognitive advances such as learning proportions. Participation and Merit certificates was given to the participants.

13.

The following faculty members have completed the online NPTEL Certification Course during Jan to April 2023

Name of the Faculty	Name of the course
Mr.H.Umesh Prabhu	Micrfprocessors and Interfacing
Mr.Srianandа Ganesh	Non-conventional Energy Sources
Mr.S.S.Harish	Outcome Based Pedagogic Principles For Effective Teaching
Mr.V.Balasubramanian	Mechatronics

14.

Our students SHYAM SUNDAR R S III year C Sec won the title of winners in the sport of " WEIGHT LIFTING " at SENIOR STATE LEVEL POWERLIFTING CHAMPIONSHIP held at TIRUNELVELI.

<table>
<tr><td></td><td>PIC: student with madel</td><td></td></tr>
<tr><td>15.</td><td> 
PIC: Students group photo</td><td>Our students won the title of winners in the sport of "football" at the intercollegiate competition conducted on April 6, 2023, at Sri Venkateshwara College of Engineering.
<table><tr><th>NAME OF THE STUDENT</th><th>YEAR/SEC</th></tr><tr><td>Hameed Rahman MA</td><td>III / A</td></tr><tr><td>Shenith D</td><td>III / C</td></tr><tr><td>Harish Kumar</td><td>II / A</td></tr><tr><td>Jeyavarman BT</td><td>II / A</td></tr><tr><td>Vignesh M</td><td>IV / C</td></tr></table></td></tr>
<tr><td>16.</td><td>  </td><td>Criteria 1
A patent titled “IMPROVING CYBER SECURITY BY IMPROVED PREDICTIVE POTENTIAL OF MACHINE LEARNING MODELS” is published by Dr.Senduru Srinivasulu, Dr.B.Jega Jothi, Dr. S. Mani, Krishna Kumar L, Aviral Srivastava, H. Prasad, Dr.S.N.Sangeethaa, Niranjan Rampravesh Barnwal on 24/03/2023.
A patent titled “Credit Card Fraud Detection System Based on Artificial Intelligence (AI) Techniques through Machine Learning” is published by Shobana. G , Libi A, Venkata Gowtham Ramayanam, Maria Sahaya Diran D , Dr. Binu V P, Dr. Chidambararaj Natarajan, Dr.Sripriya Arunachalam, R.Vishalakshi on 05/05/2023.
A patent titled “ARTIFICIAL INTELLIGENCE (AI) BASED SIMULATION OF THREE PHASE MULTILEVEL INVERTER WITH FEWER SWITCH” is published by Dr S. Alagu, M .R.Sundarakumar, D Salangai Nayagi, M. Anitha, Dr Shantha Visalakshi U, Dr. W T Chembian, S. Karthick, Dr. S. Sivasakthi on 31/03/2023.</td></tr>
<tr><td>17.</td><td>PLACEMENT DETAILS FOR THE MONTH OF APRIL 2023</td><td>Total No of students placed = 111 UG + 4 (PG) =115 Students
Total No of Offers = 173 + 4 (PG) = 177 Offers
% of students Placed (UG) = 111/144 = 77.09 %
% of students Placed (PG) = 04/06 = 66.66%
No of students having single offers = 70 + 04 (PG)
No of students having Double offers = 28
No of students having Triple offers = 15
No of students having Quadruple offers = 02</td></tr>
</table>

DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name of the Activity	Remarks
1	**Paper Published:** Process Safety and Environmental Protection Volume 172, April 2023, Pages 815-824 Effective utilization of waste pork fat as a potential alternate fuel in CRDI research diesel engine – Waste reduction and consumption technique S. Madhu [a], G.M. Lionus Leo [b], P. Prathap [c], Yuvarajan Devarajan [d], Ravikumar Jayabal [e]	➢ Dr.G.M.Lionus Leo Published a aper on "**effective utilization of waste pork fat as a potential alternate fuel in CRDI research diesel engine-waste reduction and consumption technique**" ,*Process safety and Environmental Protection. Vol 172.*
2	Workshop Organized:	**DST And SERB** Sponsored three Days seminar on "**Adopting IOT for Manufacturing Sector: its Impact and applications"** was organized on 24th April to 26th April 2023.

		Financial grant Rupees 1,00,000 was granted for conducting the event. The seminar showed overwhelming response from the faculties of various engineering colleges.

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St. JOSEPH'S COLLEGE OF ENGINEERING

(An Autonomous Institution)

St. Joseph's Group of Institutions

OMR, Chennai - 119

DEPARTMENT OF MECHANICAL ENGINEERING

Congratulations

The Management, Principal, and Faculty members are pleased to congratulate the following Faculty members from the Department of Mechanical Engineering for receiving a financial grant of Rs. 1, 00,000 (Rupees One Lakh) from the DST - Science and Engineering Research Board (SERB) for organizing three-days National seminar as per the details mentioned below:-

Department of Science and Technology (DST)
Science and Engineering Research Board (SERB)

Title of the seminar	**ADOPTING IoT FOR MANUFACTURING SECTOR:ITS IMPACT AND APPLICATIONS**
Convener	**Dr. K. M. Kumar, Associate Professor**
Coordinator	**Dr. R. Selvam, Associate Professor**
Grant Received	**Rs. 1, 00, 000 (Rupees One Lakh)**
Duration	**24-Apr-2023 to 26-Apr-2023 (3 Days)**

CHAIRMAN

DEPARTMENT OF MBA

FACULTY PUBLICATION:	Dr. Angelin S.Kiruba has published a paper on "Emerging Patterns of e-Commerce apparel Attributes: A Bibliometric Analysis" in Quality Access to Success" Vol.24. No.194 / April 2023.
WORKSHOP/FDP/STTP/CONFERENCE / SEMINAR ATTENDED BY FACULTY: 	Dr.Ajit S has completed the NPTEL Course on Marketing Analytics during Jan –April 2023.

DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks
4	**FDP/Workshop/Conference**	***Presented*** 1. Dr. N.R. Rajagopalan presented a paper , titled "An analysis in the identification of secondary RNA structure using energy algorithm" in the "International Conference on recent trends in Data Science and its applications" conducted by SRM University, Kattankulathur, held between 30.03.2023 and 31.03.2023.

		Attended 1.Dr. S. Kiruba, Dr. S. Suresh, Dr. A. Mahalakshmi, Dr. S. Rama, Mr.S. Kaleel Mohamed Ibrahim, Dr. G. Murugan, Dr. V. Swarnalatha, Dr. P. Saravanan, Dr. A. Uma Devi, Dr. N.R. Rajagopalan, Ms. S. Savitha, Dr. B. Subash, Dr. S.M. Prakash, Dr. G. Sasikumar, Dr. A.L. Ajeesha, attended 10 Days International Faculty Development Program on "Advanced Materials for Technological Applications" conducted by "Sathyabama University, Chennai" held between 24.03.23 and 04.04.23. 2. Dr. A. Mahalakshmi attended a National webinar on "Next generation Energy Storage Devices" conducted by "Rajalakshmi Institute of Technology, Chennai" on 27.04.23. 3. Dr. N. Punitha attended an International conference on "Immunfest23" conducted by "PRIST University, Thanjavur" on 28.4.23
9	**Awards/Prize won by students / Staff**	Reviewers: Dr. K. Jayamoorthy has acted as reviewer for the following reputed journals. 1. Arabian Journal of Chemistry – April 2023 2. Current Organic Chemistry – April 2023 3. Journal of Biomolecular Structure & Dynamics – April 2023 4. Brazilian Journal of Biology – April 2023 5. Vietnam Journal of Science, Technology and Engineering – April 2023
11	**Publications(only published) details**	Ms. J. Sharmila, Dr. S. Suresh, Dr. P. Saravanan published a paper titled "Photocatalytic degradation of reactive dyes using natural photo-smart pigment - A Novel approach to waste water re-usability" in the Springer journal "Environmental Science and Pollution Research" https://doi.org/10.1007/s11356-023-27360-z"

DEPARTMENT OF CIVIL ENGINEERING

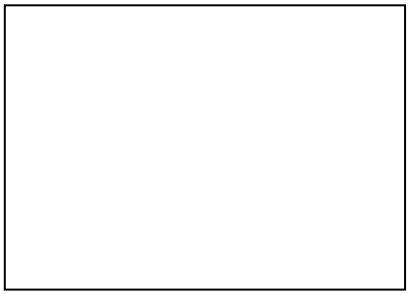
Sl. No.	Photographs Captured During Events (Briefs About the Photographs)	Corresponding remarks (Minimum 300 words) in regarding the status of activity execution stating
1.	**Publications (only published) details**	• **Dr.S.Thenmozhi** has published a paper titled "Replacement of coarse aggregates by industrial slag" in Materials Today Proceedings, April 2023. (Scopus Indexed)

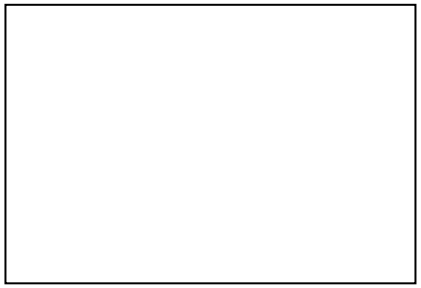
		• **Dr.S.Thenmozhi** has published a paper titled "Seismic analysis of RC building (G+9) by response spectrum method" in Materials Today Proceedings, April 2023. (Scopus Indexed)

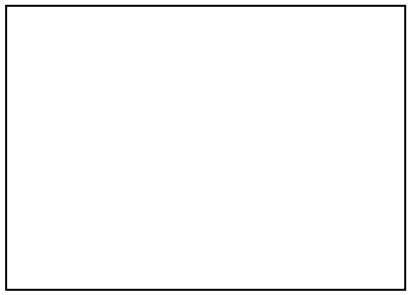
DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING

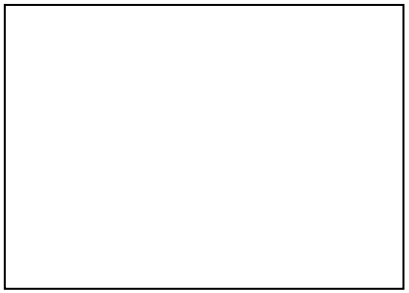
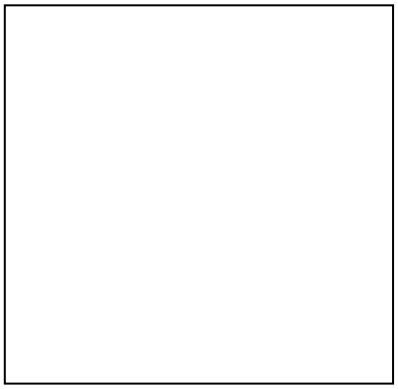
Sl. No. I — Title: FDP Attended

S. No.	Faculty Name	FDP Organised	Conducting agency	Period	Proof
1.	Dr.R.Sivakumar	Introduction to Machine Learning	NPTEL	Jan-April 2023 (12Weeks)	
2	Dr.C.N.Gnanaprakasam	Air Pollution and Control	NPTEL	Jan-April 2023 (12Weeks)	
3.	Mr.B.Senthil Kumar	Applied Time Series Analysis	NPTEL	Jan-April 2023 (12Weeks)	
4.	Mr.D. Sankaran	Air Pollution and Control	NPTEL	Jan 23-Apr 23 (12Weeks)	

DEPARTMENT OF INFORMATION TECHNOLOGY		
Sl. No.	**Photographs Captured During Event**	**Corresponding remarks in regarding the status of activity execution**
1	 **Co-author:** **Dr. D. Logeshwari** Published a paper in Scopus Indexed Conference	**<u>Staff Paper Publication</u>** A. G. Devi, A. Thota, G. Nithya, S. Majji, A. Gopatoti and **D. Logeshwari**, "Advancement of Digital Image Steganography using Deep Convolutional Neural Networks," 2022 International Interdisciplinary Humanitarian Conference for Sustainability (IIHC), Bengaluru, India, Publisher: IEEE, E ISBN:978-1-6654-5687-6, Print ISBN: 978-1-6654-5688-3, pp. 250-254, doi: 10.1109/IIHC55949.2022.10060230, 2022. (Indexed in Scopus) **Abstract:** Steganography can be used to hide information in these and other formats. First, the Robust Multitier Spatial Domain Secured Color Image Steganography in Server Environment (MSS-SE) approach is created as part of an effort to lower the possibility of compromising confidential communications. MSS-SE steganography methods, rather than transmitting the original picture from the server, send a randomized mix of a cover image and a confused image from the same server. This is done in place of delivering the original image. A unique approach that is based on deep hierarchical spectral spatial feature fusion has been developed by us in order to improve the classification of HSIs (DHSSFF). The pooling method, which is considered by CNN to be one of the most important regularization procedures, has been the primary focus of our attention prior to the construction of the model. Following an examination of the relevant published material, we have reached the conclusion that a wide variety of pooling algorithms have been applied to carry out fruitful analyses of remote sensing data.

2	 **Co-author:** **Dr. D. Logeshwari** Published a paper in Scopus Indexed Conference	**Staff Paper Publication** N. Tyagi, **D. Logeshwari**, M. S. A. Ansari, B. Pant, D. K. J. B. Saini and J. A. Dhanraj, "Skin Cancer Prediction using Machine Learning and Neural Networks," 2022 5th International Conference on Contemporary Computing and Informatics (IC3I), Uttar Pradesh, India, Publisher: IEEE, E ISBN:979-8-3503-9826-7, Print ISBN:979-8-3503-9827-4, pp. 271-275, doi: 10.1109/IC3I56241.2022.10073141, 2022. **(Indexed in Scopus)** **Abstract:** A deep learning (DL) system for identifying skin cancer is presented in this paper. The rapid development rate of melanoma skin cancer, its massive price of surgery, and its mortality rate have all heightened the need for timely diagnosis of skin disease. Most of the time, treating cancer cells requires time and careful detection. The commitment to deep learning powered by machine learning (ML) has been repeatedly shown in the medical sector. Skin cancer categorization has benefited significantly from growing study attention since it is amenable to visual pattern recognition. Studies have revealed that DL-based image classifications may be utilised to enhance skin cancer diagnosis or are on par with or even outperform human specialists. In this study, we provide a deep learning architecture that can identify skin cancer. Five state-of-the-art convolutional neural networks were trained using transfer learning to provide a simple classifier and a hierarchical (with two stages) classification that can differentiate between seven different species of moles. Experiments were conducted using data from the HAM10000 database, a huge collection of dermatoscopic pictures, with the use of data augmentation methods to boost results. The DenseNet201 network performed well in this experiment, as seen by the high classification accuracies and F-measures achieved with very few false negatives.

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
3	 **Co-author:** **Dr. A. Tamizhselvi** Published a paper in Scopus Indexed Conference	**<u>Staff Paper Publication</u>** M. Lourens, **A. Tamizhselvi**, B. Goswami, J. Alanya-Beltran, M. Aarif and D. Gangodkar, "Database Management Difficulties in the Internet of Things," 2022 5th International Conference on Contemporary Computing and Informatics (IC3I), Uttar Pradesh, India, Publisher: IEEE, E ISBN: 979-8-3503-9826-7,Print ISBN:979-8-3503-9827-4, pp. 322-326, doi: 10.1109/IC3I56241.2022.10072614, 2022. **(Indexed in Scopus)** **Abstract:** The "Internet of Things (IoT)" is an internet protocol for which real-world, virtual as well as digital objects are given recognition, detecting, connectivity, and process technology so they can interact with one another and other Internet-connected devices and services to carry out users' tasks. There are many IoT solutions available to improve and comfort civilian lives. Additionally, the use of IoT technology in the automotive sector gave rise to the concept of the "Industrial Internet of Things (IIoT)," which has simplified the usage of Cyber Physic Systems, which enable machine and human communication. In general, the variety, heterogeneity, and vast volume of data produced by these businesses make the use of traditional database management systems inappropriate. While constructing IoT data management systems, a number of special issues should be taken into account. These varied guiding notions have led to the proposal of range Of iot data management strategies. The Internet of Things will undoubtedly become a realization as more gadgets are linked to the Internet. Massive amounts of information will be instantiated by items in environment. A high rate and numerous increments will be made to its quantity. This research paper has highlighted database management and its challenges in IoT technology through secondary qualitative analysis.
4	 **Ms. M. Nivethitha Devi** Published a paper in Scopus Indexed Conference	**<u>Staff Paper Publication</u>** **M. Nivethitha Devi**, V. Parimala, Chirag Vibhakar, B. Siranthini, Mallaiah Balaganur; C.V. Vijay Kumar, "A Current Control Scheme for a Bi-Directional AC-DC Power Converter with Power Factor Correction by Using FLC for DC Micro Grid," 2022 International Conference on Knowledge Engineering and Communication Systems (ICKES), Chickballapur, India, Publisher: Springer, E ISBN:978-1-6654-5637-1, Print ISBN:978-1-6654-5638-8, pp. 1-6, doi: 10.1109/ICKECS56523.2022.10060082, 2022. **(Indexed in Scopus)** **Abstract:** Secondary controllers for hydrothermal multisource hydraulic systems (MSHS) have been built in this chapter using PDICs and FLCs. Two control areas are linked by a tie line, and each control area includes both hydroelectric and thermoelectric energy systems. Conventional controllers are unable to manage the frequency and power oscillations caused by a load that changes with time and load. A proportionally dual integral controller and a fuzzy logic controller have been designed to stabilize the switching frequency and enhance the dynamic characteristics of a multi-area, multi-source hydro thermal system.

Sl. No.	Photographs Captured During Event	Corresponding remarks in regarding the status of activity execution
5	 **Co-author:** **Dr. C. Heltin Genitha** Published a paper in SCIE Journal	**<u>Staff Paper Publication</u>** V. Nirmala, S. Leninisha, **C. Heltin Genitha** and S. Kumar, "Automated Breast Boundary Segmentation to Improve the Accuracy of Identifying Abnormalities in Breast Thermograms", IETE Journal of Research, Publisher: Taylor and Francis, Print ISSN: 0377-2063, E ISSN: 0974-780X, https://doi.org/10.1080/03772063.2023.2194277, pp. 1-10, 2023**. (Impact Factor: 2.33, Annexure I, SCI Expanded)** **Abstract:** Breast thermography is a non-invasive, painless, affordable, and safer method of detecting breast abnormalities. Thermal imaging techniques used for detecting breast anomalies rely on precise breast boundary segmentation. However, the segmentation accuracy of the breast boundary region is affected by unclear boundaries, a low signal-to-noise ratio, and poor contrast of the thermal images. To mitigate this, this paper proposes a novel Distance-based Metrics and High-Temperature Region-based Adaptive Thresholding (DM-HTRAT) method for breast boundary region segmentation and dissecting left and right breasts precisely. In the first section, the Upper Region Boundary (URB) and the intersection point of the breast are segmented using the Distance-based Metrics (DM) method. In the second section, a High-Temperature Region-based Adaptive Thresholding (HTRAT) method is used to segment the Lower Region Boundary (LRB). The result of the segmentation is analysed both quantitatively and qualitatively, also it is compared with the state-of-the-art methods.
6	 **Ms. Kripa Sekaran et al., published a paper in Scopus Indexed Conference**	**<u>Student and Staff Publication</u>** **V. Varsha, R. Shree Kriti, and Kripa Sekaran**, "Water Potability Prediction on Crops Considering pH, Chloramine, and Lead Content Using Support Vector Machine", International Conference on Data Analytics and Management, Publisher: Springer, Lecture Notes in Networks and Systems, https://doi.org/10.1007/978-981-19-7615-5_50, Print ISBN: 978-981-19-7614-8, E ISBN978-981-19-7615-5, Vol. 572, pp. 609–620, 2023. **(Indexed in Scopus)** **Abstract:** The agricultural field has seen so many improvements with the advancements in technology. The demands on yield are constantly increasing. It is important to maintain some specifications of the irrigation water based on some parameters so that the water continues to be suitable for the purpose of irrigation. Manually checking out every sample of water and recommending approval is arduous and risky. By examining these points, a model is proposed that uses the support vector machine technique to predict whether the water sample is potable for irrigation or not by considering the chloramine and lead content of the water sample collected along with its pH. These variables are selected using the Gini index for identifying the best features that can be chosen for classifying the data points. The collected dataset is analyzed, and the outliers are removed by visualization using boxplot and violin plot. Based on the accuracy of the model, it can be deduced that whether a particular water sample is acceptable for the purpose of irrigation or not.

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Dr. V. Muthulakshmi has been Granted with a UK patent

Patent Published

Title of the invention : IOT based Wearable Medical Monitoring Device **(UK Patent)**

Name of Inventor :

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Design number: 6274670

Registration date: 08 April 2023

Grant date: 20 April 2023

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Sample certificate

Online Certifications

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