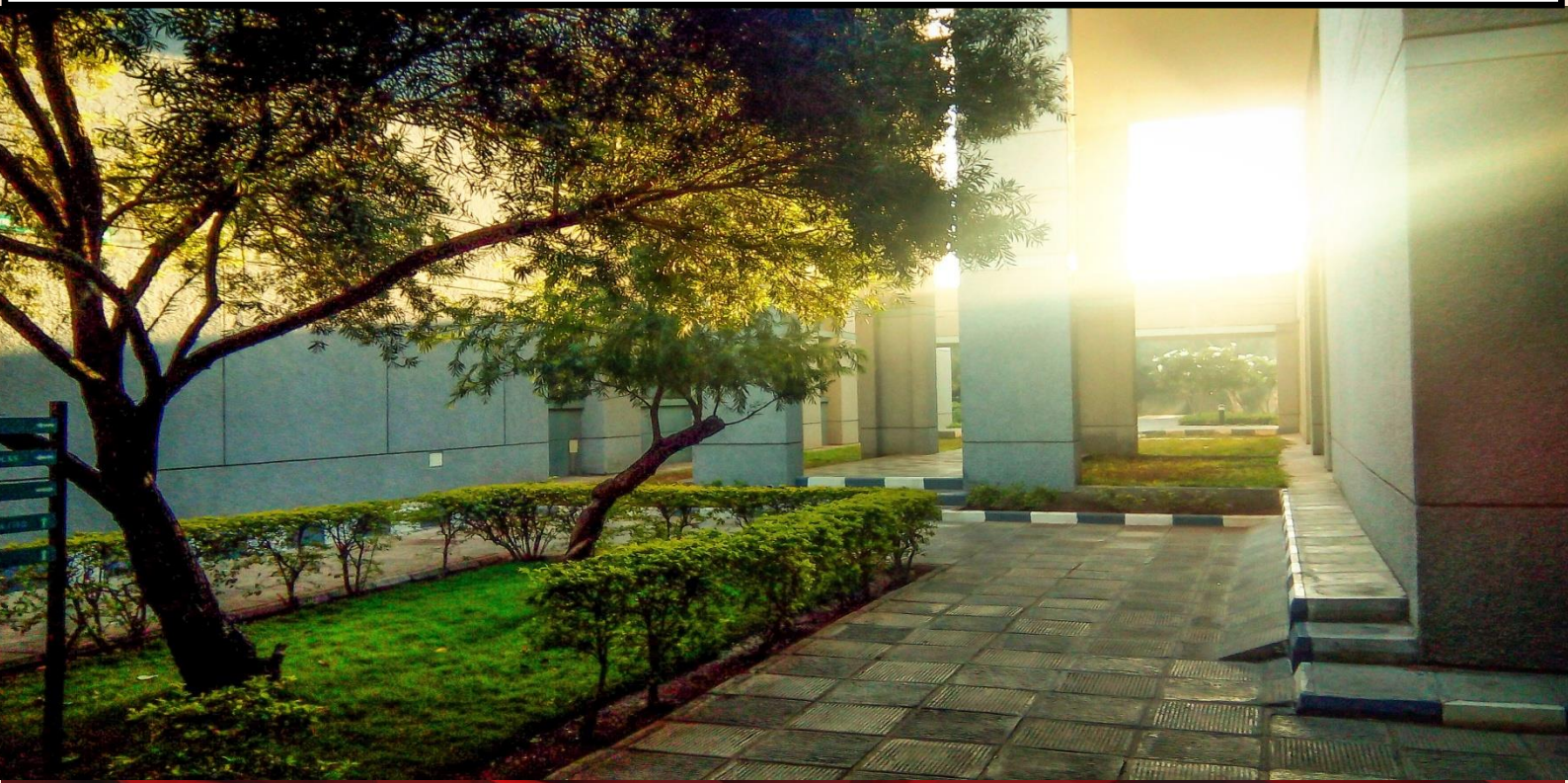


# SKCET Buzz

29<sup>th</sup> July - 04<sup>th</sup> August 2023



## **Editor-in-Chief**

**Dr.J.Janet  
Principal**

## **Co-Editor**

Dr.S.Venkata Lakshmi - AI & DS

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Ms.N.Pooranam - CSE,  
Mr.M.Diwakaran - IT,  
Mrs.S.Mary Fabiola - S&H,  
Mr.G.S.Pugalendhi -AI & DS

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*Happy Reading!*





# INSTITUTIONAL ACCOLADES



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# SKCET | CERTIFICATE OF APPRECIATION



सत्यमेव जयते

**भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING**  
**भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION**  
**अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA**



बहिः परिसर संर्क/ विस्तार कार्यक्रम प्रमाण पत्र  
**OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME**

संस्थान की सहभागिता का प्रमाण पत्र  
**CERTIFICATE OF PARTICIPATION OF INSTITUTE**

COR20231191653

यह प्रमाणित किया जाता है कि श्री कृष्णा इंजीनियरिंग व प्रौद्योगिकी कॉलेज ने भारतीय सुदूर संवेदन संस्थान, इसरो देहरादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम **जलवायु-स्मार्ट कृषि के लिए भू-स्थानिक प्रौद्योगिकी** में भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 10 जुलाई, 2023 से 14 जुलाई, 2023 तक किया गया।

This is to certify that **Sri Krishna College of Engineering and Technology**, has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehradun on **Geospatial Technology for Climate Smart Agriculture**. This online programme was conducted during July 10, 2023 to July 14, 2023



दिनांक/ Date: 28-07-2023  
 देहरादून/ Dehradun

प्रमुख,  
 जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग  
 Head, Geoweb Services, IT & Distance Learning Department, IIRS



समूह प्रमुख,  
 भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह  
 Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

SKCET conducted a training course on **“Geospatial Technology for Climate Smart Agriculture”** as a part of off-campus Outreach Certificate Programme organized by Indian Space Research Organization (ISRO), and Indian Institute of Space Sensing, Dehradun, in this regard SKCET was highly appreciated by ISRO for effective conduct of the training programme.



# SKCET | CIVIL & MCT - RESEARCH CENTER RECOGNITION | R&D

**CENTRE FOR RESEARCH**  
Anna University, Chennai - 600 025.

சகலத்திற்கும் அறிவு அடிப்படையில்  
சாதனை புரிந்து சரித்திரம் படைப்போம்.

"சோதனை கடந்து கதந்திரம் அடைந்தோம்;  
சாதனை புரிந்து சரித்திரம் படைப்போம்."

HOME ABOUT US FUNCTIONS GALLERY REGULATION JOURNAL PLAGIARISM TEAM

### Recognized Department/Institute/R&D Centre

Search: sri krishna

SL.NO	COLLEGE	DEPARTMENT/INSTITUTE/CENTRE	CODE	VALID UPTO
348	Sri Krishna College of Engineering and Technology, Coimbatore	Civil	4271805	June 2026
349	Sri Krishna College of Engineering and Technology, Coimbatore	CSE	4271806	June 2024
350	Sri Krishna College of Engineering and Technology, Coimbatore	ECE	4271807	December 2024
351	Sri Krishna College of Engineering and Technology, Coimbatore	EEE	4271808	June 2024
352	Sri Krishna College of Engineering and Technology, Coimbatore	Mech	4271817	June 2024
353	Sri Krishna College of Engineering and Technology, Coimbatore	Mechatronics	4271818	June 2026

We are exhilarated to share that Departments of **CIVIL ENGINEERING** and **MECHATRONICS ENGINEERING** are recognized as Research Centers by Anna University, Chennai to offer Ph.D and MS (by Research) programmes. This recognition also facilitates the development of new research initiatives in the cutting edge technologies.

***“Research and Innovations are the pillars of growth and development”***



# INSTITUTIONAL EVENTS



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## SKCET| PRINCIPAL MADAM INTERACTION



### SKCET - COMPUTING FACULTY INTERACTION

Principal Madam addressed the newly joined Computing departments faculty members on 4.8.2023 and motivated them to work with harmony and walk the extra mile to bring more accolades to the institution and also encouraged them to build up their profile strongly.

**"Alone we can do little; Together we can do much"**



# HACKATHON ACCOLADES



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# CSE | CYBER SECURITY HACKATHON

**कवच KAVACH 2023**  
साइबर सुरक्षा हैकथॉन  
Cybersecurity Hackathon

**KAVACH 2023**  
An initiative by MHA and MoE  
**कवच 2023**  
गृह मंत्रालय एवं शिक्षा मंत्रालय की पहल

**Problem Statement:** (KVH-018) Plug and Play System Security Audit tool

**Team Name:** CyberCore

**Institute Name:** Sri Krishna College of Engineering & Technology Coimbatore

**Team**

Prithika Andrea Angelina F	Nagasundar N	Sneha Janarthanan	Dr. Reshma V K

**Mentor**

Dr. Rohini M

**कवच KAVACH 2023**  
साइबर सुरक्षा हैकथॉन  
Cybersecurity Hackathon

**KAVACH 2023**  
An initiative by MHA and MoE  
**कवच 2023**  
गृह मंत्रालय एवं शिक्षा मंत्रालय की पहल

**Problem Statement:** (KVH-003) Advanced fake news detection system

**Team Name:** Cookie Bytes

**Institute Name:** Sri Krishna College of Engineering & Technology Coimbatore

**Team**

Rithik Raj K S	Jason Jose P	Siddhesh Agarwal	Dr. Oswalt Manoj S

**Mentor**

Ms. Priya A	Mr. Shameer B

Two student teams from the Department of **Computer Science and Engineering** have been shortlisted for the Grand Finale of KAVACH 2023.

**Team details:**

**Team 1:** Prithika Andrea Angelina F , Nagasundar N, Sneha Janarthanan, Mohana Prasad S, Mark Felix A, Maginesh U T

**Mentors :** Dr.V.K.Reshma , Dr.M.Rohini

**Team 2:** Rithik Raj K S, Jason Jose P, Siddhesh Agarwal, Johan Olivia A, Mrinalini K, Swamy Prasanna S J

**Mentors:** Dr.S.Oswalt Manoj, Ms.A.Priya, Mr.B.Shameer



# STUDENTS CERTIFICATION



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## AI&DS | STUDENT INTERNSHIP

Microsoft India (R&D) Pvt. Ltd.  
Microsoft Campus,  
Gachibowli, Hyderabad- 500032



Tel: +91-40-66930000  
Fax: +91-40-66935593  
<http://www.microsoft.com/india>

28-Jul-23

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Santhiya A** from the **Sri Krishna College of Engineering & Technology, Coimbatore** has successfully completed her Internship in the "Experience & Devices" team under **Microsoft India (R&D) Pvt. Ltd, Hyderabad** from **5-Jun-23 to 28-Jul-23**. She has completed the internship under the guidance of Nishu Bansal (Nibansal) and Kanthi Rekha Ashok (Krekha).

We wish her all the best in her future endeavors.

Yours Sincerely,  
For Microsoft India (R&D) Pvt. Ltd



Ira Gupta  
SR GEO HR DIRECTOR



Signature of Candidate

Microsoft India (R&D) Pvt. Ltd.

Registered Office: 807, New Delhi House, Barakhamba Road, New Delhi-110001.  
CIN: U72200DL1998PTC093824

**Santhiya.A**, student of **Final year AI&DS** has successfully completed her Internship at "**Experience & Devices**" team under **Microsoft India (R&D) Pvt. Ltd, Hyderabad** from **5<sup>th</sup> June 23 to 28<sup>th</sup> July 23**. She has completed the internship under the guidance of Nishu Bansal (Nibansal) and Kanthi Rekha Ashok (Krekha).



# EVENTS



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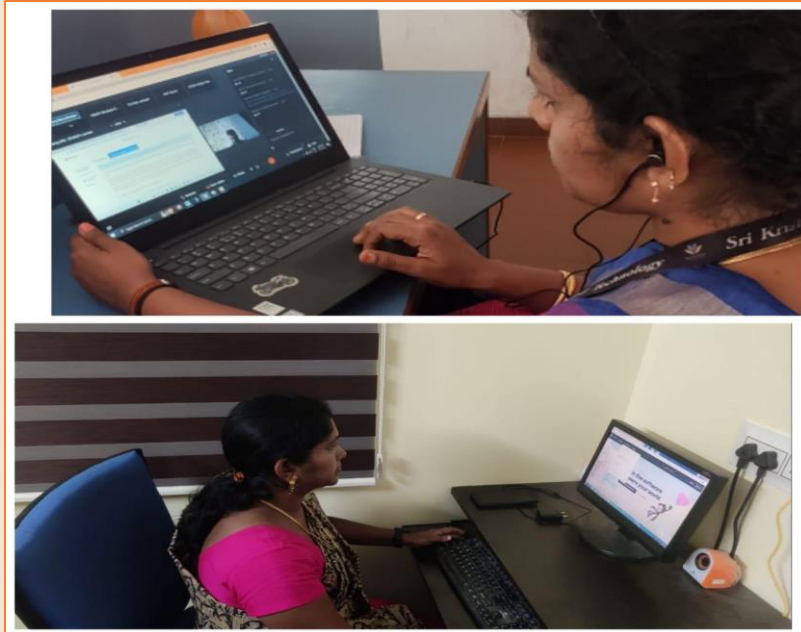
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## M.TECH CSE | TECH4ALL



**Dr.A.Pushpalatha**, Associate Professor, **M.Tech CSE** and **Dr.T.Sujatha** Associate Professor, **AI&DS**, have participated in **Five Days Tech4All - Mentor Training Program (MTP)** on **Microsoft Azure AI Program** by **Cognizant** conducted from 17<sup>th</sup> July 2023 to 21<sup>st</sup> July 2023. The program provided hands-on training to enhance the skills in Microsoft Azure AI. **Mr.Adil Yousuf**, Senior Technical Trainer, ICT Academy was the Resource Person.

### Session Highlights:

- Getting Started with Microsoft Azure and NLP.
- Developing AI Apps with Cognitive services.
- Building Speech-Enabled Applications.
- Conversational AI and the Azure Bot Service.
- Developing Custom Vision Solutions
- Detecting, Analyzing and Recognizing Faces.

# EEE | ROLE OF ZERO ENERGY BALANCE IN CONSERVATION



Department of **Electrical and Electronics Engineering** in association with **Energy Audit Cell** has conducted a Guest Lecture on the topic '**Role of Zero Energy Balance in Conservation**' for **EEE** students on 31.07.2023.

**Session Speaker:** Dr.R.Sivakumar, Energy Auditor, Pricol Limited, Coimbatore.

**Session Highlights:**

- Self-consumption of PV production,
- Continuous HVAC operation,
- Tight set-points to create performance gap,
- Concept of 'post-carbon' in industrial sectors,
- Expanding the scale of zero energy performance.

## EEE | GOVERNING THE REALM OF ARTIFICIAL INTELLIGENCE



Department of **Electrical and Electronics Engineering** has conducted a Guest Lecture on the topic '**Governing the realm of Artificial Intelligence**' for the Third year **EEE** students on 31.07.2023.

**Session Speaker:** Er.V.Gopi, Director - SKMT Electronics Private Limited, Chennai.

### Session Highlights:

- Natural language generation and speech recognition.
- New Insights on Application of machine learning, artificial intelligence and deep learning.
- ANN and Peer-to-peer network.
- Developing Robotic Process Automation at Industry level.



## CSBS| GENAI RUSH BUILDATHON



Student team from the Department of **Computer Science and Business Systems** has been selected in the **Top 20 position among 500 teams of students, Academicians and Startup CEOs** at GenAI RUSH Buildathon at We Work Bangalore organized by nexus Venture Partners and The Product Folks from 29.07.2023 to 30.07.2023

**Team Members:** Dhasagreevan.C, Arshath.K, Ethin Abinav.V, Kavin Prabhu.S

**Mentor:** Dr.G.Ignisha Rajathi, ASP/CSBS

## MCT| CAREER GUIDANCE PROGRAM



Department of **Mechatronics Engineering** organized a **Career Guidance Program** on 02.08.23 "**Career opportunities after UG**" for the Third year students.

**Resource Person:** Mr.Siddarth, Manager, T.I.M.E Coimbatore briefed about,

- Various career options after UG
- Competitive exams like CAT, GMAT, GRE, IELTS and eligibility.
- CAT training and classes
- Top B schools
- Job opportunities
- Public sector exam pattern and preparation



# CSBS | ASPIRING ZONE MAGAZINE

**SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY**  
An Autonomous Institution, Affiliated to Anna University-Chennai  
Accredited by NAAC with "A" grade Accredited by NBA  
Kuniamuthur, Coimbatore-641008

**OUR PATRONS**  
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Chairperson and Managing Trustee,  
SKI

**DR. J. JANET**  
Principal, SKCET

**CHIEF-EDITOR**  
**DR. S. BALAKRISHNAN**  
HOD-CSBS, SKCET

**EDITOR**  
**DR.G. IGNISHA RAJATHI, ASP-CSBS**

**EDITORIAL TEAM**  
**OUR MAGAZINE TEAM STUDENT MEMBERS**

**Aspiring Zone**  
**2022 - 2023**

**WE SHOOT AT THE STARS**

**B TECH COMPUTER SCIENCE AND BUSINESS SYSTEMS**

0422-267800 | principal@skcet.ac.in | https://skcet.ac.in

Department of **CSBS** has released its yearly magazine - **Aspiring Zone** in which the actual experience of the Department, with the Laurels and Accolades, sprays fragrance of uniqueness through the Prestigious Awards, Student Accolades in Hackathons, Faculty Achievements, Co-curricular and Extra-curricular Activities.

## MECH | NEP2020 EXPO



SKCET proudly displayed its best practices and innovations at the Ministry of Education's Mega Expo to celebrate the 3<sup>rd</sup> Anniversary of the National Education Policy (NEP) 2020 (Akhil Bhartiya Shiksha Samagam) held on 29<sup>th</sup> and 30<sup>th</sup> July 2023 at Pragati Maidan, New Delhi. Honourable Prime Minister of India **Shri. Narendra Modi** Ji inaugurated the event and addressed the gathering. The mega-event celebration had more than 12 thematic sessions, exhibitions and cultural programs. More than 200 selected early-stage startups, edutech growth stage startups, innovations and Institutions demonstrated their contributions and breakthrough innovation achievements towards achieving the overall goal as envisioned under the National Education Policy 2020. **Dr. P. Ashoka Varthanan**, Head & Professor, **Mr. N. Ramachandran**, Assistant Professor, Department of Mechanical Engineering participated in the expo.



## CSBS | SYSTRONS ASSOCIATION INAUGURATION



Department of **Computer Science and Business Systems** organized SYSTRONS Association Inauguration Ceremony for the academic year 2023-2024 on 27.07.2023.

**Chief Guest:** Dr. Gunasekaran Thangavel, Professor - Electronics & Communication Engineering, EEE Section, Department of Engineering in University of Technology and Applied Sciences, Muscat, Sultanate of Oman.

### Highlights of the Session:

- AI/ML and 5G/6G networks
- Weak Artificial Intelligence
- AURO Lab COBOTS
- Companies in Madurai, Coimbatore, Chennai incorporating Weak AI
- Mobile Phone Radiation
- LORAWAN
- Real time Problems awaiting solutions

The Magazine “**Aspiring Zone**” was released by the Chief Guest. The Office Bearers were inducted in their positions with badges and took up the Pledge. The Video on the Journey of CSBS in SKCET was showcased. The winners of the pre-event TECH CHARADES were honoured by the Chief Guest.

## CSE| HOD INTERACTION



**Dr. K. Sasi Kala Rani**, Professor and Head, Department of **Computer Science and Engineering**, addressed the **Final** year students. She appreciated the internship-offered students and deliberated the following points:

- Upcoming placement drives and its importance
- Maintaining decorum inside the campus and following proper dress code
- Training assessments and Practice tests.
- Attending the placement drives with sincere effort.
- Instructed the students to check their marks and other details in the Myclassroom web portal.



## CSBS | SYSTRONS ASSOCIATION INAUGURATION PRE-EVENT TECH



Department of **Computer Science and Business Systems** organized **Association Inauguration** pre event - **Tech Charades**, to reverberate the vibe of enriching the thought process of technical astounding terms with actions only on 26.07.2021.

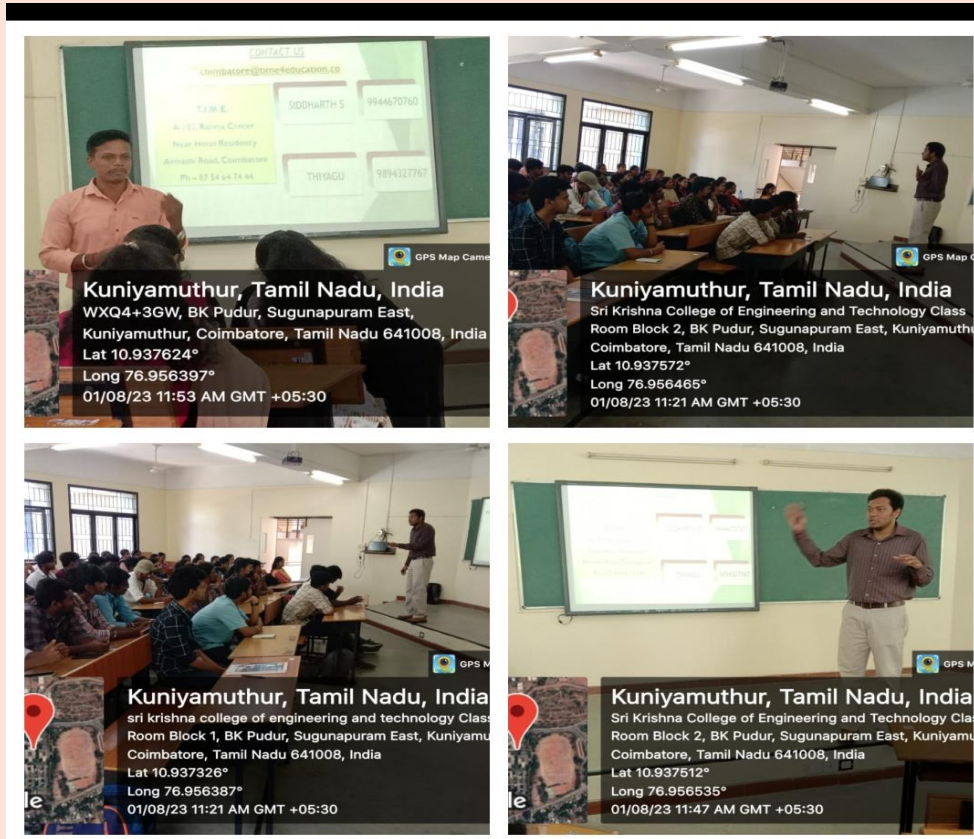
### Winners:

**First place:** Ashik Ahamed S- III year CSBS, Sricharan Sundar S-III year CSBS

**Second place:** Bhagyasree PuthiyaPurayil-III year CSBS, Shrreya S R-III year CSBS

**Third Place:** Seshan Bharati S M-I CSBS, Thithiksha J-I CSBS

# EEE | HIGHER EDUCATION AFTER UG PROGRAMME



Department of **EEE** organized Awareness Seminar on '**Higher Education after UG Programme**' on 01.08.2023 for the Pre-final year EEE students.

**Resource Person:** Mr.S.Siddharth, Manager (Operations),T.I.M.E., Coimbatore.

### Session Takeaways:

- Selection Criteria for IIM & Non-IIM
- Top B Schools to pursue MBA
- Career after MBA
- Entrance to get into Premier Institutions
- Utilization of Online Resources
- CAT Exam Patterns and Syllabus
- On-Campus Coaching Protocols.



## MECH | HARVESTING OF ORGANIC GREEN CHILLY FROM POLYHOUSE



Department of **Mechanical Engineering** constructed **Smart Polyhouse** at our campus few months back and planted tomato and green chilly saplings on 02.08.2023. The team also harvested 28 kgs of organic green chili and handed over to our boys' hostel kitchen. This poly-house was constructed as the part of SEED project (Science Technology & Innovation Hub) funded by **DST – Government of India**. This is the team's second cycle of harvesting after their first cycle harvesting happened on 28.6.23.

## IT| ELQ SCHOLARSHIPS PROGRAM



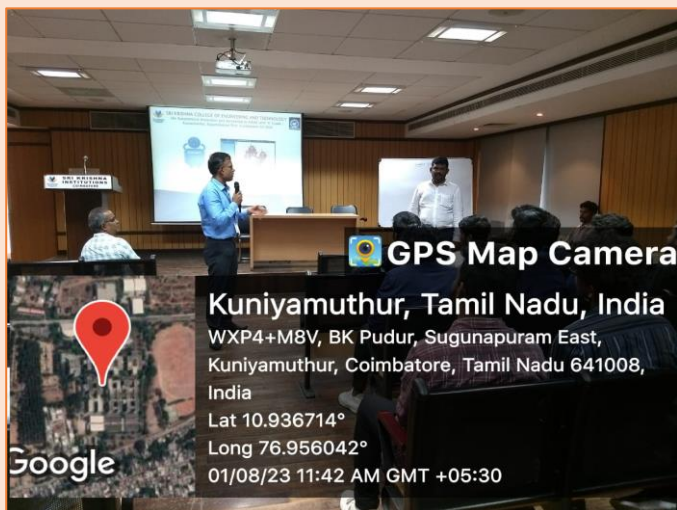
**Dr.N.Susila**, Professor, HoD - IT and **Dr. Prabha** , Professor, M.Tech CSE have attended ELQ scholarships program 2023-2024 conducted by Global Education and Careers on 27-07-2023, Coimbatore.

### Session Highlights:

- Free IELTS training through online.
- ELQ Exam scholarship.
- Studying in abroad opportunities and benefits.
- Addressed the benefits of the nominated and Enrolled students.



# MECH | SKILL DEVELOPMENT PROGRAMME ON SMART FOUNDRY



DST supported Skill Development Programme on **Smart Foundry** was organized on 1<sup>st</sup> and 2<sup>nd</sup> Aug 2023. Around 30 external participants attended the programme which was conducted in association with the Instrumentation Sector Skill Council. Overview of foundry industry, Basic training on Auto Cast simulation software, Hands on demonstration of pattern making, metal melting and casting of solids and Role of 3D printing and its overview were discussed during the program.



# TUTOR WARD MEETING



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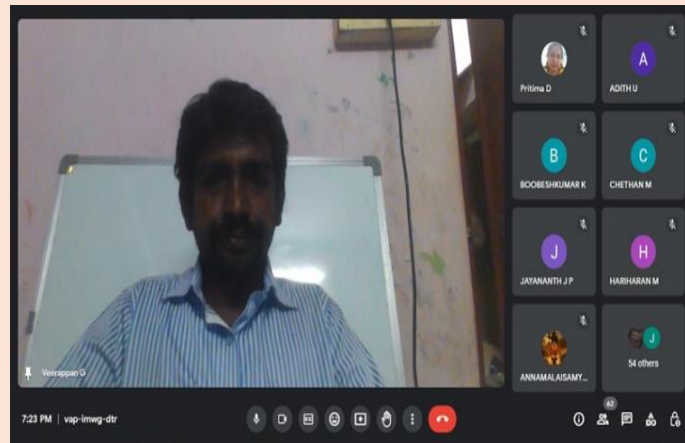
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## MCT| TUTOR WARD MEETING



**Tutor Ward Meeting** was conducted for the Pre – final year students on 22.07.2023. The following points were discussed.

- Regular attendance and discipline
- Industrial training attendance for open elective
- Attending the placement test
- CIA 1 preparation
- Semester exam results
- Participation in curricular and extracurricular activities
- Transparency application submission
- Industrial Training
- Placement activities

## MCT| TUTOR WARD MEETING



**Tutor Ward Meeting** was conducted for the **Final** year students on 23.07.2023.

The following points were discussed:

- Accenture Drive Preparation
- Self-Practice through online mock tests
- Placement Drive Dress code
- Class and placement timing punctuality and attendance
- Importance of Internal marks
- Placement Test and Drive Attendance
- Completion and certificate submission of NIELT's - Bridge Course on 3D Printing and Additive Manufacturing
- Transparency form submission status



## AI&DS|TUTOR WARD MEETING



Kuniyamuthur, Tamil Nadu, India  
 Sri Krishna College of Engineering and Technology, BK Pudur, Kuniyamuthur, Tamil Nadu 641008,  
 India  
 Lat 10.94126°  
 Long 76.954044°  
 01/08/23 10:25 AM GMT +05:30



Kuniyamuthur, Tamil Nadu, India  
 Sri Krishna College of Engineering and Technology, BK Pudur, Kuniyamuthur, Tamil Nadu 641008,  
 India  
 Lat 10.94126°  
 Long 76.954044°  
 01/08/23 10:26 AM GMT +05:30

**Mr.K.Balaji** and **Mr.S.Senthil Kumar**, Assistant Professor, Department of **Artificial Intelligence and Data Science** conducted Tutor Ward Meeting for the **Third** year students on 01.08.2023. The pointers of discussion were: Placement test, motivated students to effectively participate in events and placement activities, Regular attendance and discipline.



# PLACEMENT AND TRAINING



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## EEE | TESTIMONIAL BY PLACED STUDENTS

Firstly, I would like to express my heartfelt gratitude to Sri Krishna Family. I would also like to extend my regards and thanks to the professors and faculty members of the department who are integral to my success and enabled me to have a positive approach in life. I am privileged to be a part of the SKCET family. The management provided us with excellent placement training programs and numerous campus interview opportunities. **"There is only one difference between Dream and Aim. Dream requires effortless sleep and Aim requires sleepless efforts"**. I can say that SKCET has been the best part of my life and I admire the support and dedication I received from the management and my EEE department. We were well trained for placements and because of the training I got placed in NINELEAPS. I genuinely thank all my friends, staff and professors who made my college life a happy memory.

**HEMA B**  
**EEE (2023 Batch)**  
**NINELEAPS - 6 LPA**





## TESTIMONIAL BY PLACED STUDENTS

I am Javid Firnas S from Mechanical Engineering of Batch 2023. My experience in SKCET helped me to shape my knowledge in problem solving, leadership and management skills. I am a part of SAE SKCET collegiate club which helped me to work on my academic skills practically by means of various projects and won various awards during my academic year. The relationship between faculty members and student is very cordial, which gave me an opportunity to excel in my studies. The four years spent here were splendid and has helped me to grow better professionally and personally. I would like to thank the entire faculty members for making me a "Better Person." It gave me an opportunity to meet different kinds of people and learn several things. I have received a great support from faculty members and placement office. I am thankful to the Training and Placement cell for providing a platform to enhance my skills and opportunity to showcase them. Special thanks to SKCET team for providing various opportunities and for showing me a suitable carrier path to enhance my future growth. I convey my sincere thanks to our Principal Madam and the entire SKCET family for providing me with adverse opportunities in building my career.



**JAVID FIRNAS S, MECH (2023 BATCH),  
JSW**

# SKCET Buzz



## RESEARCH AND DEVELOPMENT



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## R&D | JOURNAL PUBLICATION | CIVIL

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Vol. 38 Nº1 2023  
[www.ricci.es](http://www.ricci.es)  
DOI: 10.7764/RIC.00074.21

ENGLISH VERSION

*Influence of bacteria megaterium on strength and durability properties of concrete partially substituted with metakaolin*  
*Influencia de la bacteria megaterium en las propiedades de resistencia y durabilidad del hormigón parcialmente sustituido con metacaolín*

Vighnesh Rameshkumar\*<sup>1</sup>, <https://orcid.org/0000-0001-8904-0508>  
S. Vaishnavi Devi\*\* <https://orcid.org/0000-0002-9726-2085>

\* Sri Krishna College of Engineering and Technology, Coimbatore Tamilnadu, INDIA  
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PAG: 349-360

**Abstract:**  
Concrete is one of the most used materials in the building sector. Inevitably, concrete gains strength and develops shrinkage cracks during the curing process. Shrinkage cracks provide an entry point for reactive fluids to get into the concrete core. Under favorable conditions, the fluids reduce the pH of the core and consequently corrode the reinforcing bars. This research shows the use of *Bacillus megaterium* MTC 3353, which produces calcium carbonate and closes the minute fissures. Part substitution of cement with metakaolin was also done in the study. It was seen that the bio-based concrete specimens enhanced the mechanical strength and durability parameters. The calcite precipitation was validated using a microstructure study. FESEM and XRD tests show the presence of calcite (calcium carbonate) inside the concrete structure. The bacteria were tested for their growth when superplasticizers were added to them. The bacteria showed normal growth compared to the conventional testing.  
**Keywords:** Mechanical properties; durability properties; microstructure; *Bacillus Megaterium*; Metakaolin.

**Mr.R.Vighnesh**, Assistant Professor, Department of **Civil Engineering** has published a research article titled **“Influence of bacteria megaterium on strength and durability properties of concrete partially substituted with metakaolin”** in *Revista Ingeniería de Construcción*. It is indexed in Scopus and WoS.

## R&D | JOURNAL PUBLICATION | M.TechCSE

**Dr.S.Karthikeyini**, Assistant Professor, Department of **M.Tech Computer Science and Engineering** has published a paper titled **“Heart Disease Prognosis Using D-GRU with Logistic Chaos Honey Badger Optimization in IoMT Framework”** in the *Journal of Information Technology and Control*. It is a SCI, WoS and Scopus Indexed Journal with an Impact Factor 1.2. The Journal is also enlisted in Anna University Annexure I.

Information Technology and Control 2023/2/52

ITC 2/52 Information Technology and Control Vol. 52 / No. 2 / 2023 pp. 367-389 DOI 10.5755/JOI.Ic.52.2.32889	Heart Disease Prognosis Using D-GRU with Logistic Chaos Honey Badger Optimization in IoMT Framework	
	Received 2022/12/02	Accepted after revision 2023/02/13

**HOW TO CITE:** Karthikeyini, S., Vidhya, G., Vetriseelvi, T., Deepa, K. (2023), Heart Disease Prognosis Using D-GRU with Logistic Chaos Honey Badger Optimization in IoMT Framework. *Information Technology and Control*, 52(2), 367-389. <https://doi.org/10.5755/JOI.Ic.52.2.32889>

**Heart Disease Prognosis Using D-GRU with Logistic Chaos Honey Badger Optimization in IoMT Framework**

**S. Karthikeyini**  
Department of Computer Science and Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, 641008, Tamilnadu, India

**G. Vidhya**  
Department of Computer Science and Engineering, Sona College of Technology, Salem, India

**T. Vetriseelvi**  
Department of Internet of Things, School of Computer Science and Engineering, VIT Vellore, India

**K. Deepa**  
Department of Computer Science and Engineering, K. Ramakrishnan College of Technology, Samayapuram, 621112, Tiruch

Corresponding author: skarthikeyini@outlook.com

In recent years, heart disease has superseded several other contributory death factors. It is challenging to predict an individual's risk of acquiring heart disease since it requires both expert knowledge and real-world experience. Developing an effective method for the prognosis of heart disease using Internet of Medical Things (IoMT) technology in healthcare organizations by collecting sensor data from patients' bodies, utilizing robust expert systems, and incorporating vast healthcare data on cardiac disorders to alert physicians in critical situations is a challenging task. Several machine learning-based techniques for predicting and diagnosing cardiac disease have recently been demonstrated. However, these algorithms cannot effectively handle high-dimensional information due to the need for an intelligent framework incorporating multiple sources to predict cardiac illness. This work proposes a unique model for heart disease prediction based on deep learning. Deep Gat-



## R&D | JOURNAL PUBLICATION | EEE

8/1/23, 6:15 AM Electric vehicle parameter identification and state of charge estimation of li-ion batteries: Hybrid WSO-HDLNN method - ScienceDirect

ScienceDirect

ISA Transactions  
Available online 25 July 2023  
In Press, Journal Pre-proof

Research article  
**Electric vehicle parameter identification and state of charge estimation of li-ion batteries: Hybrid WSO-HDLNN method**  
V. Kandasamy,<sup>a</sup> R. S. M. Mathankumar,<sup>b</sup> ThamilSelvi C. Palanichamy,<sup>c</sup> S. Sivaranjani,<sup>c</sup>

<sup>a</sup> Electrical and Electronics Engineering, Kumaraguru college of technology, Coimbatore, India  
<sup>b</sup> Computer Science and Engineering, PPG Institute of Technology, Coimbatore, India  
<sup>c</sup> Electrical and Electronics Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, India

Received 3 November 2022, Revised 22 June 2023, Accepted 21 July 2023, Available online 25 July 2023.

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<https://doi.org/10.1016/j.isatra.2023.07.029>  
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Highlights

- This manuscript proposes a hybrid technique for measuring the battery's dynamic electrical response.
- The proposed hybrid technique is the wrapper of WSO and HDLNN.
- The main aim of the proposed method is to lessen the battery-voltage error.
- WSO is detects the parameters of battery; HDLNN is predict the electrical response of battery.
- The estimated voltage and measured voltage error is reduced and identifies the parameter effectively.

**Dr.S.Sivaranjani**, Professor, EEE Department has published a paper entitled on **“Electric vehicle parameter identification and state of charge estimation of li-ion batteries: Hybrid WSO-HDLNN method”** in ISA Transactions, Elsevier. It is SCI indexed journal with an **impact factor of 7.3**.

## EEE | BOOK CHAPTER PUBLICATION

CHAPTER - 29

**A Review of Torque Ripple Control Strategies of Switched Reluctance Motor**

G.Mahalakshmi<sup>1</sup> and Dr. C.Ganesh<sup>2</sup>

<sup>1</sup>Assistant Professor<sup>1</sup>Electrical and Electronics Engineering, Sri Krishna College of Engineering & Technology, Coimbatore-641 008, Tamilnadu, India. E-mail: mahalakshmi@gmail.com ORCID ID: 0000-0003-4289-7146

<sup>2</sup>Professor<sup>2</sup>Electrical and Electronics Engineering, KPR Institute of Engineering & Technology, Arasur, Coimbatore-641 407, Tamilnadu, India. E-mail: c.ganesh@mech72@gmail.com

**Abstract**  
Doubly salient, single energized Switched Reluctance motor is eminently suited for industrial application of variable speed control SRM drive is most suited for low cost and variable speed operations. But the major drawback in Switched Reluctance Motor is High torque ripple, mechanical vibration and Acoustic noise. Due to its nonlinearity and doubly salient structure torque ripple becomes inevitable. This paper discussed about the outset of torque ripple and the appropriate methods used so far to diminish the torque swell in Switched Reluctance Motor. Results obtained from the review of all the Torque ripple Minimization techniques are presented. From the results it has been concluded that DTC and DTC with PI & Genetic PI controller gives the least torque ripple when it is used in Switched Reluctance motor drive.

**Keywords:** Acoustic noise, Converter, Current Control, Torque Control.

**INTRODUCTION**  
The stator and rotor of SRM have projected poles. Stator winding produce the magnetic field and the rotor don't have windings, commutator and brushes. The speed of SRM is more compared to stepper motor. The preferable qualities of

Advanced Engineering Research and Applications  
Editor-in-Chief: Hongseok Choi  
RM Research International Pte. Ltd.  
ISBN: 978-981-18-7125-2

**G.Mahalakshmi**, Assistant Professor, EEE Department has published a book chapter entitled on **“A Review of Torque Ripple Control Strategies of Switched Reluctance Motor”** in **Advanced Engineering Research and Applications**, Book Volume with ISBN: 978-981-18-7125-2 published by RM Research International Pte. Ltd. Singapore.

## CSBS| PATENT GRANT



**Dr.S.Balakrishnan**, Professor and Head, Department of **CSBS**, Sri Krishna College of Engineering and Technology received an Indian Design Patent Grant titled **“Machine Learning Based Robot For Face Mask And Sanitizer Dispensing”** with the Design Number 381142-001 from the Government of India on 31.07.2023

## MCT| Book Publication

**Dr.J.Indirapriyadharshini**, Assistant Professor, **MCT** has published a book titled **"Sensor and Transducer"** with ISBN number 978-93-5757-354-2 in Scientific International Publishing House.





## R&D | ARTICLE PUBLICATION | MECH

E3S Web of Conferences 399, 06005 (2023)  
ICONNECT-2023

<https://doi.org/10.1051/e3sconf/202339906005>

### Performance Comparison of Tray, Bed and Integrated Drying Chamber in Closed Loop Heat Pump Dryer for Bermuda Grass

Ashok Kumar M<sup>1\*</sup>, Kumaresan G<sup>2</sup>, Sivagaminathan M<sup>1</sup>, Rajakarunakaran S<sup>1</sup>, and Siva Subramanian R<sup>3</sup>

<sup>1</sup>Department of Mechanical Engineering, Ramco Institute of Technology, Rajapalayam, Tamil Nadu, India  
<sup>2</sup>Department of Mechanical Engineering, Bannari Amman Institute of Technology, Sathyamangalam, Tamil Nadu, India

<sup>3</sup>Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu, India

**Abstract.** Drying plays a crucial role in various industries such as food production, agriculture, Siddha, Ayurveda, and medical fields. To achieve controlled drying conditions, a heat pump dryer is considered an effective method, allowing for precise control of parameters like temperature, humidity, and air velocity. In this study, a heat pump dryer was designed and constructed to investigate the drying characteristics of Bermuda grass (*Cynodon dactylon*) at different velocities (1.5 m/s, 2.0 m/s, and 2.5 m/s) using three types of drying chambers: fluidized bed dryer, tray dryer, and combined dryer (a combination of bed and tray). The heat pump system utilized R134a as the refrigerant. The performance of the heat pump dryer in the three drying chambers was analyzed using Bermuda grass as the drying product. The Moisture Removal Rate (MRR) was calculated for various combinations of velocity and drying chamber, and it was observed that the combined dryer achieved a higher MRR at all three velocities compared to the tray and fluidized bed dryers.

Mr. R. Siva Subramanian, Assistant Professor, **Mech**, has published a scientific article entitled “**Performance comparison of tray, bed and integrated drying chamber in closed loop heat pump dryer for Bermuda grass**” in E3S Web of Conferences. It is a Scopus Indexed Journal.

## R&D | ARTICLE PUBLICATION | MECH

Dr. K. P Yuvaraj, Assistant Professor, **Mech**, has published a scientific article entitled ‘**Impact of ultrasonic vibration power and tool pin profile on mechanical and microstructural behavior of friction stir welded dissimilar aluminium alloy joints**’ in Aircraft Engineering and Aerospace Technology – An Emerald group publication. It is a Scopus Indexed Journal.

### Impact of ultrasonic vibration power and tool pin profile on mechanical and microstructural behaviour of friction stir welded dissimilar aluminium alloy joints

Yuvaraj K.P.

Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, India

Joshua Gnana Sekaran J.

Department of Mechanical Engineering, CSI College of Engineering, Nilgiris, India, and

Shanmugam A.

Department of Mechanical Engineering, SAMS College of Engineering and Technology, Chennai, India

#### Abstract

**Purpose** – The purpose of this paper is to investigate the impact of ultrasonic vibration (UV) and tool pin profile on mechanical properties and microstructural behaviour of AA7075-T651 and AA6061-T6 joints was analysed.

**Design/methodology/approach** – The joints were fabricated using three different tool pin profiles such as cylindrical, square and triangle. For each tool pin profile, two different UV powers of 1.5 kW and 2 kW were used.

**Findings** – On both the advancing and retreating sides of the weld, the thermo-mechanically affected zone has the lowest microhardness. In all joints, the tensile fracture locations match to the minimum hardness values. Field emission scanning electron microscope fractography of tensile tested specimens reveals heterogeneous modes of brittle, shear and ductile fracture. Three-point bending analysis was performed to determine the ductility and soundness of the weld joint. The acoustic softening effect of UV, as well as the static and dynamic ratio of tool pin profile, plays an important role in determining the material flow and mechanical behaviour of the joint.

**Practical implications** – Dissimilar aluminium joining fascinates many applications like aircraft, aerospace, automobiles, ship building and electronics, where fusion welding is a very intricate process because of the deviation in its physical and chemical properties.

**Originality/value** – From this study investigation, it is found that the square pin profiled tool with 2 kW UV power produces metallurgical defect-free and mechanically sound weld with maximum tensile strength, hardness and bending load of 297 MPa, 151HV and 3.82 kN, respectively.

**Keywords** Friction stir welding, Aluminium alloy, Ultrasonic vibration, Tool pin profile, Hardness, Tensile strength, Bending strength

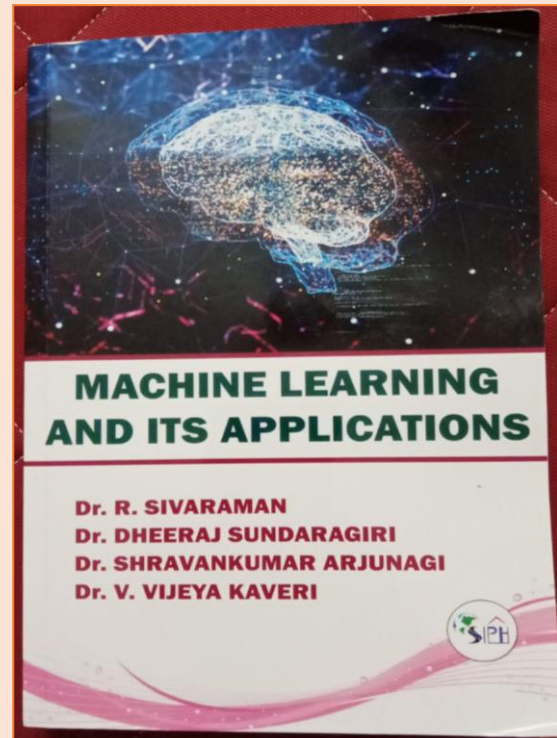
**Paper type** Research paper





## CSE | BOOK PUBLICATION | R&D

Dr.V.Vijeya Kaveri, Professor, Department of CSE has published a book titled “Machine Learning and It's Applications”, Publisher SPIH (Scientific International Publishing House).



## R&D | JOURNAL PUBLICATION | EEE

Optical and Quantum Electronics (2023) 55:911  
<https://doi.org/10.1007/s11082-023-05169-x>

**10 Gbps CPFSK FSO system under various adverse atmospheric conditions: performance analysis**

A. R. Palanisamy<sup>1</sup> · K. C. Ramya<sup>2</sup> · J. Roopa Jayasingh<sup>3</sup> · R. Maheswar<sup>4</sup> · P. Roshini<sup>5</sup> · Moustafa H. Aly<sup>6</sup>

Received: 20 April 2023 / Accepted: 8 July 2023  
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**Abstract**  
 A 10 Gbps Continuous Phase Frequency Shift Keying (CPFSK) modulation is proposed for a Free Space Optical (FSO) communication system. The system performance is analyzed by considering effects of atmospheric conditions, beam divergence, transmitter and receiver antenna aperture diameters for 1550 nm operation. In this paper, we evaluate the system maximum Quality-factor (Q-factor), Bit Error Rate (BER), and received power, where the system is greatly affected by the mentioned parameters. This simulation is performed by using the Optiwave system software. The obtained simulation results show that CPFSK modulated FSO system with low beam divergence and high aperture diameter is upgrading maximum Q-factor and degrading minimum BER.

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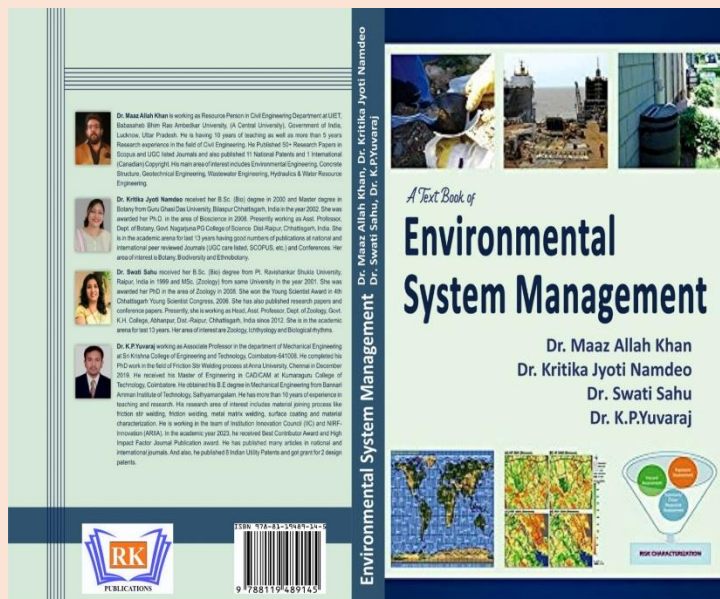
<sup>1</sup> Department of ECE, Park College of Technology, Coimbatore, India  
<sup>2</sup> Department of EEE, Sri Krishna College of Engineering and Technology, Coimbatore, India  
<sup>3</sup> Department of ECE, Karunya Institute of Technology and Sciences, Coimbatore, India  
<sup>4</sup> Department of ECE, Centre for IoT and AI (CITI), KPR Institute of Engineering and Technology, Coimbatore, India  
<sup>5</sup> Society for Applied Microwave Electronics and Engineering Research (SAMEER) - Centre for Electromagnetics, Chennai, India  
<sup>6</sup> Department of Electronics and Communications Engineering, Arab Academy for Science, Technology, and Maritime Transport, Alexandria, Egypt

Published online: 02 August 2023

Dr.K.C.Ramya, HoD, EEE Department has published a paper entitled “10Gbps CPFSK FSO system under various adverse atmospheric conditions: performance analysis” in Optical Quantum Electronics with an Impact Factor: 3.0 DOI:10.1007/s11082-023-05169-x. It is indexed in SCI & Scopus journal.

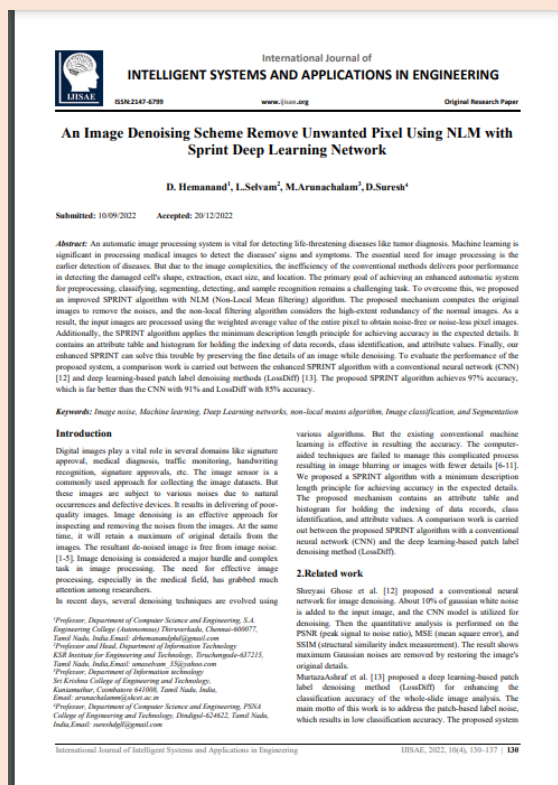
## MECH | BOOK PUBLICATION | R&D

Dr. K. P. Yuvaraj, Assistant Professor, Department of Mech, has published a book entitled 'Environmental system Management'. The Book was published by RK Publications.

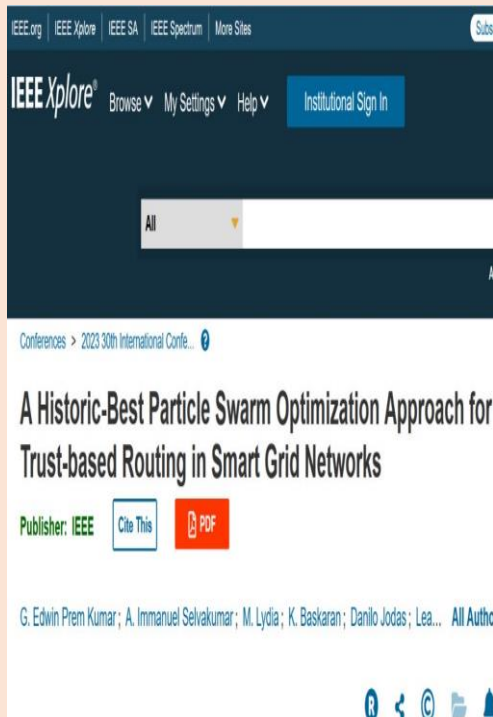


## IT | JOURNAL PUBLICATION | R&D

Dr.M.Arunachalam, Professor, IT has published a paper titled "An Image Denoising Scheme Remove Unwanted Pixel Using NLM with Sprint Deep Learning Network" in the International Journal of Intelligent Systems and Applications in Engineering. It is Scopus indexed publication.

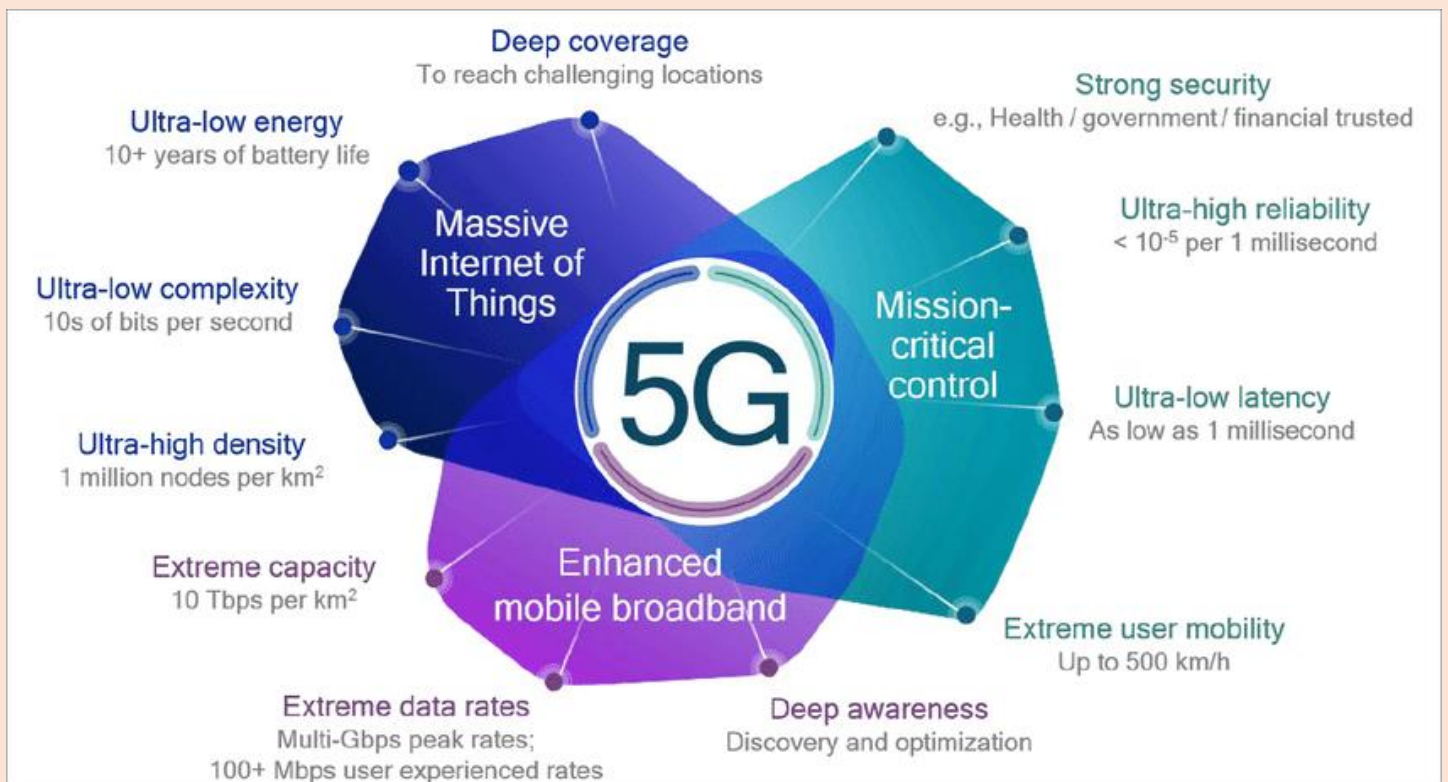


## IT/MCT | BOOK PUBLICATION | R&D



**Dr. G. Edwin Prem Kumar**, Professor, **IT** and **Dr. M. Lydia**, Professor, **MCT** have published a paper entitled **“A Historic-Best Particle Swarm Optimization Approach for Trust-based Routing in Smart Grid Networks”** which was presented in the 30<sup>th</sup> International Conference on Systems, Signals And Image Processing held during 27<sup>th</sup> – 29<sup>th</sup> June 2023, Ohrid, North Macedonia And Published In IEEE Xplore. It is a Scopus Indexed Publication.

## INFOGRAPHICS







# FACULTY PROGRESSION



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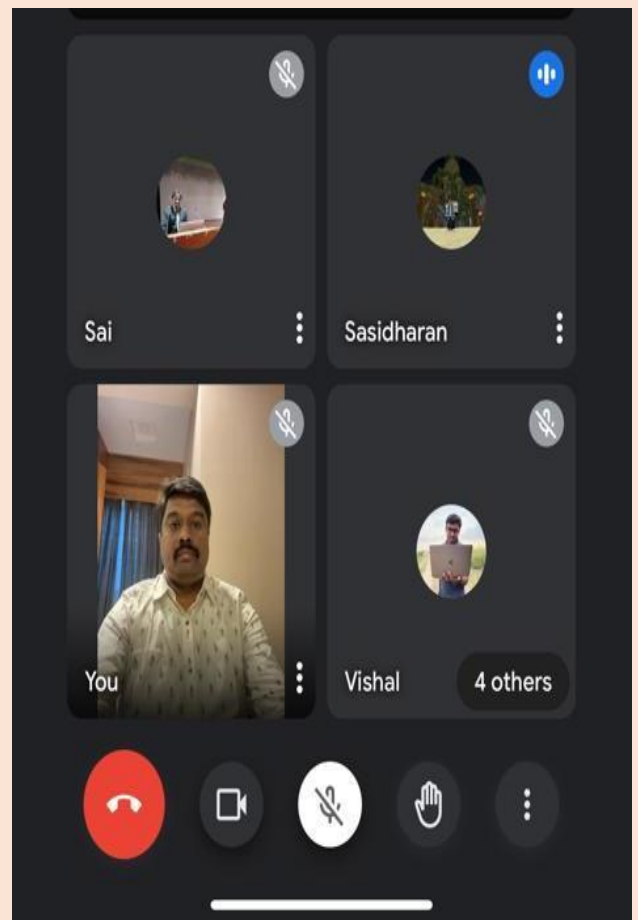
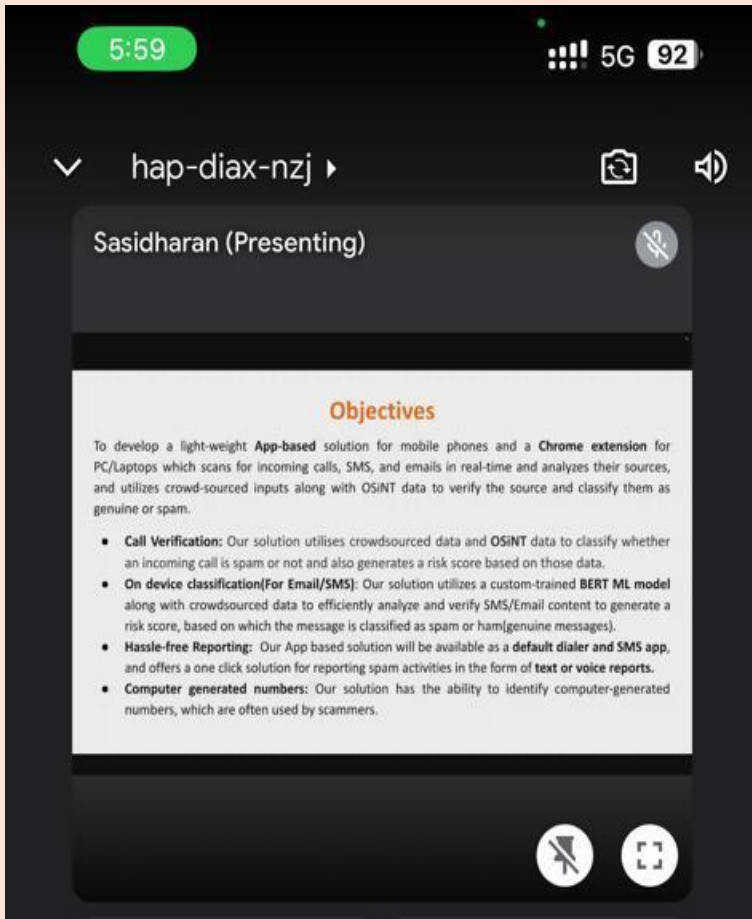


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## CSBS/CSE | INDUSTRY EXPERT MENTORING SESSION



Student teams from the Department of **Computer Science and Business Systems and Computer Science and Engineering** which were chosen for the National level prestigious **KAVACH Hackathon 2023**, had a technically sound interactive Mentoring session with **Mr.Sai Satish, CEO, Indian Server Vijayawada , Andhra Pradesh.**

By presenting their views for the proposed solution to the expert, the students had a useful discussion. The expert rejuvenated the brainstorming process through problem-solution mapping and contributed insights into greater levels of technical feasibility on 24.07.2023.



# FACULTY CERTIFICATIONS



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## CIVIL | INNOVATION AMBASSADOR TRAINING



**Mr.S.C.Boobalan,** Assistant Professor, Department of **Civil Engineering** has undergone Innovation Ambassador Training “**Foundation level**” conducted Online by MoE’s Innovation Cell and AICTE.

## IT | INFOSYS CERTIFICATION

**Dr.K.N.Sivabalan,** Professor-IT has successfully completed the course on Introduction to Deep Learning certified by Infosys Springboard.



## CSBS| INNOVATION AMBASSADOR (IA) TRAINING



**Mr.R.Yasir Abdullah** , Assistant Professor , **Department of Computer Science and Business Systems** has completed the Innovation Ambassador (IA) training **“Foundation Level”** of 30 hours conducted in online mode by MoE’s innovation Cell & AICTE during the IIC calendar and received the certificate on 26.07.2023

## MECH| FDP ON RECENT ADVANCEMENTS IN ELECTRIC VEHICLE TECHNOLOGY

**Mr. J. Dhiyaneshwaran**, Assistant Professor , **Mechanical Engineering** has actively participated in the five days Faculty Development Program on **‘Recent Advancements in Electric Vehicle Technology’** organized by Ballari Institute of Technology and Management from 24.07.23 to 28.07.23.



## AI&DS | FDP ON CURRENT TRENDS IN SCIENCE & TECHNOLOGY



**Mr.A.Wasim Raja**, Assistant Professor of **AI&DS** had participated in the One Week Virtual FDP on "**Current Trends in Engineering, Science and Technology**" held on 3<sup>rd</sup> – 8<sup>th</sup> July 2023.

## AI&DS | INFOSYS SPRINGBOARD CERTIFICATION

**Mr.S.Senthil Kumar**, Assistant Professor, **AI&DS** has successfully completed a course on "**Implementing Deep Learning: Optimized Deep Learning Applications**" Certified by Infosys Springboard on July 24,2023.





## CSE|ADVANCED RESEARCH METHODOLOGY

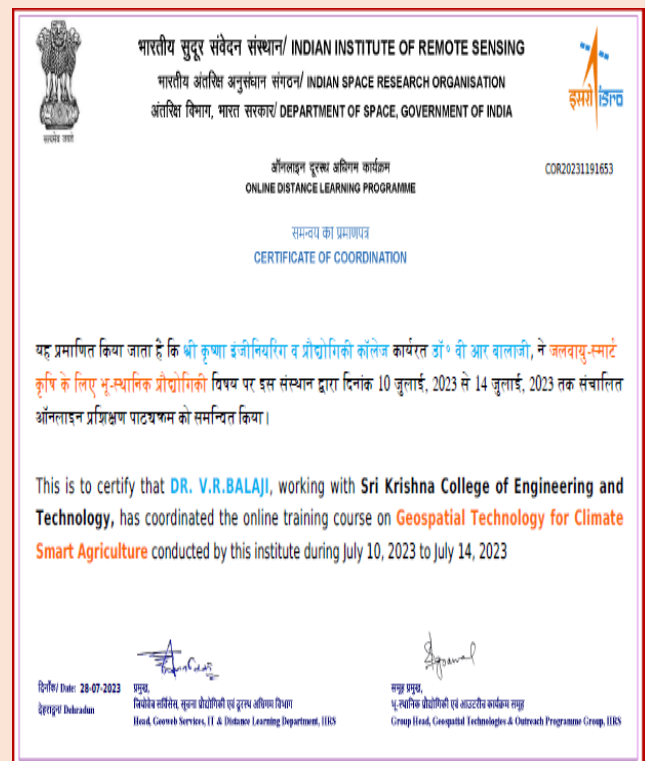


**Mr.M.Vengateshwaran,**

Assistant Professor, Department of **CSE** has participated in the two week National level virtual workshop on “**Advanced research Methodology**” organized by SRM Institute of science and Technology,

## ECE | FACUTY CERTIFICATION

**Dr.V.R.Balaji**, Associate Professor, Department of **ECE** has received a coordinator certificate as a token of appreciation for conducting the online training course on “**Geospatial Technology for Climate Smart Agriculture**” organized by Indian Space Research Organization (ISRO), and Indian Institute of Space Sensing, Dehradun.



## ECE | IEEE CERTIFICATION

**Ms K. Priyadharshini**, Assistant Professor has received an appreciation certificate for her role as reviewer in “**IEEE International Conference on Applied Intelligence and Sustainable Computing (ICAISC - 2023)**” held on 16<sup>th</sup> and 17<sup>th</sup> June 2023.



## ECE | IEEE CERTIFICATION

**KALPATARU INSTITUTE OF TECHNOLOGY, TIPTUR.**

**Certificate of Appreciation**

This is to recognise the contribution of

**Mr. Dinesh Kumar J R**

Sri Krishna College of Engineering and Technology

as **REVIEWER** for **First IEEE International Conference on Data Science and Network Security (ICDSNS - 2023)** organized by Kalpataru Institute of Technology, Tiptur, 28<sup>th</sup> - 29<sup>th</sup> July 2023.

Prof. Shashidhara M. S.  
Publication Chair, ICDSNS  
HOD, Dept. of CSE, KIT, Tiptur

Dr. Raviprakash M L  
Organizing Chair, ICDSNS  
Dept. of CSE, KIT Tiptur

Dr. G.D. Gurusurthy  
Principal  
KIT Tiptur

**Mr J R Dinesh Kumar**, Assistant Professor, has received an appreciation certificate for his role as reviewer in “**First IEEE International Conference on Data Science and Network Security (ICDSNS - 2023)**” held on 28<sup>th</sup> and 29<sup>th</sup> July 2023.



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## MCT| MOCK INTERVIEW



**Mock Interview** was conducted for the **Final** year **MCT** students by our college MBA Alumni **Mr. Sri Hari. P**, Social Media Analyst, SaasAnt Inc., **Mr. Sharukh. R**, Entrepreneur, Shuttle Logistics, **Mr. Ranjan Vishal. PC**, Product Marketing Analyst, SaasAnt Inc.

- Reviewed students resume
- Conducted company oriented interview
- Gave their valuable suggestions on how to improvise resume
- How to deliver self-introduction
- How to prepare for interview.

The students gained good confidence to face the interview by this mock drive.



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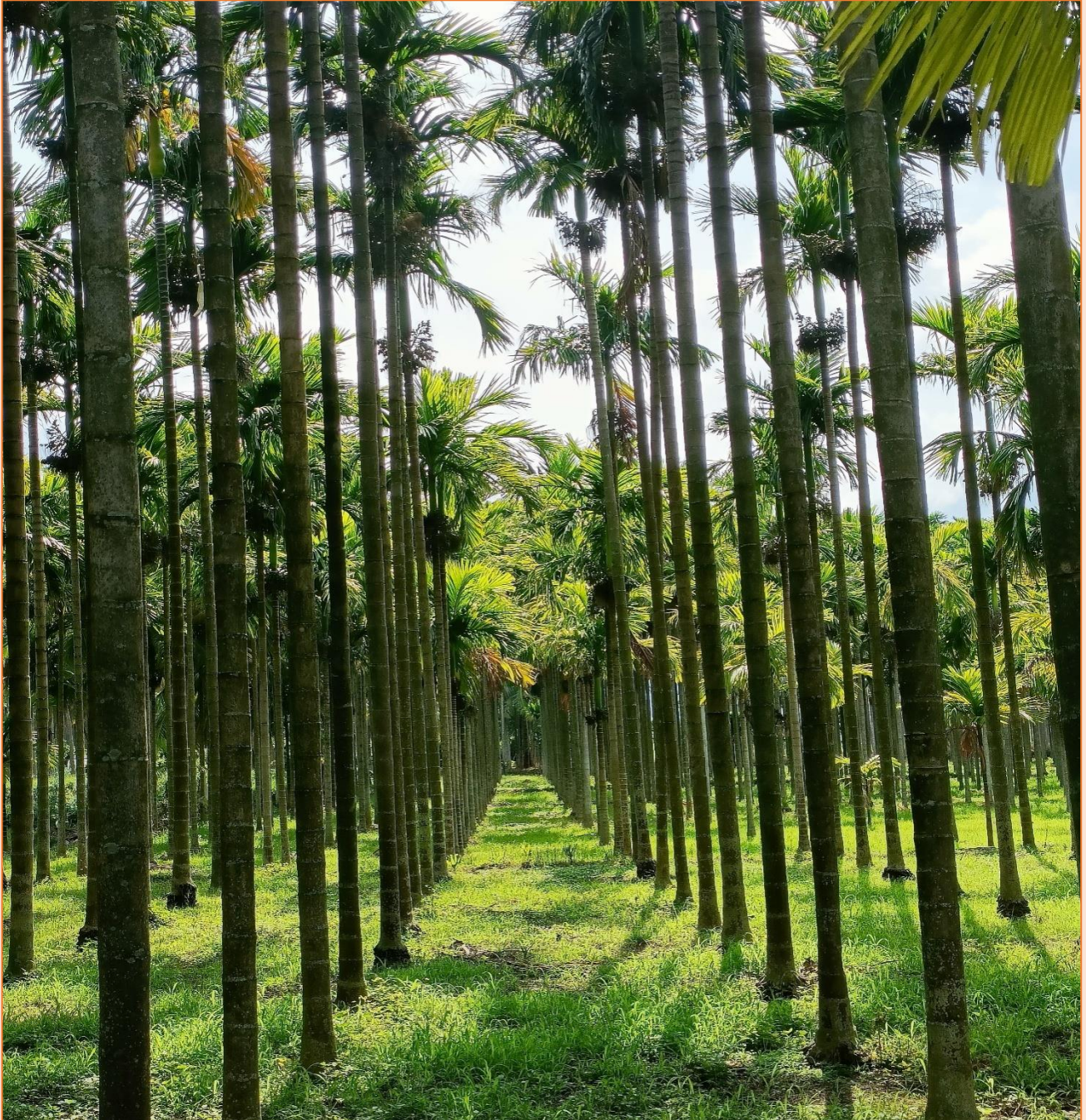
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## EEE | NATURE CLICK

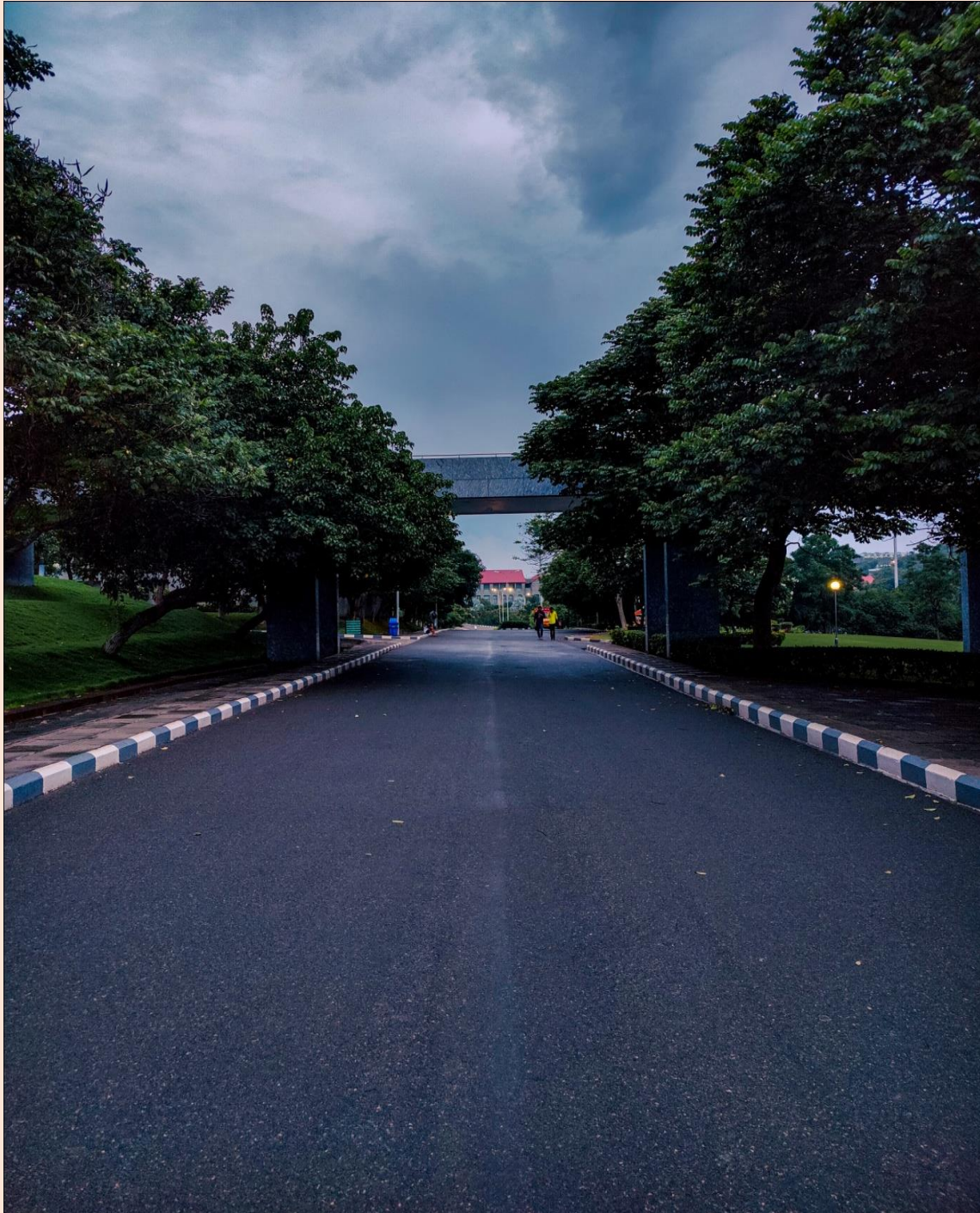


**Surjith surya.V**

**IV Year EEE B**



## ECE | NATURE CLICK



**Thanga Aravind C**  
**IV ECE C**