



**SKCET**  
**Buzz**

17<sup>th</sup> - 21<sup>st</sup> July 2023



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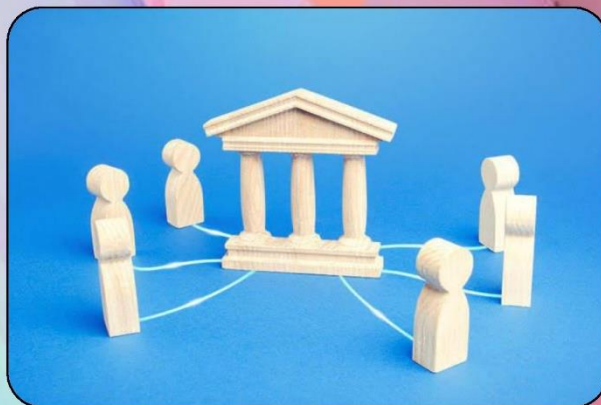


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# INSTITUTIONAL EVENTS



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## SKCET | HANDLOOM FASHION SHOW 2023



To celebrate **National Handloom Day** and to highlight the importance of handloom amongst youngsters, '**Handloom Fashion Show 2023**' was held at Convention Centre, SKCET. 75 Young fashion enthusiasts participated in the event and walked the ramp wearing stunning handloom ensembles which portrayed unique style and story. The show featured a breathtaking collection that symbolized unity and diversity, showcasing handloom's ability to bring people together through fashion.

**We salute the Indian weaves curated from all corners of India, articulating our Historical Handloom!**



# SKCET | HANDLOOM FASHION SHOW 2023





## SKCET | HANDLOOM FASHION SHOW 2023



Each collection was a testament to the time-honored craft of handloom, showcasing its continued relevance in the world of fashion. The best two fashion styles were selected - **Mohammed Toufiq - I MBA** and **Shwetha - III CSBS**. The winners were honoured with prizes.

**Let us continue to support and celebrate our rich textile heritage!**



# SOM | GUEST LECTURE - IMPACT OF INCOME TAX ON INDIAN ECONOMY



**School of Management** in association with **NSS** and **USVA** organized a Guest Lecture on "Impact of Income Tax on Indian Economy" on 13.07.2023 to commemorate the Income Tax Day 2023 principal madam presided the session.

**Resource Person:** Ms.Pryati Sharma IRS, Deputy Commissioner of Income tax, Coimbatore.

### Session Takeaways:

- Origin and History of Taxation
- Concept of Direct and Indirect taxes
- Incentivizing the industries through Taxation
- Impact of capital gain taxes
- Transactions in Tax Havens
- Digitalization of Taxation department
- Difference of Enforcement Act and Income Tax Act.

## SOM | AVINYA'23



**School of Management** organized IIC Driven **Avinya 23** - Innovate to elevate a trade fair by the MBA students. The event was inaugurated by our **Principal Madam** Dr. J. Janet on 17<sup>th</sup> July 2023. To acknowledge the hard work and efforts of the students and to motivate them to continue their journey with the same enthusiasm the students were facilitated by **Dr. Ashokavarthanan**, IIC Head and HOD of Mechanical Department.



## SKCET | WORLD PAPER BAG DAY



On the eve of **World Paper Bag Day**, **SKCET** organized a **Mega Paper Bag Making Event** on **12.7.2023** as an attempt for world record. **500** student participants gathered together in the pursuit of making **15,000** paper bags with a shared vision to promote sustainability, raise awareness about the harmful effects of plastic bags and encourage people to embrace eco-friendly alternatives. Our students have crossed the target and reached a total number of **15,618** paper bags were made.



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## MECH | INTERNSHIP @ HYUNDAI



HRD /Project Training-2023/ PT-65

13 July 2023

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Mr.Vyshak K**, student of Sri Krishna College of Engineering and Technology-Coimbatore has successfully completed his project training during the period 14<sup>th</sup> June 2023 to 13<sup>th</sup> July 2023.

He was part of the project titled "**Traceability of defected parts**" in Transmission #1 Department at Hyundai Motor India Limited with reference to the partial fulfillment of the requirements of the B.E Mechanical Engineering Course.

He has been a keen learner. His skills and efforts during the training were commendable and we wish him all the best for his future endeavors.

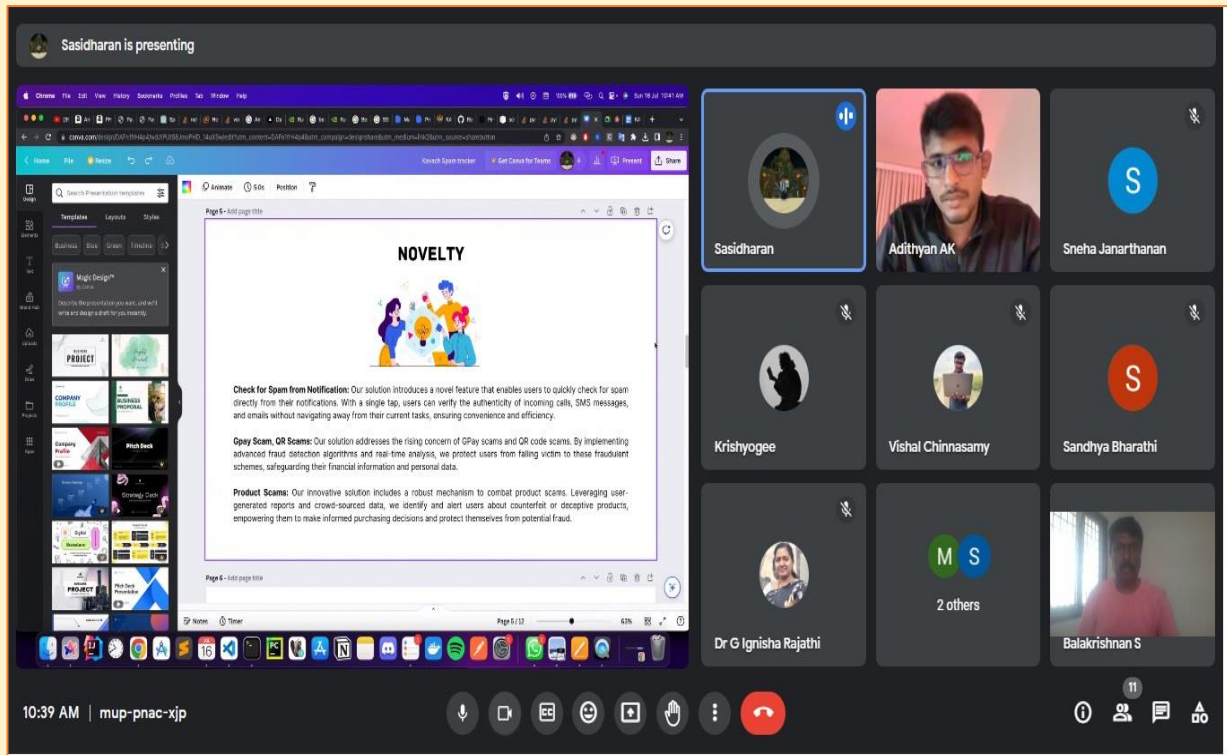
For HYUNDAI MOTOR INDIA LIMITED




**Navin Joseph Peter J**  
Associate General Manager & Team Lead  
Human Resources Development

**Vyashak K**, student of **Third year Mechanical Engineering** underwent an internship training at Hyundai Motors India Limited, Sriperumbudur from 14.06.2023 to 13.07.2023. During the tenure, the student has completed a project entitled '**Traceability of defected parts**'. The officials of the industry lauded the student for his commitment, knowledge and discipline.

## CSBS & CSE | INDUSTRY EXPERT MENTORING SESSION



Student team from the Department of **Computer Science and Business Systems** and **Computer Science and Engineering** has been selected to participate in the **National level prestigious KAVACH Hackathon 2023**. The team also had a technically sound interactive mentoring session with **Mr. Adithyan Arun Kumar**, Product Security Engineer, Salesforce, USA through online

The students had a fruitful discussion by presenting their ideas of the proposed solution to the expert. The expert revitalized the ideation with problem-solution mapping and shared insights towards higher versions of technical feasibility and Business viability which ensures users desirability on 16.07.2023.



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# EVENTS



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## EEE | SEMINAR TALK SERIES



IIC of SKCET in association with the Department of **Electrical Electronics and Engineering** organized Seminar Talk series on '**Insights on Entrepreneurship and Startup**' - **Experience and Challenges** for the Third year EEE students on 13.07.2023.

### Day 2: Session 3

Innovations into Entrepreneur - Experience and Challenges

#### Resource Person:

Mr. Jaganadan Hariharan,  
Founder & CEO, Denshi  
Solutions, Coimbatore.

#### Session Highlights:

- Selection of comfort zone in business.
- Unit Economics that brings value to the business.

### Day 2: Session 4

Fostering a Culture of Creativity in Startup Ecosystem

#### Resource Person:

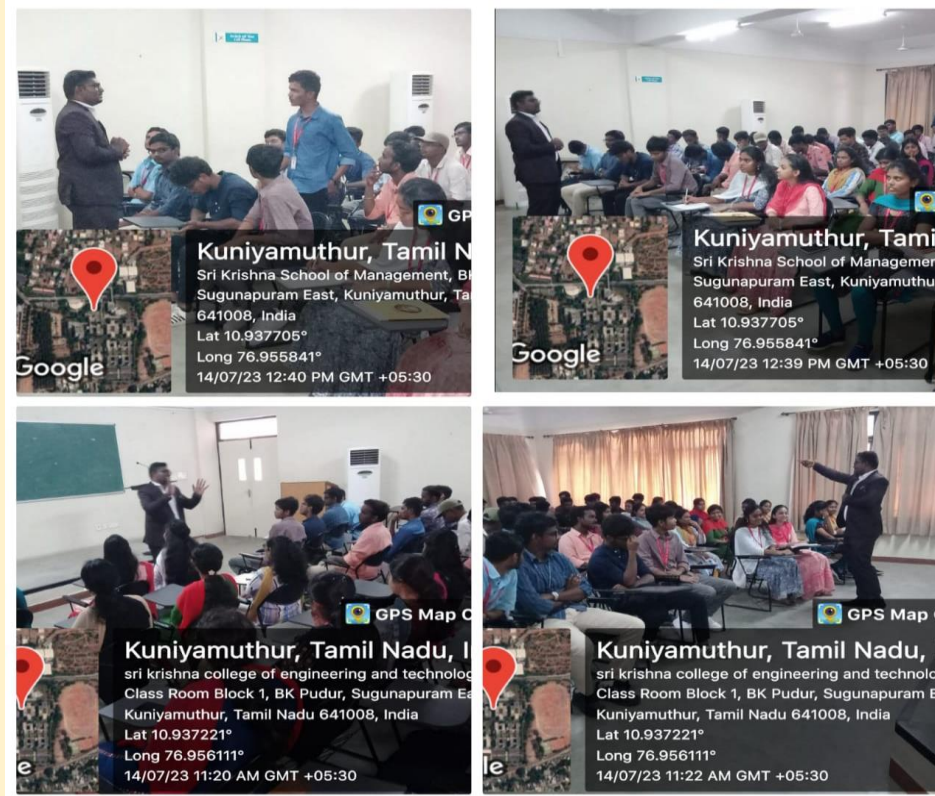
Mr. Suthersun, Dermz Technology  
Private Limited, Coimbatore.

#### Session Highlights:

- Customized approach to achieve success in digital market.
- Provide scalable solutions for customers.
- S.M.A.R.T Goals.



## EEE | SEMINAR TALK SERIES



### Day 3: Session 5

The Lean Startup: How Entrepreneurs Create Radically Successful Business  
**Resource Person:**

Dr. V. Nagaraj, Startnet Private Limited, Salem.

### Session Highlights:

- Lean Startup Method and its parts
- Business Model Canvas
- Customer Segments
- Value Proposition
- Channels for Marketing - Digital Marketing
- Customer Relationships and Revenue Streams.
- Indian Government Initiatives

# MCT | ASSOCIATION INAUGURATION



Department of **Mechatronics Engineering** inaugurated MEA association and organized Guest Lecture on "**The Power of Soft Skills: Unveiling the Hidden Foundation of Career Success**". The Office Bearers of MEA for the academic year 2023 – 2024 were conferred with badges.

**Mr. Bala Arunagirinathan**, Sr. Systems Engineer, SAS, North California, United States of America was the Resource person.

### Session Highlights:

- Emotional Intelligence
- Personal Branding and professionalism
- Essentials of team work and collaboration
- Adaptability and flexibility for dynamic work environment
- Customer service and relationship building



# SOM | SEMINAR ON TIME MANAGEMENT - SOLVING PROCRASTINATION PUZZLE



**SOM** organized a Seminar on Time Management – Solving Procrastination Puzzle on 12<sup>th</sup> July 2023.

### Session Highlights:

- Procrastination and the reasons for that
- Functions of the human brain during Procrastination
- Activities and questioners for self-awareness on Procrastination
- Link between perfectionism and Procrastination
- Goals setting through committed thoughts, emotion and behavior.
- Prioritizing the task and ways to maximize the effectiveness.

## SOM | FINANCE TABLE TALK DISCUSSION

The image block contains a central poster for the event and two photographs. The poster, titled 'SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY', is organized by the 'SCHOOL OF MANAGEMENT'. It features the college's accreditation logos (NAAC, AICTE, ARB) and the Institution Innovation Council (IIC) logo. The event is a 'Finance Table Talk on Mutual Funds & Wealth Management' with Mr. T. Mahizharasu, Assistant Vice President of SBI Mutual Funds, Coimbatore, as the guest speaker. The event took place on Thursday, 13th July 2023, from 04:30 pm to 05:30 pm at SBI MF, R.S. Puram, Coimbatore. The top-right photo shows Mr. Mahizharasu presenting to a group of students in a classroom. The bottom-right photo shows a group of students and faculty members presenting a framed certificate to Mr. Mahizharasu. The address '541, Diwan Bahadur Rd, R.S. Puram, Coimbatore, Tamil Nadu 641002, India' and the timestamp '13 Jul 2023 04:22 pm' are also visible.

**School of Management** organized **Finance Talk Table** discussion on **Mutual Funds and Wealth Management** with **Mr.T.Mahizharasu**, Assistant Vice President, SBI Mutual Fund, Coimbatore on 13th July 2023.

A team of 8 MBA students interacted with the guest and discussed on the overview of MF industry, current market scenario. They also discussed on the right choice of investment avenues with its merits and demerits. SIP and its benefits, tax benefits while investing. Category of Funds, their expense ratio, and also the importance and role of Fund managers were discussed in detail.



## SOM | MARKETING TABLE TALK: EMERGING RETAIL FORMATS AND STRATEGIES



**School of Management** organized Marketing Talk Table discussion on **Emerging Retail formats and Strategies with Mr. Ejaz Ahmed K, Store Manager - Operations, Aditya Birla, Pantaloons, Coimbatore** on 18th July 2023. A team of 7 MBA students interacted with the guest and discussed on various roles of a Store Manager, Pantaloons operating Parameters, Hierarchy of Pantaloons Management, Quarter targets of Pantaloons and Pantaloons' strategies to manage competition. The guest also highlighted the daily routine operations of Pantaloons.

# SOM | HUMAN RESOURCE TABLE TALK



**School of Management** organized **Human Resource Talk Table discussion on Talent Acquisition - Aligning recruitment with organizational culture** with **Mr.Hari Prasad K, DGM-HRBP, Schneider Electric Ltd, Coimbatore** on 18<sup>th</sup> July 2023. A team of 7 MBA students interacted with the guest and had an insight on the global Economic Scenarios, current business trends, necessity of Talent Storage, Types of Industries and workforce. They also discussed on talent acquisition across generations, recruitment, Selection & Screening process, Campus selection Process. Digitalization of TA process were also discussed in detail.



## IT | GUEST LECTURE ON INTEL ONE API AND SYCL



Department of IT organized a Guest Lecture on the topic "**Intel One API and SYCL**" on 18.07.2023 for **Third year IT** students. The session was handled by **Dr. Shriram Kris Vasudevan, Lead – Technology Evangelist, Intel Solutions & Services Pvt Ltd, Bengaluru**. The resource person enlightened the students with the cutting-edge programming frameworks.

### Session Takeaways:

- Introduction to oneAPI
- Exploration of One API Libraries
- Programming Challenges
- **Intel DevCloud: A Comprehensive Guide**
- One API Toolkits
- Elucidation on the tools - **SYCLomatic, VTUNE, ADVISOR**
- A discussion on AI reference kits and AI Analytics kit
- Building project with One API stack
- Demos with real-time projects

# ECE | WORKSHOP ON AMAZON WEBSERVICES AND CLOUD CERTIFICATION



**SRI KRISHNA**
  
**COLLEGE OF ENGINEERING AND TECHNOLOGY**
  
(An Autonomous Institution)
  
(Accredited by NAAC with 'A' Grade | Accredited by NBA | Affiliated to Anna University, Chennai)
  
Kuniyamuthur, Coimbatore - 641008

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**Department of Electronics and Communication Engineering**  
 Cordially Invite You All for the Seminar on

**Amazon Webservices and Cloud Certification**  
**(A Future Perspective)**

Resource Person  
**Mr. J. Prem Kumar**  
Chief Executive Officer  
Episyche Technologies, Coimbatore

Presided by  
**Dr. J. Janet**  
Principal, SKCET

Felicitation by  
**Dr. S. Sasipriya**  
HoD/ECE, SKCET

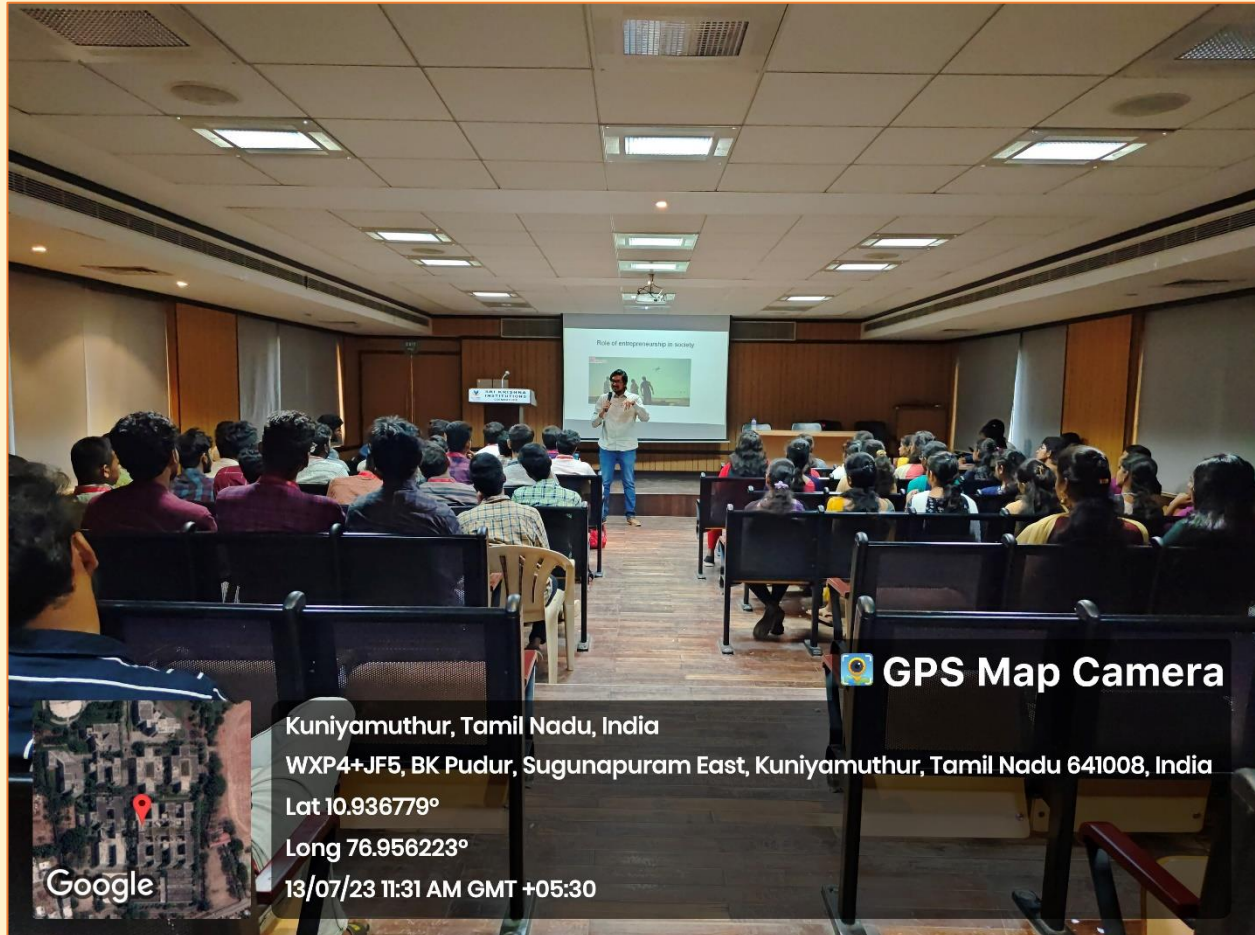
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BS-03 Seminar Hall
 13-07-2023  
01.30 pm to 4.30 pm
 @skcetofficial @skcetofficial

Department of **Electronics and Communication Engineering** organized a workshop and hands-on training on “**Amazon Webservices And Cloud Certification - A Future Perspective**” for Third year **ECE** students on 13-07-2023. The session was handled by **Mr. J. Prem Kumar, Chief Executive Officer, Episyche Technologies, Coimbatore**. The Session highlights were: AWS services and certification, AWS platform - Unique features, Security services in association with AWS, Serverless cloud functions, benefits and industry expectations.



## ECE | SEMINAR ON ENTREPRENEURSHIP



GPS Map Camera

Kuniamuthur, Tamil Nadu, India

WXP4+JF5, BK Pudur, Sugunapuram East, Kuniamuthur, Tamil Nadu 641008, India

Lat 10.936779°

Long 76.956223°

13/07/23 11:31 AM GMT +05:30

Google

IIC of SKCET in association with the Department of **Electronics and Communication Engineering** organized a seminar series on "Entrepreneurship" from 11<sup>th</sup> to 13<sup>th</sup> July 2023.

**Resource Person:** Mr.Jithin Purushothaman, Founding Team Engineering, Kalvium, Co-Founder Widezo, Coimbatore

**Title:** "Taking the first step in Entrepreneurship"

**Session takeaways:**

Impact of Entrepreneurship in the Society, Fundamentals of Business and Trending start-ups of India.

## EEE | ASSOCIATION INAUGURATION



Department of **EEE** inaugurated Electrical and Electronics Engineering Association - '**TESLAENIANS**' and organized an Expert talk on '**Elecnnovators - Global Energy Transitions**', on 19-07-2023.

**Mr.D.Mahesh Kumar**, General Manager, L&T Electrical and Automation, Coimbatore conferred the Office Bearers of EEE Association for the academic year 2023-24 with badges and also released the first edition of the **Department Magazine - Vidhyuth '23**.

### Session Takeaways:

- Power Generation and Environmental Impacts,
- Ramping up Renewables in India,
- Green Hydrogen Energy Production,
- Global Transition Index,
- Energy Economics and Finance,
- Overall Efficiency and Demand side Management.

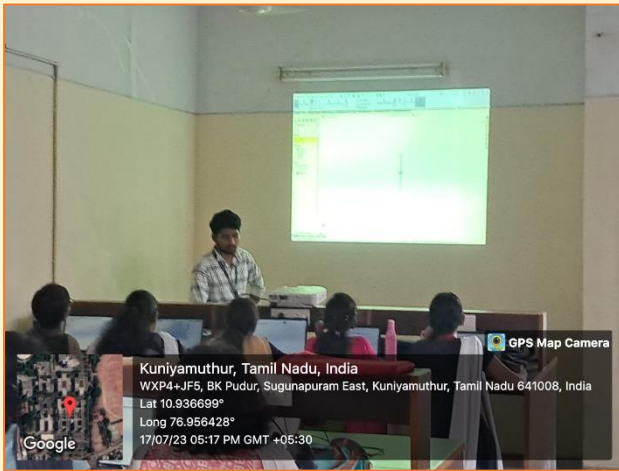


# EEE | ASSOCIATION INAUGURATION



With a vision to inspire innovation and provide access to cutting-edge information, the **E-Kart Club of Electrical and Electronics Engineering Department** organized a **special training session for students at Pinnacle Lithium Power, Coimbatore**. The session focused on **Battery Management Systems (BMS)** and Battery Internal technology. This visit allowed the students to gain first hand insights into BMS design and its significance in sustainable transportation. They had the chance to engage in practical activities, interact with industry experts, and witness the latest advancements in battery technology. This immersive experience left a lasting impact, fueling their passion for sustainable energy solutions and empowering them to contribute to this evolving field.

# EEE | TRAINING SESSION E- KART CLUB



With the aim to foster innovation and provide students with the latest knowledge, the **Department of Electrical and Electronics Engineering, E-Kart Club** arranged an engaging training session on the topic "**Designing Revolve Cuts & Fillets for Electric Vehicles (EVs) using Solid Works**". The session was held exclusively for **Third and Second** year students on July 17<sup>th</sup> 2023, opened doors to a remarkable opportunity for these young minds. They were able to delve into the world of sustainable transportation, gaining practical experience and exploring the field hands-on.



## EEE | EXTENSION ACTIVITY



On account of 'One Student One Tree' sapling plantation drive, **Dr.S.Sophia**, Dean R&D Ranking and Accreditation, **Dr.K.C.Ramya**, Professor and Head, Department of **EEE** along with **Ms.R.Geethamani**, NSS Officer and **Mr.V.V.Vineeth** Assistant Professor, Department of **EEE** visited the reserved forest area near Sundarapuram.

They discussed with the Forest Officials, Kuniyamuthur Zone and inspected the Land and rooting conditions, Soil organic textures and topography for sapling plantation.

# EEE | PEDAGOGY LEARNING ACTIVITY



As a part of our pedagogy learning activity for the course '**Power System Protection and Switchgear**', Final year students visited campus Power House 1. During the visit, they acquired practical knowledge on the working principles of SF6 CBs and ABCBs. Additionally, they were educated on the construction and functionalities of Transformers, Gas Operated Relays - Buchholz Relay and Automatic Power Factor Correction.

**Dr.B.Karthikeyan**, course instructor along with **Dr.G.Radhakrishnan**, Assistant Professor, **EEE** imparted their expertise to the students, providing detailed explanation and demonstrations on the live functionalities and operational procedures of each of these components. The visit to the power house served as an exceptional opportunity for our **EEE** students to enhance their understanding of Power System critical elements.



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**TUTOR WARD  
MEETING**



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## CSBS | CLASS COMMITTEE MEETING



**The Class Committee Meeting** for the students **Third year, Computer Science and Business Systems** was conducted by **Dr.A.Radhika**, Professor from the Department of **Electrical and Electronics Engineering** on 13.7.2023. The Meeting revolved around the key points like preparation for Continuous Internal Assessment, Portion Completion, Subject Study Materials and participation of events.



## CIVIL | TUTOR WARD MEETING



Tutor Ward Meeting for **Third** year students was conducted on 12<sup>th</sup> July 2023 by **Dr.V.Yogeshwaran** and **Ms.R.Hemavathi**. The following points were discussed:

- Feedback for the classes and labs for the current semester
- Attendance percentage
- Placement training
- Higher studies and opportunities in GATE, IELTS, GRE etc.
- Participation in competitions

## MCT | TUTOR WARD MEETING



**Dr.D.Pritima**, Professor, **MCT**, conducted **Tutor Ward Meeting** for the **Third** year students on 12.07.2023. The pointers of discussion were:

- Regular attendance and Discipline.
- Placement preparedness.
- Innovative project team formation and follow up.
- IFT report submission & presentation.
- CIA 1 preparedness.



## MCT | TUTOR WARD MEETING



**Dr.S.Balasubramani**, Assistant Professor / **MCT**, conducted **Tutor Ward Meeting** for III Year MCT B sec students on 14.07.2023. The pointers of discussion were:

- Regular attendance in the class
- IFT Report and Presentation
- Placement Test
- CIA 1 dates and preparation
- Participation in co and extra-curricular activities
- Student Discipline

## EEE | CLASS COMMITTEE MEETING



Department of **EEE** Conducted **Class Committee Meeting** for the **Final year EEE** students. The Pointers of discussion were: Syllabus Coverage, Placement Training, Development of soft skills and communication skills, My classroom usage and Preparation for Assessment Test.

Class Committee Chairperson - **Dr.TA.Selvan**, Professor, Department of **Mechatronics Engineering**.



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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 staffs of my department who played an integral part 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 one.

**HAYNES IMMANUEL S**  
**EEE (2023 BATCH)**  
**NINELEAPS**







# R&D | JOURNAL PUBLICATION | EEE

Wireless Personal Communications (2023) 131:581–608  
<https://doi.org/10.1007/s11277-023-10449-9>

## A Novel Security Algorithm RPBB31 for Securing the Social Media Analyzed Data using Machine Learning Algorithms

Bagath Basha Chan Batcha<sup>1</sup> · Rajaprakash Singaravelu<sup>2</sup> · Meenakumari Ramachandran<sup>3</sup> · Suresh Muthusamy<sup>4</sup> · Hitesh Panchal<sup>5</sup> · Kokilavani Thangaraj<sup>6</sup> · Ashokkumar Ravindran<sup>7</sup>

Accepted: 7 April 2023 / Published online: 24 April 2023  
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### Abstract

The present world data is most important in public because without data cannot live in the world. This data is big data and that data daily increases through Social Media like "Twitter, Facebook, Youtube, WhatsApp, Instagram, LinkedIn", etc., because this media only share public opinion very fast through the net. From this media, more people used especially Twitter. This media are used to analyze the public opinion of the tweets and predict the future through Machine Learning Algorithm. This analyzed data should make it polarity score. This score data has very little security because, this score can change the score and affected the future, so apply the existing security algorithms is Salsa and ChaCha. The Salsa algorithm is diagonal values moved to the first row. The ChaCha algorithm is diagonal values moved to the first column. The existing algorithms do not have good security because they focused only on performance, not security. So, the novel security algorithm is RPBB31. This algorithm has seven stages. The 1st stage is to find the secret key  $N$ ,  $n$ , and  $p$  values from the matrix. The 2nd stage is to apply the secret key in  $P_{s(n)}$  operation. The 3rd stage operation of  $P_{s(n)}$  up to  $n=1$ . The 4th stage is all  $P_{s(n)}$  operations make their single line. The 5th stage is to pair the values and swap the values in the matrix. The 6th stage is column operations in the matrix. The 7th stage is again Step 4 values used to swap but "0th" cell value start from reverse in the matrix. In world cricket is the most famous game. In all social media Millions of people are following in different manner, especially in indian cricketer are more famous in India and world. In some point of time it may lead to match fixing, betting. To overcome this kind of issue the four datasets chosen. The proposed algorithm has provide good security and performance while compare to existing algorithms.

**Keywords** Twitter · Machine learning algorithm · Security · Encryption · RPBB31

✉ Suresh Muthusamy  
 infosuresh@gmail.com

Extended author information available on the last page of the article



Dr.T.Kokilavani, Assistant Professor, EEE Department has published a paper entitled "A Novel Security Algorithm RPBB31 for Securing the Social Media Analyzed Data Using Machine Learning Algorithms" in Wireless Personal Communications, Springer. It is SCI indexed journal with an impact factor of 2.017.

# R&D | PATENT PUBLICATION | CIVIL

Dr.R.Chandra Devi, Associate Professor, Department of Civil Engineering, has published a patent titled "Development of Artificial Intelligence methods for planning of the transportation network".

(12) PATENT APPLICATION PUBLICATION (21) Application No.202311035349 A  
 (19) INDIA  
 (22) Date of filing of Application :21/05/2023 (43) Publication Date : 30/06/2023

(54) Title of the invention : DEVELOPMENT OF ARTIFICIAL INTELLIGENCE METHODS FOR PLANNING OF THE TRANSPORTATION NETWORK

(51) International classification G06F 050400, G06F 200000, G06Q 100400, G06Q 100600, G06Q 010100	(71) Name of Applicant : S/Vijegesh Paulak Address of Applicant: Research scholar, Institute of Engineering and Technology, Sripur Rd, Sector 7, Indrapuram, Lacharam-216011, Uttar Pradesh, India Lacharam S/Abdul Ahad Address of Applicant: Assistant Professor, Department of Civil Engineering, Jankajyoti Institute of Technology, Bhusawal- 212303, Uttar Pradesh, India Bhusawal S/Vishalsh Meenle Address of Applicant: Assistant Professor, Department of Civil Engineering, Yeshwantrao Chavan College of Engineering, Nagpur, Hingna Road, Wananogri, Nagpur-441110, Maharashtra, India Nagpur S/Mohammad Farooq Alam Address of Applicant: Assistant Professor, Department of Civil Engineering, Sree Shanmukh's Institute of Professional Management and Technology Raipur, Mangalam, Sehohar, Raipur, Chhattisgarh- 492015, India Raipur S/Dr. T. Subbalakshmi Address of Applicant: Assistant Professor, Department of Civil Engineering, CK college of Engineering and Technology, Cuddalore, Tamil Nadu, India, Cuddalore S/Dr. S. Dhyanmani Devi Address of Applicant: Assistant Professor, Department of Civil Engineering, Moutu Zion College of Engineering and Technology, Pudukkottai, Tamil Nadu, India, Pudukkottai S/Thakalapudi Suresh Address of Applicant: Research Scholar, Department of Civil Engineering, Sri Venkateswara University College of Engineering, Sri Venkateswara University, Tirupuru - 517020, Andhra Pradesh, India Tirupuru S/Dr. Amrutraj Balakrishnan Khemalappu Address of Applicant: Assistant Professor, Civil Engineering Department, RMD Sinhgad School of Engineering, Wajga, Pune-411058, Maharashtra, India Pune S/Dr. R. Chandra Devi Address of Applicant: Associate Professor, Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu- 641008, India Coimbatore
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(57) Abstract:  
 DEVELOPMENT OF ARTIFICIAL INTELLIGENCE METHODS FOR PLANNING OF THE TRANSPORTATION NETWORK. The present invention relates to development of artificial intelligence methods for planning of the transportation network. The present invention deals with the problem of the transportation network development in response to the new demands. The task is to minimize the total network impedance taking into account the constraints of the investment budget. A bi-level model of the transportation network consisting of route choice of road links was developed. At the upper level the objective function is the usage cost expressed by the total travelling time. At the lower level, at each procedure step the optimal distribution of the traffic is searched for. The main objective of the present invention is to indicate the most advantageous and acceptable directions of development of the transportation network. Figure of abstract: FIG. 1

No. of Pages : 18 No. of Claims : 3



# R&D | PATENT PUBLICATION | CIVIL

(12) PATENT APPLICATION PUBLICATION (21) Application No: 202341032483 A  
 (19) INDIA  
 (22) Date of filing of Application : 08/05/2023 (43) Publication Date : 23/06/2023

(54) Title of the invention : PREDICTION OF POST-FIRE SELF-HEALING OF CONCRETE BY MACHINE LEARNING METHOD

(71) Name of Applicant :  
 1) Dr. G. Sree Lathika Devi  
 Address of Applicant: Associate Professor, Department of Civil Engineering, Nalla Malla Reddy Engineering College, Duvvuranga, Kakharimangalam, Near Nellore City, Guntur District, Andhra Pradesh - 520018, India  
 2) Dr. Hemavathi Prasad Raju  
 1) Dr. Abhisara Bandu  
 2) Dr. Nandini Prasad  
 3) Dr. Nandini Prasad  
 4) Dr. Nandini Prasad  
 5) Dr. Nandini Prasad  
 6) Dr. Nandini Prasad  
 7) Dr. Nandini Prasad  
 8) Dr. Nandini Prasad  
 9) Dr. Nandini Prasad  
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 Address of Applicant: Associate Professor, Department of Civil Engineering, Nalla Malla Reddy Engineering College, Duvvuranga, Kakharimangalam, Near Nellore City, Guntur District, Andhra Pradesh - 520018, India

(57) Abstract:  
 PREDICTION OF POST-FIRE SELF-HEALING OF CONCRETE BY MACHINE LEARNING METHOD The present invention relates to prediction of post-fire self-healing of concrete by machine learning method. Machine learning (ML) and artificial intelligence are powerful tools for solving complex high-precision prediction. The present invention discloses utilization of ML for predicting post-fire self-healing of concrete. Twelve input variables are analyzed. The output of the model is the compressive strength recovery, being use of the self-healing efficiency prediction. Four ML methods are compared and compared based on their performance error. Support Vector Machine (SVM), Regression Tree (RT), Artificial Neural Network (ANN) and Ensemble of Regression Trees (ET) Monte Carlo analysis is conducted to verify the stability of the selected model. All ML approaches demonstrate satisfying prediction, with a good linear regression. The ET model is found to be the most optimal with the highest prediction accuracy and sufficient robustness. Model interpretation is performed using Partial Dependence Plot and Individual Conditional Expectation Plot. Temperature, curing regime and amount of aggregate are identified as the most significant predictors. Figure of abstract: FIG. 1

No. of Pages : 19 No. of Claims : 3

**Dr.R.Chandra Devi, Associate Professor and Ms.R.Hemavathi, Assistant Professor, Department of Civil Engineering** have published a patent on the title "**Prediction of post-fire self-healing of concrete by machine learning**".

# R&D | JOURNAL PUBLICATION | MECH

**Dr.R.Soundararajan, Associate Professor - Mechanical Engineering** has published a scientific article entitled "**Metallurgical enhancement and mechanical performance of GTAW of AA5083 plates using medium and high entropy fillers**" in Material Characterization Journal – An ELSEVIER publication. It is WoS and SCOPUS Indexed Journal with Impact Factor 4.7. The journal is also enlisted in Anna University Annexure 1.

Materials Characterization 204 (2023) 113167

Contents lists available at ScienceDirect  
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 journal homepage: [www.elsevier.com/locate/matcha](http://www.elsevier.com/locate/matcha)

**Metallurgical enhancement and mechanical performance of GTAW of AA5083 plates using medium and high-entropy fillers**

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**ARTICLE INFO**

**ABSTRACT**  
 The contemporary investigation focuses on the development of a welding technique to join AA5083 alloy plates using equimolar medium entropy alloy (4E-MEA - Fe<sub>20</sub>Al<sub>20</sub>Ni<sub>20</sub>Co<sub>20</sub>Cr<sub>20</sub>) and high entropy alloy (5E-HA - Fe<sub>20</sub>Al<sub>20</sub>Ni<sub>20</sub>Co<sub>20</sub>Ni<sub>20</sub>) filler wires. A non-made combined cable wire method, was chosen to prepare the filler wires and the gas tungsten arc welding was used to compare the AA5083 plates. This study evaluated the metallurgical characteristics and mechanical performance of welded joints using 4E-MEA and 5E-HA filler weldments and compared them with the standard ER50S filler weldment. XRD analysis showed that both 4E-MEA and 5E-HA weldments had evolved FCC and BCC phases, whereas microstructural analysis revealed a fine grain distribution without intermetallic phases. SEM analysis of the weldments revealed a heterogeneous microstructure (equiaxed and columnar grains) owing to the influence of the constituent elements. Solid solution formation, structural refinement, and high configurational entropy effects promoted grain refinement in the weldments as evidenced by EBSD analysis. The microhardness of 4E-MEA and 5E-HA weldments increased by 18.3% and 19.9%, respectively, compared with the standard filler weldment, while the tensile strength of 4E-MEA and 5E-HA weldments increased by 24.3% and 27.9%, respectively and also obtained work-hardening rates were higher. It was observed that the heterogeneous microstructure in the weldment led to complicated plastic deformation and improved the mechanical responses. The presence of Fe and Ni increased ductility and inhibited the formation of intermetallic. The fractography results showed that the 4E-MEA and 5E-HA filler weldments exhibited a combination of ductile and brittle fractures. Overall, the researchers demonstrated that the developed equimolar 4E-MEA and 5E-HA filler wires could produce weldments with improved mechanical properties and can be utilized in automobile and shipbuilding applications.

**1. Introduction**  
 A wide range of aluminum and its alloy series are highly favoured in various industries owing to their specific properties such as low density, excellent mechanical properties, wear, and corrosion resistance [1,2]. The 5xxx series Aluminum alloy (AA) is a popular choice owing to its magnesium content which provides improved strength and corrosion resistance [3]. AA5083 is especially crucial in aerospace, automotive, armour, and marine applications because it has superior weldability, formability, and high specific strength [4–6]. However, welding of AA5083 has proven challenges using lower power density techniques such as shielded metal arc welding, flux cored arc welding and electroslag welding. Fortunately, the Gas Tungsten Arc Welding (GTAW) technique has been highly effective in producing defect-free welded joints with minimal heat affected zones (HAZ) for plates not exceeding 10 mm in thickness [1,10].  
 In GTAW, a considerable quantity of heat is generated between the non-consumable tungsten electrode tip and the work piece under an inert gas atmosphere, facilitating the joining process [10]. In the GTAW process, it is possible to enhance the metallurgical and mechanical attributes of the welded joint by incorporating the recommended base metal filler rods provided by the supplier, or by utilizing other specific/proposed filler rods with optimal welding parameters [11]. Over the years, considerable advancements have been achieved through the modification of existing filler rod materials and development of composite filler rods. Based on previous research, it is apparent that welded

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## R&D | JOURNAL PUBLICATION | MCT

12 Views  
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Research Article  
**Battery-Based Energy Storage and Solar Technologies Integrated for Power Matching and Quality Improvement Using Artificial Intelligence**  
Ashit Kumar Dutta, L. Bharathi Krishna, Katuri Rayudu, Devaraj Vethagiri, Nageswara Rao Medikonda, Suji Prasad Sudarsananair, Jalajakumari, Gopinathan Raghunathan & Nutan Saha ...show less  
Received 07 Mar 2023, Accepted 25 May 2023, Published online: 29 Jun 2023

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**Abstract**  
Power quality issues, such as abnormal voltage, current, or frequency, can cause equipment malfunctions and failures, resulting in financial losses. With the developing integration of RES into distribution networks through custom power devices like

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**Dr.R.Gopinathan,** Associate Professor, MCT has published a paper entitled **“Battery – Based Energy Storage and Solar Technologies Integrated for Power Matching and Quality Improvement Using Artificial Intelligence”** in Electric Power Components and Systems. It is a SCI and scopus indexed publication.

## R&D | JOURNAL PUBLICATION | ECE

**Dr.C.Thirumarai Selvi,** Professor, of ECE Department has published a Scopus indexed Book Chapter titled **“Automatic Hybrid Deep Learning Network for Image Lesion Prognosis and Diagnosis”** in the book titled Translating Healthcare Through Intelligent Computational Methods which was published by SpringerLink. DoI: 10.1007/978-3-031-27700-9\_9.

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**Automatic Hybrid Deep Learning Network for Image Lesion Prognosis and Diagnosis**  
C. Thirumarai Selvi, M. Murthukrishnan & Aishwarya Gopalakrishnan  
Chapter | First Online: 08 June 2023  
24 Accesses  
Part of the [EAI/Springer Innovations in Communication and Computing](#) book series (EAI/ICC)

**Abstract**  
Human lives are very precious. Human body parts are affected due to various food habits, environment, social habits, hereditary health issues and many more. One of the most well-known disorders is liver cancer. Liver cancer causes major loss to human lives. Early detection of this can be curable at the initial stages. Due to the advancement of computer vision algorithms and progression of IoT technologies working along with image processing techniques, early detection and curing are inevitable. To improve the classification time with faster duration which can help the medical practitioner, lesion detection algorithms are developed. The work's key contribution is to apply efficient image segmentation algorithms along with powerful deep learning algorithms to classify the cancerous lesion efficiently. This ensemble or hybrid technique is developed by combining the morphological operations and



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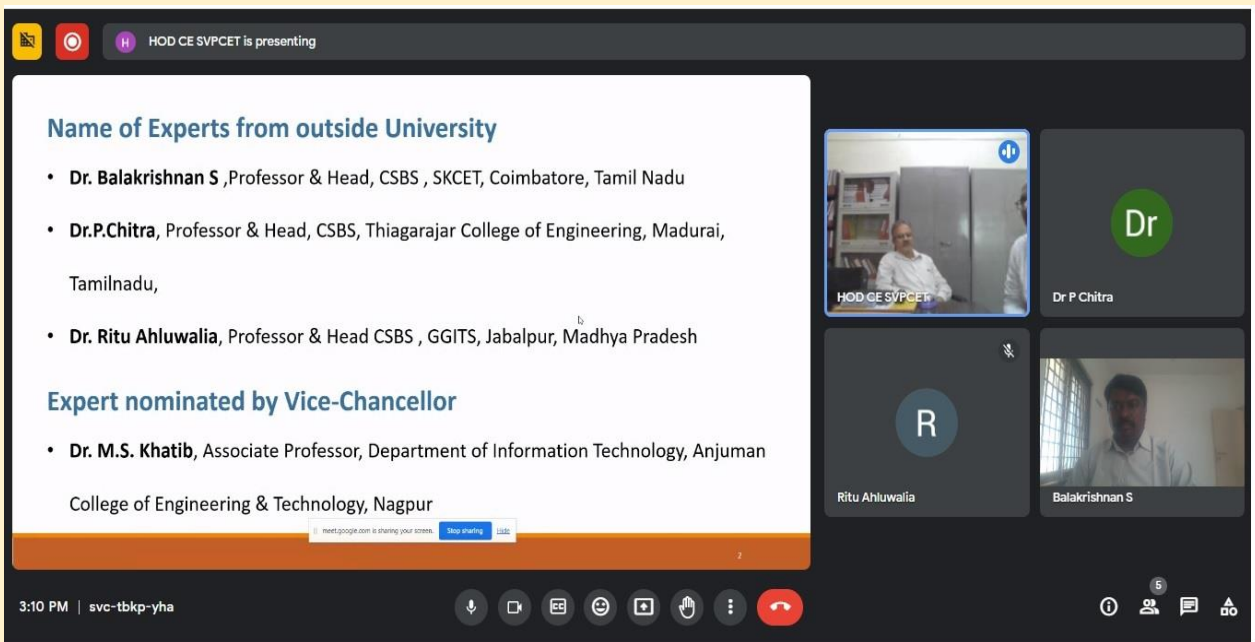
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# CSBS | BOS MEMBER



**Dr. S. Balakrishnan, Professor and Head, Department of Computer Science and Business Systems** has acted as the Member (Academics), Board of Studies (BoS), Computer Science Business Systems, St. Vincent Pallotti College of Engineering & Technology, Nagpur on 15.07.2023.

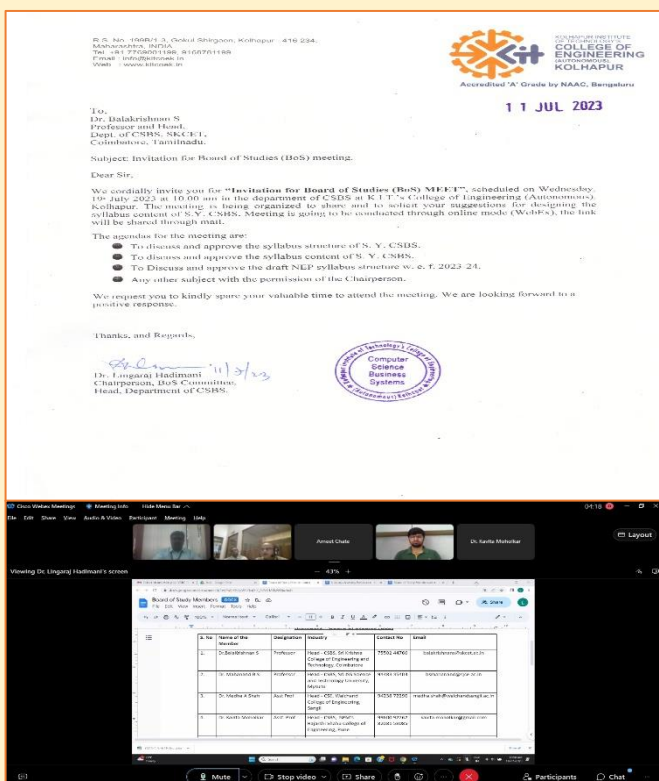


## CSBS | CHIEF GUEST IN FDP

**Dr.S.Balakrishnan**, Professor and Head of the Department, Department of **Computer Science and Business Systems** was a Chief Guest for Faculty Development Program on Data Science Specialization Using Python conducted by NoviTech R&D Pvt Ltd, Coimbatore on 10.07.2023.



## CSBS | BOS MEMBER



**Dr.S.Balakrishnan**, Professor and Head, Department of **Computer Science and Business Systems** has acted as the Member (Academics), Board of Studies (BoS), Computer Science and Business Systems at KIT's College of Engineering and Technology, Kolhapur, Maharashtra, on 19.07.2023.

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# IT | NOVITECH CERTIFICATIONS



Following faculty members from the Department of Information Technology have participated in the five days FDP on “Data Science Specialization using Python” from 10-07-2023 to 14-07-2023 conducted by Novitech R&D.

Dr.S.Durga,Associate Professor	Dr.A.Kousalya,Associate Professor
Dr.T.Keerthika,Associate Professor	Ms.V.Sindhu,Assistant Professor
Ms.U.M Ramya, Assistant Professor	

## MCT | DIGITAL PROTOTYPING



**Dr. V. Narasimharaj**, Associate Professor, **MCT**, has actively participated in 10 hours of Faculty Development Program on “**Digital Prototyping**” using CATIA (Online FDP) conducted by ICT Academy from 10<sup>th</sup> July 2023 to 14<sup>th</sup> July 2023.

## S&H | FACULTY PROGRESSION

**Ms. Revathy P**, Assistant Professor, **Department of Science and Humanities** participated in One-Day Online Workshop on **Applications of Graph Theory in Landscape Ecology** organized on 29<sup>th</sup> June, 2023 by the Division of Mathematics, School of Advanced Sciences, Vellore Institute of Technology (VIT), Chennai.





# S&H | FDP ON STRESS MANAGEMENT



**Dr.Suresh P & Ms.Joshina Rozario, Assistant Professors, Department of Science and Humanities participated in three day Faculty Development Program on Stress Management conducted by ICT Academy on 17<sup>th</sup> July 2023 to 19<sup>th</sup> July 2023 at Dr.NGP Institute of Technology, Coimbatore.**





## NATURE CLICKS



Mr. N. Loganathan  
Assistant Professor, EEE

## ECE | CURRENT TECHNOLOGY AND REAL LIFE

Nowadays, technological progress is developing with non-seen speed and power. It may even look like every day something new is created in this sphere, and its potential is exhaustless. Technological advance has captured all the people on the planet in both positive and negative meaning of this word.

So, it goes without saying that the scope of technology is an endless sphere to examine.



There's no doubt that the technology industry has achieved tremendous success. Its ubiquitous products and services power our digital society.

Technology creates great impact among people all over the world. Advances in technology have made our countries safer and our lives easier, they have also negatively affected our lives. Technology have brought us online banking, smart cars, smart TVs, lightning-fast computers, and the virtual reality. Also there include cyber warfare, hackers, identity theft, cyber stalking, and a host of other bad things.

**Technology** has also brought about efficiency and quality in the manufacturing sector. Technological advancement has reduced the risk. Development is closely related with technology and the stage of development the human being has arrived could have been possible without the advancement in technology. Agriculture, industry, profession, health, education, art, political processes, recreation, religious activities and daily life activities all are under the influence of technology now. There are some modern technological developments that play a major role in making our daily life more effective. Television is also good servant; it's considered as the cheapest source of information and entertainment nowadays. Technological progress has merely provided us with more efficient means for going whether forwards or backwards as well. It has enabled us to increase our comfort and to achieve efficiency in all sectors of life.

Piyush Singh S  
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III-ECE-B