

SKCET



02nd - 08th March 2024



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Happy Reading!

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INSTITUTIONAL EVENTS



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SKCET | CELEBRATING WOMANHOOD



Women's Day Celebration was organised by the Women Empowerment Cell of **SKCET** to celebrate womanhood and empower women in creating a more inclusive and equitable society on the theme Inspired Inclusion.

SKCET | CELEBRATING WOMANHOOD



As part of the **Women's Day celebration**, three exemplary women guests Mrs. D.Subhalakshmi, Block Mission Manager, TNSRLM, Mahalir Thittam, Mrs.V.Birundha, Block Coordinator, TNSRLM, Mahalir Thittam and Mrs.J.Ajitha Kalpana, Block Coordinator, TNSRLM, Mahalir Thittam, were invited and honored with awards and mementos as tokens of appreciation for their efforts in uplifting marginalized and tribal women, empowering them to become self-resilient by our Academic Leadership Team.

SKCET | CELEBRATING WOMANHOOD



Dr. S.Sophia, Principal Incharge, delivered the **Women's Day** address, emphasizing the importance of equality, empowerment, and celebrating the achievements of women in all spheres of life.

SKCET | CELEBRATING WOMANHOOD



Mrs.D.Subhalakshmi, Block Mission Manager, TNSLRM, Mahalir Thittam inspired the audience with her igniting speech on the roles and responsibilities of every woman in empowering the marginalized women.

SKCET | CELEBRATING WOMANHOOD



The female artisans of SKCET lit up the stage with their captivating and dynamic cultural performance, showcasing their talent as they moved to the music with flawless precision.

SKCET | CELEBRATING WOMANHOOD



As part of the Women's Day celebration, a multitude of events were organised by various departments for students, teaching staff, and non-teaching staff alike. The winners of these electrifying events were honored and celebrated with extravagant prizes, igniting a wave of excitement and anticipation throughout the event.

Women's day celebration at SKCET was a culmination filled with joy and empowerment, ensuring that the spirit of celebrating womanhood resonated throughout the campus with a resounding bang.



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STUDENTS PROGRESSION



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MCT | NATIONAL LEVEL RACING KART CHAMPIONSHIP 2024



Student team Electric Kart and Brainiacs Racing of **Mechatronics Engineering** Department has won **Overall Championship** in the **National Level Racing Kart Championship 2024** conducted by the **Academy of Indigenous Motor Sports (AIMS)** at Kari Motors Speedway, Coimbatore between 26th and 29th February 2024.

The team has also won awards in the following categories:

- Overall Championship in EV Category cash prize of Rs 50,000/-
- Winner in Endurance cash prize of Rs 15,000/-
- Best Cost Optimum Award
- Winner in Acceleration Event cash prize of Rs 5000/-
- Best Autocross Event cash prize of Rs 5000/-
- Special Endurance for Girl Driver

Total cash prize of Rs 75,000/-

Mentors: Mr.T.Vignesh AP/MCT, Dr.R.Gopinathan ASP/MCT

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EVENTS



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AI&DS | WORKSHOP ON DESIGN & INNOVATIVE THINKING



IIC of **SKCET** in association with the Department of **AI&DS** organized a Two Days Hands-on Workshop on "**Design & Innovative Thinking**" on 28.02.2024 and 29.02.2024.

Resource Person: Mr.Prabhakaran.V.M, Project Head & CEO, Visaithalam Solutions, Coimbatore.

Session Takeaways:

Design Thinking, User-Centered Design, Empathy mapping exercise to transform theory into practice, Visual Thinking, Design Sprints, Story Boarding Business Model canva, Pitching ideas , Rapid Prototyping, Five Whys technique, Journey Mapping, Role play and Dot Voting.

EEE | NATIONAL LEVEL TECHNICAL SYMPOSIUM-ELEKTROTECH 2024



Department of **Electrical and Electronics Engineering** inaugurated a **National Level Technical Symposium - ELEKTROTECH 2024** on 04.03.2024.

Dr. S.Sophia, Principal Incharge graced the occasion and felicitated the gathering. The inaugural address was delivered by **Mr. Navaneetha krishnan Ramanathan**, RMoC of Atal Innovation Mission, NITI Aayog, Government of India, and Director of Metasage Alliance, Coimbatore.

Various technical and non-technical events were officially declared open for the student participants from various Institutions to showcase their skills and talents.

MCT | PLACEMENT ACTIVITY



Department of **Mechatronics Engineering** organized **Placement Preparation Session** on 01.03.2024 for Third year MCT students.

The session was handled by **Mr.Boopathy**, Assistant Professor, **MBA**.

Key takeaways:

- Strategies for handling interviews effectively
- Significance of one's attitude
- Verbal expression skills
- Non-verbal communication cues

EEE | SEMINAR ON RENEWABLE ENERGY INNOVATIONS AND SUSTAINABILITY



Department of **Electrical and Electronics Engineering** organized a Seminar on '**Renewable Energy Innovations and Sustainability & Career Opportunities**' for the **Third year EEE** students on 26.02.2024.
Resource Person: Mr. P A Sundara Murugan, Co-Founder & Director, KCP Group of Companies, Salem.

Session Takeaways:

- Recent advancements in renewable energy and their influence on sustainability
- Importance of innovation and technology
- Career prospects and the varied positions accessible within the renewable energy sector
- Essential skills like data analysis, communication, and teamwork in the industry.

CIVIL | CRIADIOS 2K24



Civil Engineering Association of SKCET hosted a National Level **Technical symposium** CRIADIOS 2K24 on 27th February 2024. 110 students from various colleges actively participated in the events. Totally eight technical and non-technical events including Paper Presentation, Quiz Contest, Budget Builders, 3D Modelling, Cube Contest, Origami Bridge Modelling, Painting and Short Film were conducted. The commendable efforts of the students and faculty members received widespread appreciation from all the external participants for the seamless execution of the events.

EEE | KART DESIGN AND RACING CHAMPIONSHIP 2024



Two student kart teams **Gandiva** and **Arinna** from the Department of **EEE**, participated in **National Level Kart Design and Racing Championship 2024** from 26th to 29th of February 2024. The static events were held at Hindusthan College of Engineering and Technology, Coimbatore and the final event at Kari Motors Speedway Racetrack, Coimbatore. The teams received recognition in the following categories:

Team Gandiva:

- Champion in the Go-Green category.
- Champion in the First Vehicle Inspection and Acceptance Protocol for the 5 KW to 6 KW kart category.
- Winner in the Skip Pad event, earning a total cash prize of Rs. 10,000/-

EEE | KART DESIGN AND RACING CHAMPIONSHIP 2024



Team Arinna:

- Best Virtual Presentation
- Best Captainship
- Best Driver
- Best Faculty Mentor
- Best Team Spirit
- Winner in First Vehicle Inspection and Acceptance Protocol under 3 KW to 4 KW category
- Best Time Keeper

Faculty Mentors:

Ms.R.Geethamani, EEE & Mr.S.Boobalan, EEE

EEE| KART DESIGN AND RACING CHAMPIONSHIP 2024



Mr. G. Diwagar, Managing Director of AIMS, commended the exceptional driving abilities and overall team leadership displayed by **Ms. E. Vijayasri**, Arinna Team Captain and **Second** year **EEE** student. In recognition of her outstanding performance, she has been selected as an '**AIMS representative**' (Girl Kart Driver) for forthcoming International Level Kart Event to be held in Dubai. Additionally, she will undergo prior training at CRA (Coimbatore Racing Academy) Motorsports in preparation for the event.

EEE | GUEST LECTURE ON RECENT TRENDS IN ELECTRICAL SUBSTATION AND CAREER GUIDANCE



Department of **Electrical and Electronics Engineering** organized a Guest Lecture on '**Recent Trends in Electrical Substation and Career Guidance**' for the **Third year EEE** students.

Resource Person: Mr. S.Vinoth Kumar, Senior Engineer - WSP, Bengaluru.

Session Takeaways

- Substation Design
- Advanced types of Circuit Breakers
- Transformer Metrics
- Carrier Opportunities in different streams
- Core Software used in different Companies
- Challenges to be faced in the Interviews

EEE | NATIONAL LEVEL TECHNICAL SYMPOSIUM- ELEKTROTECH 2024



Event Name: **Elevate-X**

As a part of Elecktrotech 2024, a Project Contest - 'Elevate-X' was conducted in the Power Electronics Lab. Around 19 batches from various colleges participated in this event and demonstrated their prototypes.

Jury Members: Mr.R.Navaneetha Krishnan, Director, Metasage Alliance, Coimbatore.

Dr.J.RejinaParvin, Associate Professor/ ECE

Event Coordinator:

Dr. R.Sumathi, Professor/EEE

Event Name: **Meme Frenzy**

As a part of Elecktrotech 2024, Non-Technical event - **Meme Frenzy** was conducted in Embedded Systems Laboratory. Around 20 students from various colleges participated in this event.

Jury Member:

Dr. M.Bhuvaneshwari,
Associate Professor/MCT

Event Coordinator:

Ms. N.Subha Lakshmi,
Assistant Professor/EEE



EEE | NATIONAL LEVEL TECHNICAL SYMPOSIUM-'ELEKTROTECH 2024'

Event Name: **Coding Contest**

A total of 70 participants from various colleges enthusiastically joined the event, contributing to its vibrancy and success. It was truly inspiring to witness the dedication and talent showcased by each participant throughout the contest.

Jury Members:

Mr. J. Senthil,
Software Trainer/Placement

Event Coordinator:

Mr.S.Karthikeyan,
Assistant Professor/EEE



Event Name: **Tune Town**

As a part of National Level Technical Symposium - Elektrotech 2024, a non-technical - Tune Town event was conducted. Around 14 participants from various colleges participated in the event and showcased their talents.

Jury Members:

Mr. Ajay Selvaraj, Managing Director,
Sadhana Associates, Coimbatore
Ms. B.Anish Fathima, Assistant
Professor/ECE

Event Coordinator:

Ms. T.Malini, Assistant Professor/EEE

EEE| NATIONAL LEVEL TECHNICAL SYMPOSIUM-ELEKTROTECH 2024



TECHNOZARRE - a workshop on 'Innovative Product Development using ARDUINO' was conducted.

Resource Person:

Mr. K.S.R. Prabhakaran,
Project Engineer,
ZED Digital, Coimbatore.

Session Keynotes:

- Key Features of Arduino.
- Architecture of Controllers.
- Integrating sensors and actuators with Arduino.
- Development of Prototype skills.

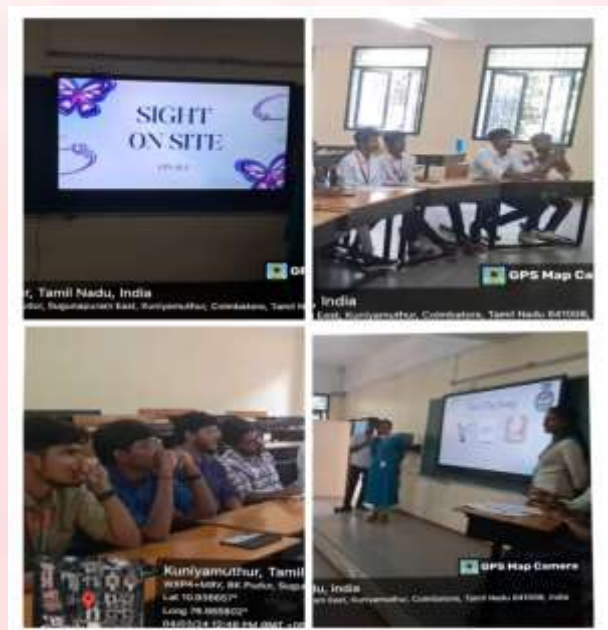


Event Name: Sight on Site - Quiz

As a part of Non-Technical event, Sight on Site was conducted. 27 student teams from various colleges participated in this event and exhibited their skills.

Event Coordinator:

Ms.G.Mahalakshmi
Assistant Professor, EEE



EEE | NATIONAL LEVEL TECHNICAL SYMPOSIUM-ELEKTROTECH 2024

Event Name: **SWEATSYNC**

A non-technical event named 'SWEATSYNC' was organized, with 35 student participants taking part in the event. Separate arenas were provided for boys and girls, allowing them to unleash their energy and vitality.

In the Push-up challenge, the boys flexed their muscle power, while the girls flaunted their prowess in the Skipping Challenge.

Jury Members:

Dr. A.Karthika, Associate Professor, S&H & Mr. S.Sreeraj, Assistant Professor, M.Tech CSE

Event Coordinator:

Mr. V.V.Vineeth, Assistant Professor, ---



Event Name: **Crack the Circuit**

Crack the Circuit – a technical event was conducted in the Electronics Lab. This event is to identify and resolve the issues or obstacles in the given circuit and to achieve a desired outcome. More than 24 student teams from various colleges have participated in this event and solved the puzzles enthusiastically.

Jury Members:

Mr.R.Kumar, Senior Software Engineer, Cognizant, Coimbatore.

Ms.N.Kalaivani, Associate Professor, ECE

Event Coordinator:

Dr.J.Karthika, Professor, EEE

EEE | VALEDICTORY CEREMONY OF ELEKTROTECH 2024



The valedictory ceremony of '**ELEKTROTECH 2024**', a National Level Technical Symposium was graced by **Ms.S.Nithyamanohari**, Project Lead - Finance & Operations, Cares Renewables Private Limited, Coimbatore.

A total of 12 Technical and Non-technical events were conducted as a part of the Symposium, showcasing the extraordinary talents of young minds in various aspects. The achievers of the competitions were duly acknowledged and appreciated with cash awards, shields and certificates for their outstanding performances.

MCT | INTERNATIONAL CONFERENCE - ICIRIAC 2024



Department of **Mechatronics Engineering** in association with Kyungpook National University, South Korea organized **Second International Conference** on “**Innovations in Robotics, Intelligent Automation and Control**” (ICIRIAC 2024).

Dr. K. Ramesh Kumar, Chairman & Professor, School of Mechanical Engineering, Amrita Vishwa Vidyapeetham, Coimbatore inaugurated the conference.

287 papers were submitted for this conference, with 80 of them being selected for presentation across 6 Technical Sessions.

MCT | INTERNATIONAL CONFERENCE - ICIRIAC 2024



Keynote Address 1

Dr. Anand Paul, School of Computer Science and Engineering, Kyungpook National University South Korea delivered a keynote address on **"Robust and Resilient Hidden Sequence Identification using Enhanced Adaptive Hidden Markov Model"**.

Session Takeaways:

- RHSI in communication system
- Role of RHSI in cyber security and data analysis
- Modeling sequential data with hidden states
- Enhanced Adaptive Hidden Markov Model

MCT | INTERNATIONAL CONFERENCE - ICIRIAC 2024



Keynote Address 2

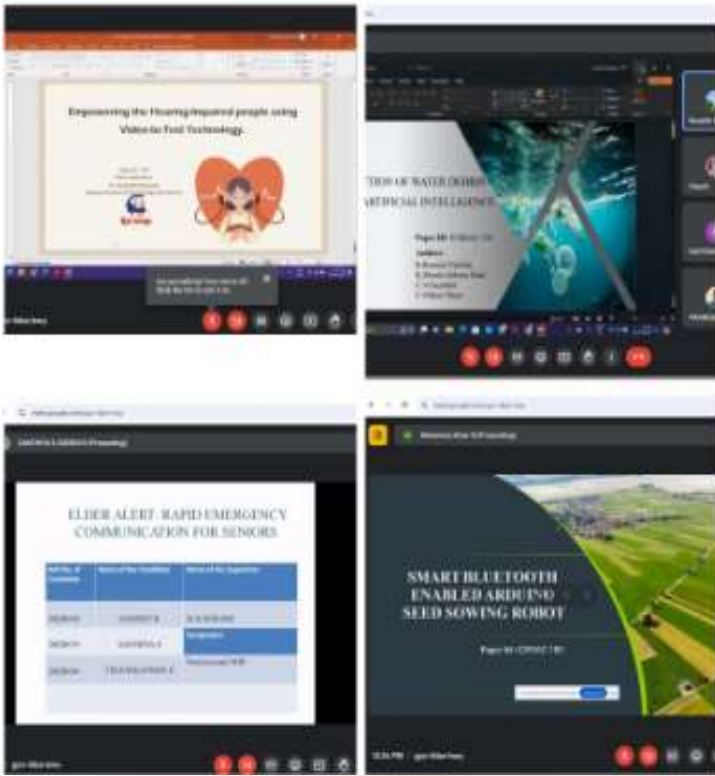
Mr. Nirmal Krishna R, R&D Engineer, Automation Control, Nordic Semiconductor, Norway delivered a keynote address on **“Introduction to Long Range LTE Embedded Devices.”**

Session Takeaways:

- Large range wireless technologies
- Low power wide area network
- nRF 9160 System In Package
- Massive IoT – Target applications

MCT | INTERNATIONAL CONFERENCE - ICIRIAC 2024

Technical Session 1
Title: Intelligent Systems & Algorithms
Papers Presented: 4
Chair - Dr. J. Karthika,
 Associate Professor/EEE
Co- Chair - Dr. T. A. Selvan,
 Professor, MCT and **Dr. M. Bhuvaneshwari,**
 Associate Professor, MCT



Technical Session 2
Title: Innovations in Robotics
Papers Presented: 14
Chair: Dr. K P Yuvaraj,
 Associate Professor, MECH
Co – Chair: Dr. L. Feroz Ali,
 Associate Professor, MCT and
Dr. V. Narasimharaj, Associate Professor, MCT

MCT | INTERNATIONAL CONFERENCE - ICIRIAC 2024

Technical Session 3:

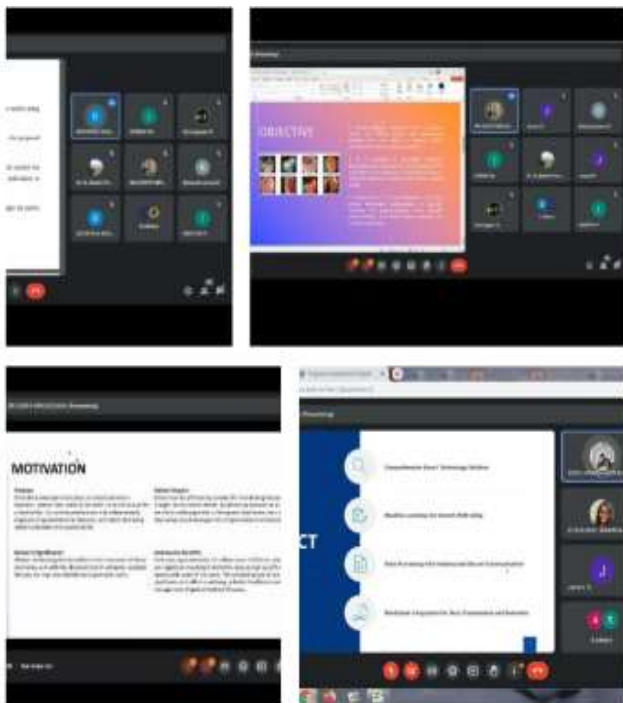
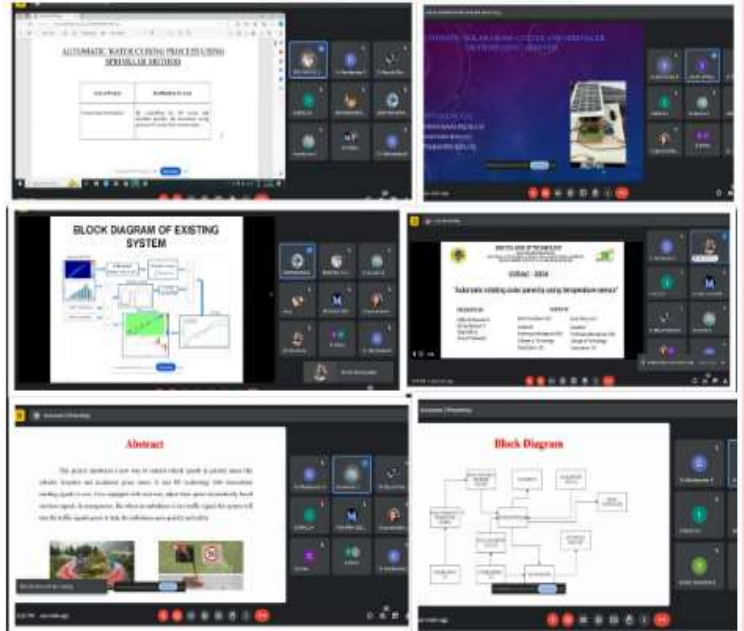
Title:

Innovations in Automation

Papers Presented: 13

Chair: Dr. B. Maruthi Shankar,
Associate Professor, **ECE**

Co- Chair: Dr. R. Manikandan,
Associate Professor , **MCT** and
Dr. R. Gopinathan, Associate
Professor , **MCT.**



Technical Session 4:

**Title: Intelligent Systems &
Algorithms**

Papers Presented: 13

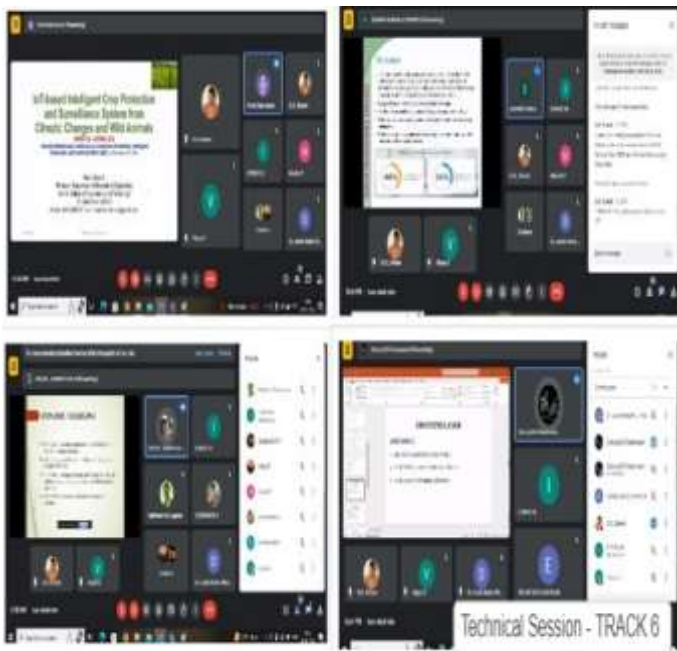
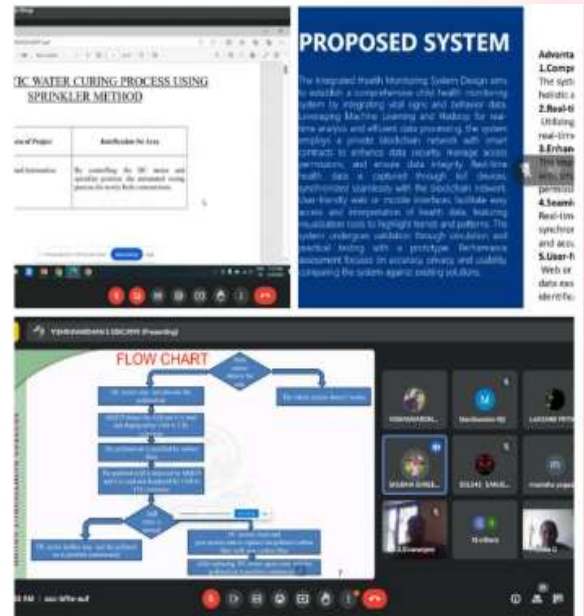
Chair: Dr. Edwin Prem Kumar,
Professor, **IT**

Co – Chair: Dr. G. Veerappan,
Associate Professor , **MCT** and

Dr. S. Balasubramani, Associate
Professor , **MCT**

MCT | INTERNATIONAL CONFERENCE - ICIRIAC 2024

Technical Session 5:
Title: Intelligent Systems & Algorithms
Papers Presented: 13
Chair: Dr. S. Sivaranjani,
 Professor, EEE
Co – Chair: Dr. D. Pritima,
 Professor, MCT, and **Dr. N. Mithran,**
 Professor, EEE



Technical Session 6:
Title: Intelligent Systems & Algorithms
Papers Presented: 13
Chair: Dr. Vijaya, Professor, CSE
Co – Chair: Dr. S. Dinesh,
 Associate Professor, MCT and
Dr. J. Justin Maria Hillary,
 Associate Professor, MCT

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**TUTOR WARD
MEETING**



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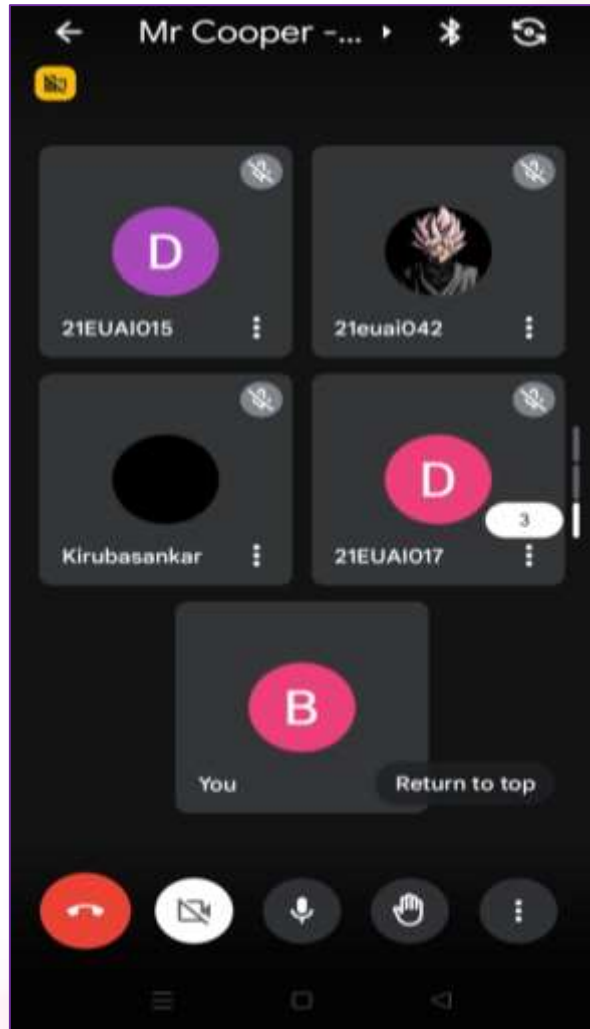
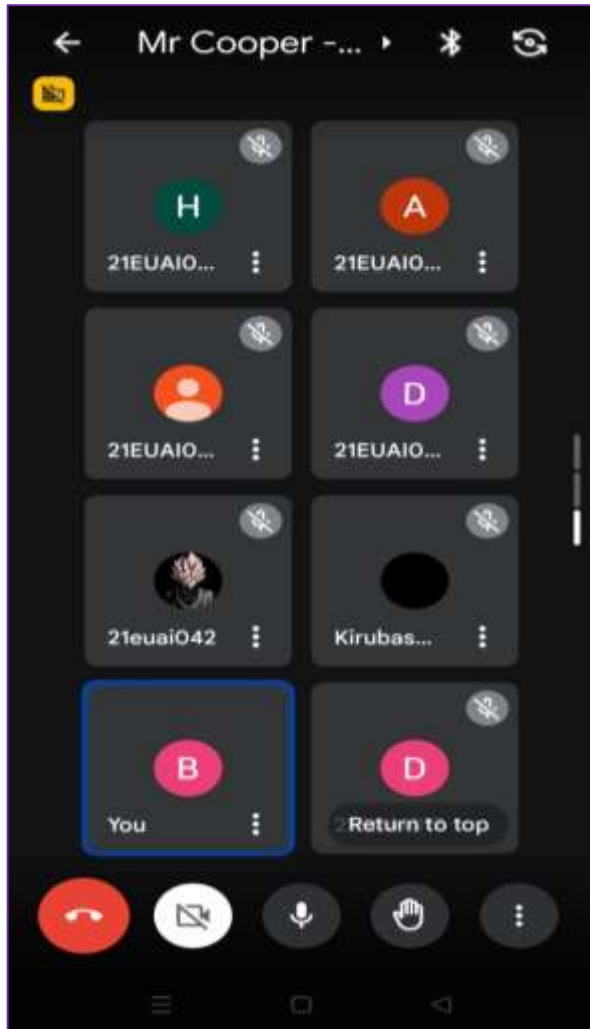


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AI&DS | TUTOR WARD MEETING



Mr.K.Balaji, Assistant Professor Department, **AI&DS** conducted Tutor Ward Meeting for the **Third** year students on 29.02.2024 to address the pre placement preparation such as aptitude, group discussion and self-introduction for the upcoming placement drive.

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**RESEARCH AND
DEVELOPMENT**



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R&D | PAPER PUBLICATION | CIVIL

E3S Web of Conferences #1, 01012 (2024) <https://doi.org/10.1051/e3sconf/2024101012>
A3C3219

Experimental and Statistical Study of Flexural Strength in Ternary Blended High-Performance Concrete using Alcofine

Durga Aditya¹, Suganya Anbarasan², Ramakrishnan Subramanian³, Harishankar Sureshkumar⁴, Nisar Ali Raza^{5*}

¹Department of Civil Engineering, IO Eshay College of Engineering and Technology, Hyderabad, Telangana - 500073, India
²Department of Civil Engineering, Sri Suresh Engineering College, Chennai, Tamilnadu - 600044, India
³Department of Civil Engineering, Sri Eshay College of Engineering and Technology, Coimbatore, Tamilnadu- 641009, India
⁴School of Civil Engineering, SASTRA Deemed University, Thanjavur, Tamilnadu - 613401, India
⁵Department of Civil Engineering, College of Engineering and Technology, Sreejaya University, Abu - 582, Karnataka

Abstract. The primary aim of this research is to conduct a comprehensive comparative experimental and statistical study on the flexural strength of a novel ternary blended high-performance M30 grade concrete incorporating 30% Alcofine in comparison to traditional concrete. The components employed in the experimental investigation of high-performance M30 concrete incorporating Alcofine, in contrast to conventional concrete, comprise cement, fine aggregate, coarse aggregate, water, Alcofine, and additional supplementary materials like fly ash and silica fume. The flexural strength of high-performance M30 concrete containing Alcofine significantly influences the performance of concrete structures, rendering it a critical mechanical property for examination in the comparative analysis. The mean flexural strength of the Conventional Concrete group measured 8.1111 N/mm², with a standard deviation of 0.75240 and a standard error of the mean of 0.13278. In contrast, the Ternary Blended Concrete group exhibited a higher mean flexural strength of 12.5800 N/mm², coupled with a larger standard deviation of 2.50341 and a standard error of the mean of 0.49343. The statistical power analysis, involving parameters such as alpha (α) and beta (β), with commonly used values of 0.05 or 0.01, indicates a significance level of 1% or 10%, respectively. Further research could delve into refining the optimal percentage of Alcofine and exploring its long-term performance under varying environmental conditions.

Keywords: Ternary Blended Concrete, Alcofine, Flexural Strength, Comparative Analysis, Statistical Study

Dr. S. Ramakrishnan, Associate Professor, Department of **Civil Engineering**, has published a research article titled **“Experimental and Statistical Study of Flexural Strength in Ternary Blended High-Performance Concrete using Alcofine”** in E3S Web of Conferences.

R&D | PAPER PUBLICATION | MECH

Dr.V.P.Srinivasan, Associate Professor, Department of **MECH**, has published the following research articles in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.

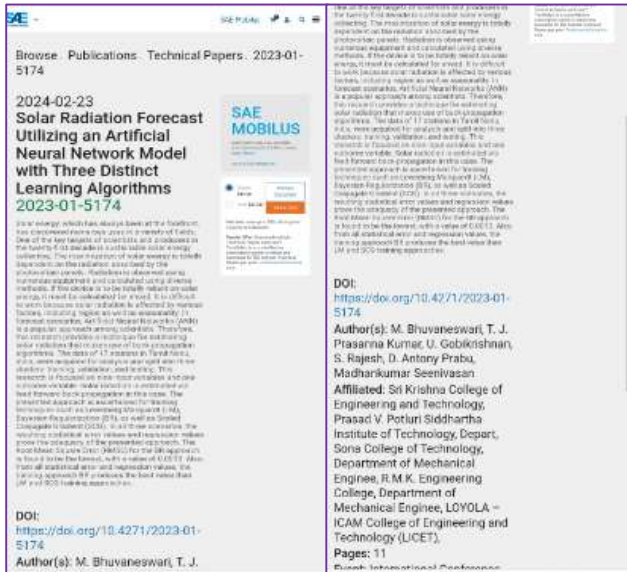
Titles:

1. Deformation of 8561 Aluminium Alloy during Mechanical Stir Processing at Higher Temperature.
2. Structure and Behaviour Characteristics of Aluminum-Nickel-Zinc Alloy by Spray Forming.
3. Analysis of Cast Aluminium-Zinc Alloy Surface Fatigue Crack Formation Growth Characteristics.

The image displays three research paper abstracts from SAE International, all published in February 2024. Each abstract includes the title, ISSN, EISSN, DOI, publication date, sector, event, language, and authors.

- Deformation of 8561 Aluminium Alloy during Mechanical Stir Processing at Higher Temperature:** Published February 23, 2024. Authors: V.P. Srinivasan, S. Suresh Kumar, S. Srinivasan, S. Srinivasan, S. Srinivasan, S. Srinivasan.
- Structure and Behaviour Characteristics of Aluminum -Nickel- Zinc Alloy by Spray Forming:** Published February 23, 2024. Authors: V.P. Srinivasan, S. Suresh Kumar, S. Srinivasan, S. Srinivasan, S. Srinivasan, S. Srinivasan.
- Topology, Morphologies, and Material Properties of 40% Aluminium-10% Nickel Boride Alloys as a Function of Recrystallization Rate:** Published February 23, 2024. Authors: V.P. Srinivasan, S. Suresh Kumar, S. Srinivasan, S. Srinivasan, S. Srinivasan, S. Srinivasan.

R&D | PAPER PUBLICATION | MCT



Dr.M.Bhuvaneshwari and Mr.S.Madhan Kumar, Assistant Professors of **MCT** have published a paper titled **“Solar Radiation Forecast Utilizing an Artificial Neural Network Model with Three Distinct Learning Algorithms”** in **SAE MOBILUS**. This is a Scopus indexed publication.

R&D | PAPER PUBLICATION | MECH

Dr.K.Balasubramanian, Professor, Department of **MECH**, has published a research article titled **“Optimization of CNC-FSSW parameters for dissimilar spot welding of AA6061 aluminium alloy and mild steel using Taguchi based desirability function approach”** in the International Journal of Interactive Design and Manufacturing. It is a Scopus indexed paper.



R&D| PAPER PUBLICATION| CIVIL

Vol.23 No.01
Jan. 2024

MATERIAL SCIENCE AND TECHNOLOGY

ESTIMATION OF COMPRESSIVE STRENGTH OF ALKALI ACTIVATED SOIL USING ARTIFICIAL INTELLIGENCE TECHNIQUES

Dr Manik Deshmukh¹, Dr. Sneha Thombre², Mohammad Parvej Alam³, S. Sadheesh⁴, S. Elavarasan⁵, Devendra Dohare⁶

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³Assistant Professor, Department of Civil Engineering, Shri Shankaracharya Institute of Professional Management and Technology Raipur, Mungahan Sejabahar, Raipur, Chhattisgarh-492015, India.

⁴Assistant Professor, Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu, India.

⁵Assistant Professor, Department of Civil Engineering, KPR Institute of Engineering and Technology, Coimbatore, Tamil Nadu, India.

⁶Associate Professor, Department of Civil Engineering and Applied Mechanics, Shri G. S. Institute of Technology and Science, Indore-452003, Madhya Pradesh, India.

ABSTRACT:

The development of sustainable and environmentally friendly building materials has showed promise for earth-based materials. However, estimating their qualities is challenging and imprecise due to their unusual application in the building industry. Their characteristics are frequently determined using a traditional materials technique. As a result, knowledge about the characteristics of the unusual materials is inaccurate. The compressive strength of the alkali-activated termite soil was predicted using a support vector machine (SVM), an artificial neural network (ANN), and linear regression (LR) in order to achieve more precise characteristics. Due to their substantial impact on compressive strength, this study employed activator concentration, Si/Al, starting curing temperature, water absorption, weight, and curing regime as input parameters. According to the experimental data, SVM performs better than ANN and LR in terms of root mean square error (RMSE) and R2 score.

Keywords: machine learning; artificial neural network; support vector machine; linear regression; alkali-activated termite soil; compressive strength

Mr. S. Sadheesh, Assistant Professor, Department of **Civil Engineering**, has published a research article titled “**Estimation of compressive strength of alkali-activated soil using artificial intelligence techniques**” in Materials Science and Technology.

R&D| PAPER PUBLICATION| MECH

Dr.R.Ramamoorthi, Professor, Department of **Mechanical Engineering**, has published a research article titled “**Experimental Investigation on the Mechanical Properties of Date Seed and Neem Gum Powder Added Natural Composites**” in the SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.

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Experimental Investigation on the Mechanical Properties of Date Seed and Neem Gum Powder Added Natural Composites

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 Published February 23, 2024 by SAE International in United States

Technical Paper
2023-01-5150

Sector: Automotive
 Event: International Conference on Trends in Automotive Parts Systems and Applications
 Language: English

Authors

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- G. Rajamurugan - Vellore Institute of Technology
- R. Ramamoorthi - Sri Krishna college of Engineering and Technology
- K.P. Yuvaraj - Sri Krishna college of Engineering and Technology
- N. Babu - Sri Krishna college of Engineering and Technology

R&D | BOOK CHAPTER PUBLICATION | CSE



ABSTRACT

Efficient supply chain management has emerged as a crucial determinant of organizational performance in the contemporary dynamic corporate environment. The incorporation of nascent technology, such as machine learning and blockchain, is revolutionizing how enterprises manage their supply chain operations. By examining extensive datasets, machine learning algorithms can predict future demand, optimize inventory levels, and improve the planning of routes. By discerning regularities and deviations within datasets, these algorithms facilitate enterprises in making well-informed choices and managing potential hazards. Additionally, the utilization of machine learning facilitates the automation of monotonous jobs, hence mitigating the occurrence of human fallibility and augmenting the overall efficacy of supply chain operations. The utilization of blockchain technology, renowned for its decentralized and unalterable ledger systems, effectively tackles several critical issues encountered in the realm of supply chain management.

1. INTRODUCTION

The current era, often referred to as the “fourth industrial revolution”, is characterized by the advancement of digitization, robotics, communication technology, and Artificial Intelligence (AI) (Pandey, B. K. et DOI: 10.4018/979-8-3693-3593-2.ch008

Dr. Ramesh K, Professor, Department of **Computer Science and Engineering** has published a Book Chapter titled “**Revolutionizing Supply Chain with Machine Learning and Blockchain Integration**” by IGI Global Publishers with DOI: 10.4018/979-8-3693-3593-2.ch008.

R&D | PAPER PUBLICATION | MECH

Dr. R. Arunbharathi, Associate Professor, Department of **Mechanical Engineering**, has published a research article titled “**Application of Desirability Approach to Determine Optimal Turning Parameters**” in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.



R&D | BOOK CHAPTER PUBLICATION | CSE

Chapter 11

Leveraging Cutting-Edge Technologies and Innovative Strategies to Optimize the IoT and AI Integration in Supply Chain Management 159

- K. Ramesh, Sri Krishna College of Engineering and Technology, India*
P. N. Renjith, Vellore Institute of Technology, Chennai, India
S. Balasubramani, Kovara Lakshminiah Education Foundation, India
M. Anto Bennet, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India
S. Saritha, Rathinam Technical Campus, Coimbatore, India
Digvijay Pandey, Department of Technical Education, Government of Uttar Pradesh, India
Uday Kumar Kanike, Georgia State University, USA

Conventional supply chain models are insufficient to satisfy the requirements of contemporary consumers and their growing quantities. This model presents a methodology for incorporating internet of things (IoT) and artificial intelligence (AI) technology into supply chain management. The objective is to establish a flexible and responsive system. The proposed new model aims to improve the efficiency, transparency, and ecological impact of the supply chain. The proposed integration model of IoT and AI in supply chain is a comprehensive strategy to revolutionizing supply chain management. Organizations can develop more adaptable, productive, and environmentally friendly supply chains that meet the requirements of the contemporary business environment by adopting advanced technology and promoting a culture of innovation. The amalgamation of internet of things (IoT) and machine learning (ML) technology presents significant opportunities to transform supply chain management by enhancing productivity, minimizing expenses, and facilitating more informed decision-making.

Dr. Ramesh K, Professor, Department of **Computer Science and Engineering** has published a Book Chapter titled **“Leveraging Cutting-Edge Technologies and Innovative Strategies to Optimize the IoT and AI Integration in Supply Chain Management”** by IGI Global Publishers
 DOI: 10.4018/979-8-3693-3593-2,
 ISBN13: 9798369335932.

R&D | PAPER PUBLICATION | MECH

Mr. R. Siva Subramanian, Assistant Professor, Department of **Mechanical Engineering**, has published a research article titled **“Effect of Post Weld Heat Treatment on Notch Sensitivity Ratio of Electron Beam Welded AA2024 Aluminum Alloy Joints”** in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.

Effect of Post Weld Heat Treatment on Notch Sensitivity Ratio of Electron Beam Welded AA2024 Aluminum Alloy Joints

ISSN: 0146-7191, e-ISSN: 2689-3627
 DOI: <https://doi.org/10.4271/2023-01-5142> (<https://doi.org/10.4271/2023-01-5142>)
 Published February 25, 2024 by SAE International in United States

Technical Paper
 2023-01-5142

Sector: Aerospace, Avionics
 Event: International Conference on Trends in Automotive Parts Systems and Applications
 Language: English

Abstract

Aluminum alloy AA2024 stands out as a widely utilized age-hardening alloy in aircraft applications worldwide. Despite its superior weldability in comparison to its 6000-series counterparts, AA2024 still reveals vulnerability in the welded joint. Specifically, in the T6 condition, the joint strength is only about 40% of the strength exhibited by the base metal. Faced with this challenge, design engineers often resort to selecting thicker base metal plates due to notable disparities in strength values, particularly concerning yield strength. AA2024 alloy is welded using low heat input electron beam welding. This weld is eliminated all defects in other fusion welding process. However, heat affected zone is always a weaker region in all the fusion welding process. Post weld heat treatment process, namely, solution treatment and artificial aging was performed to diminish the width of weaker region. Of which, the joint treated with solution treatment followed by aging yielded higher strength. It may be attributed by distribution of strengthening precipitates.

Authors

- Ch. Sankaraj, Institute of Aeronautical Engineering, Department of Mechanical
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- M. Mohan Das - Kovara Lakshminiah Education Foundation, Chennai, India
- P. Venka Prasad - Rajalakshmi Institute of Technology, Department of Mechanical
- R. Vijaya Prakash - Sri Sakthi Institute of Engineering and Technology, Chennai

R&D | BOOK PUBLICATION | IT



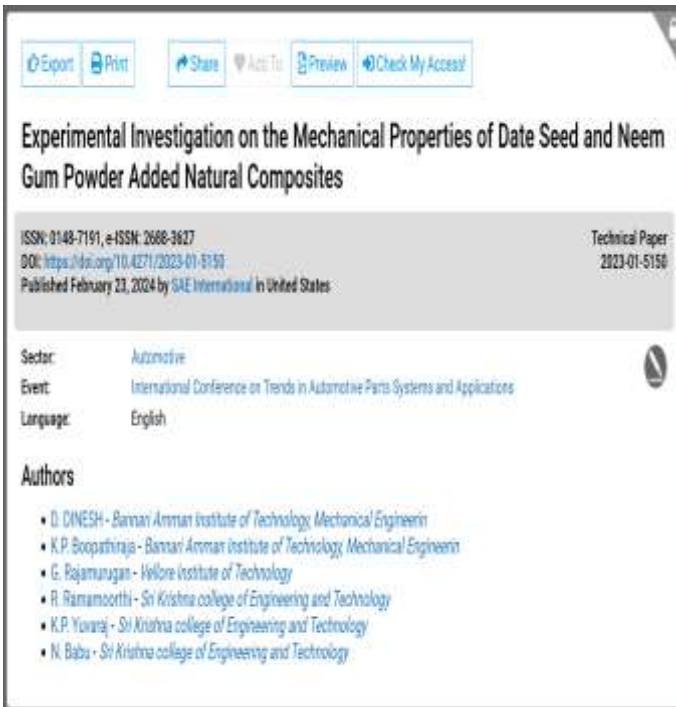
Mr. M. Diwakaran, Assistant Professor, IT Department has published a book titled **“Software System: Quality Assurance, Measurement and Configuration Management”**.

R&D | PAPER PUBLICATION | MECH

Mr. K. N. Gunasekaran, Assistant Professor, Department of **Mechanical Engineering**, has published a research article titled **“Influence of Rotatory speed and Frictional Pressure on Tensile Strength Of Friction Welded Mild Steel/AISI 304 L Joints”** in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.



R&D | PAPER PUBLICATION | MECH



Mr.N.Babu, Assistant Professor, Department of **Mechanical Engineering**, has published a research article titled **“Experimental Investigation on the Mechanical Properties of Date Seed and Neem Gum Powder Added Natural Composites”** in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.

R&D | DESIGN PATENT GRANT | MECH

Patent titled **‘Smart Fish Health Monitoring Device in Aquaculture’** filed by **Dr. Yuvaraj K.P**, Associate Professor, Mechanical Engineering has been granted a Design Patent by The Patent Office, Government of UK.



R&D | PAPER PUBLICATION | MECH



Mr.S.BaluMahandiran, Assistant Professor, Department of **Mechanical Engineering,** has published a research article titled **“Influence of Diameter Ratio on the Mechanical Properties of Lap Joints in Friction Stir Welding of 2014 Aluminum Alloy”** in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.

Dr.V.P.Srinivasan, Associate Professor, Department of **MECH,** has published the following research articles in SAE International Conference Proceedings, through International Conference on Trends in Automotive. It is indexed in Scopus.

Titles:

- 1.Topology, Morphologies and Material Properties of 40% Aluminium-10% Nickel Boride Alloys as a Function of Recrystallization Rate.**
- 2. An Examination of the Friction and Wear Characteristics of Carburized, Boronized and Austenitic 1080 and 1566 Steel.**



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MCT| IDEA PRESENTATION



Mr.S.Madhankumar, Assistant Professor, **Mechatronics Engineering** presented his research concept in the National Science Day 2024 celebration at IIT Ropar, Punjab on 28.02.2024. He presented his idea titled "**Computational, Experimental and Machine Learning studies on Solar Drying Device with Thermal Energy Storage Device**" to the scientific community and also received third prize with a cash amount of Rs.10,000/-.

EEE | GUEST LECTURE DELIVERED

Dr. B. Karthikeyan, Associate Professor, Department of EEE delivered an online Guest Lecture on "**Hybrid Energy Technology**" organized by the Department of Electrical and Electronics Engineering at Velammal Institute of Technology on 01.03.2024.



CSE | SEMINAR - RESOURCE PERSON



Mr.M.Vengateshwaran, Assistant Professor, Department of Computer Science and Engineering served as a Resource Person for a session titled "Predictive Smart System using Hadoop Inspired NoSQL Frameworks" at M.Kumarasamy College of Engineering (Autonomous), Karur, on February 29th, 2024.

INFOGRAPHICS



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MCT | FDP ON EMERGING TRENDS IN ADVANCE MANUFACTURING



Dr.D. Pritima, Professor of MCT has participated in a National Level One – Week Faculty Development Program (Online Mode) on “Emerging Trends in Advance Manufacturing Technology” organized by Mechanical Engineering Department, School of Engineering and Technology, Sandip University, Nashik, from 20th to 24th February 2024.

EEE | FDP ON BIG DATA ANALYTICS IN SMART GRID

Ms.T.Malini, Assistant Professor, EEE Department has participated in an Online AICTE Recognized Faculty Development Programme on “Big Data Analytics in Smart Grid” organized by the Department of Electrical Engineering, NITTTR-Chandigarh from 12.02.2024 to 16.02.2024.



MCT| FDP ON RECENT ADVANCES IN SMART MATERIALS AND SENSOR TECHNOLOGY



Dr.S.Dinesh and **Dr.M.Bhuvaneshwari**, Assistant Professors of **MCT** have attended a six days National Level Faculty Development program on **"Recent Advances in Smart Materials and Sensor Technology"** organized by the Department of Electronics and Communication Engineering, Pavai Engineering College, sponsored by IETE – WEEC & IETE ERODE CENTRE in association with the Institute of Electronics and Telecommunication Engineers (IETE) from 12th to 17th February 2024.

CSE| WIPRO CERTIFICATION



Ms. V.R. Azhaguramyaa, and **Dr.Koushika N** Assistant Professor, **CSE** has participated in the **WIPRO Talent Next Program**, a 30-day intensive training and assessment initiative focusing on Wipro's Project Based Learning framework in Java Full Stack and awarded the Wipro Certified Faculty (WCF) certificate.

MCT| FDP ON 5G AND BEYOND



Dr.M.Bhuvaneshwari, Assistant Professor of **MCT** participated in the AICTE Recognized Faculty Development Programme on “**5G and Beyond**” conducted by Electronics and Communication Engineering Department from 05/02/2024 to 09/02/2024 (one week) at NITTTR, Chandigarh.

HEALTHOGRAPHICS

Top 10 Hydrating Foods

Celery - 95% water	Cantaloupe - 92% water	Tomato - 94% water	Lettuce - 95% water
Pear - 89% water			Blueberries - 95% water
Grapefruit - 90% water	Pineapple - 95% water	Watermelon - 96% water	Cucumber - 96% water

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MECH | CONFERENCE PRESENTATION



Dr.K.Balasubramanian, Professor, Department of **Mechanical Engineering**, has participated and presented a technical paper titled **“Determination of contact angles on different surface preparations of Ti6Al4V alloy implants to study the wettability nature”** in the Second International Conference on Innovations in Robotics, Intelligent Automation and Control (ICIRIAC 2024) on 28.02.2024.

EEE | CONFERENCE PRESENTATION



Dr.T.Kokilavani, Associate Professor, **EEE** has presented a research paper entitled **“AI Based Tagging the Optimal Power Point of a Solar Photovoltaic using Artificial Bee Colony (ABC) Optimization Algorithm”** on IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering – UPCON 2023 held at Mehran Univ of Engineering and Technology. The proceeding of the conference is published in IEEE Xplore and is also indexed in Scopus.

MECH | CONFERENCE PRESENTATION



Mr.R.Siva Subramanian, Assistant Professor, Department of **Mechanical Engineering**, has participated and presented a technical paper titled “**Light Spectrum Optimization Based ADABOOST SVM for the Secured Communication in Vehicular AD HOC Network.**” in the Second International Conference on Innovations in Robotics, Intelligent Automation and Control (ICIRIAC 2024) on 28.02.2024.

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CSBS | ALUMNI RECOGNITION



OUTSTANDING CONTRIBUTOR AWARD

Ms. Priya Darshini E

(2020-2022 Batch)

Associate-HR,

Kovai.Co

Coimbatore



SKCET ICON AWARD & Office Bearer – Coimbatore

Chapter

Mr. Venkatesh Damodharan

(2015-2017 Batch)

Head South-Sales and Operations,

Upgrade Campus

Coimbatore