



SRI KRISHNA
COLLEGE OF ENGINEERING AND TECHNOLOGY
AN AUTONOMOUS INSTITUTION, ACCREDITED BY NAAC 'A' GRADE



VOLUME 4
ISSUE 2

ECHO

MAGAZINE OF

MECHATRONICS

ENGINEERING DEPARTMENT

"THE WAY TO GET STARTED IS TO QUIT TALKING AND BEGIN DOING."

- WALT DISNEY



Editorial

I am so excited to pen down my thoughts in this Editorial Column. Glad that the ECHO Magazine is bringing out the exhilarating achievements of our students both in curricular and co-curricular aspects. You will also get a glimpse of the First International Conference ICIRIAC 2022 conducted by our Department with AIP as our publishing partner. Latest technological innovations in the areas of Digital Twins, AI, Metaverse and Industrial Automation were the highlights of the Keynote addresses of the Conference. Digital Twin (DT) technology is poised to revolutionize the industrial sector in a massive manner. Being the dynamic virtual representation of a physical counterpart, digital twins find application in real time monitoring, diagnosis, prediction and control. DTs aid in acquiring wide-ranging and astute information about processes and also facilitate in their control. The development and application of DT have impacted the industrial realm in the areas of robotics, smart manufacturing, wind turbines, agriculture, shipping and aviation industry and product development.

Apart from the technical updates, you will also enjoy the artistic skills of our students and faculty members. I place on records my sincere appreciation to the entire Editorial Team for their unstinted efforts in bringing out yet another edition of ECHO. I wish all the readers a very pleasant time of reading!

Dr. M. Lydia
Professor & Head



Faculty Editor:

Mr. S. Madhankumar, Assistant Professor

Student Editors:

2019-23 Batch

C. Bero
S. Gedendhar
P. Kishore
S. Vishal

2020-24 Batch

K. V. Deepak
S. Sooraj
A. Dheeraj

2021-25 Batch

S. Mohit
J. Abdul Wahid
R. Dhivya Dharshini
T. Mohana Kumar
G. Sree Karthika



SYNOPSIS

- ✿ **DEPARTMENT EVENTS**
- ✿ **RESEARCH & DEVELOPMENT**
- ✿ **EXPLORE THE TECH**
- ✿ **A STORY WITHOUT LETTERS –
ART & CANDID**
- ✿ **THOUGHT MANIACS**
- ✿ **THINK! DO! TREAT!**
- ✿ **ACHIEVEMENTS**
- ✿ **PLACEMENT TESTIMONIALS**

“Don't take rest after your first victory because if you fail in second, more lips are waiting to say that your first victory was just luck.”

– Dr. A. P. J. Abdul Kalam

PROJECT EXPO'22



As a part of **Engineers Day celebration**, Department has organized "**In house Project Expo 22**". Student teams displayed their innovative projects that were useful to the society. Highlights of this expo include: Interdisciplinary projects, Autonomous guided vehicle, Chat bots and security appliances.

Winners:

- Team Tech Squad – First Prize
- Team Mechatronz – Second Prize
- Team Tech Mutants – Third Prize

WEBINAR

Department organized a webinar on "**Design and Control Robots for Field and Service Applications**" on 16.09.2022. **Dr. T. Asokan**, Head of the Department, Department of Engineering Design, **IIT Madras** was the Resource Person. Session Highlights were Robotic research, Tele-surgical Robotics, Mechanism for end tool Actuation, Autonomous Underwater Vehicle and Underwater Glider.



WORKSHOP



Third year students attended **Autodesk Fusion 360** a one-day workshop on "**DESIGN NOW**" as part of INDIA DESIGN WEEK 2022 challenge organized by ICT Academy.

FACULTY SEMINAR SERIES



Dr. M. Lydia, HoD delivered an informative talk on the topic "**Cyber Physical Systems**" on 03.09.2022.

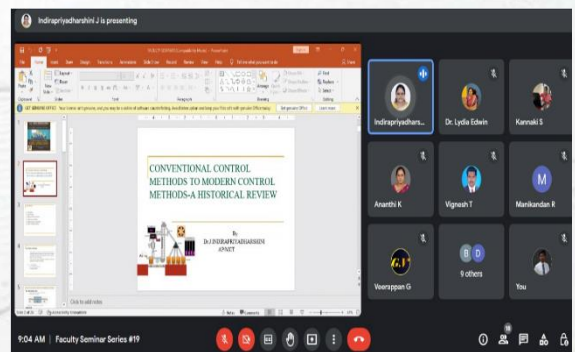
Session Highlights are:

- Introduction to Cyber Physical System (CPS)
- Difference between CPS and Embedded System
- Difference between CPS and IoT
- Application of CPS in Medical care, Transportation, Smart Grid
- Cyber Physical Power System
- Digital Twin and Robotics CPS



Dr. J. Indirapriyadharshini, Assistant Professor has shared her views on the topic "**Conventional Control Methods to Modern Control Methods – A Historic Review**" on 24.09.2022. Session Highlights:

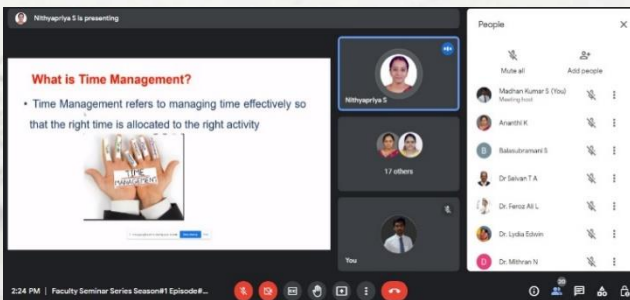
- History of Control System.
- Control system design procedure
- Future of control systems



Mrs. S. Nithya Priya, Assistant Professor delivered an informative talk on the topic "**Time management**" on 02.11.2022.

Session Highlights are:

- Effective Planning
- Setting Goals and Objectives
- Setting Deadlines
- Delegation of Responsibilities



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DEPARTMENT OF MECHATRONICS ENGINEERING PRESENTS

KRIZEN
A NATIONAL LEVEL SYMPOSIUM

TECHNICAL EVENTS	NON-TECHNICAL EVENTS	WORKSHOP
1. PAPER PRESENTATION	1. BEYOND INKS	1. INDUSTRIAL IOT AND AUTOMATION
2. LINE FOLLOWER ROBOT	2. FOTO HUNT	
3. FLASH CODE	3. VIDEO VISION	
4. MECHANICAL QUIZ	4. RHYTHM	
5. INTERVIEWING	5. MEME CRAFT	
6. CAD FAST	6. SOUL STEPS	
7. ELECTRIC QUIZ		

15TH SEP

@KRIZEN_SKCET WWW.KRIZEN.IN @KRIZEN_SKCET

Department organized a **National Level Symposium KRIZEN Second Edition** on 15th of September 2022, to commemorate **Engineers' Day**. The event brought the innate talents and technical skills of the students to limelight and it provided a wonderful platform for the students across India to showcase their skills and talents. KRIZEN, the monumental fest had **7 Technical Events, 6 Cultural Events and 1 Workshop**. Total number of registrations received for all the events pan India was more than 3500. The participants had an exhilarating time, sharing their innovative ideas and honing their technical and cultural skills.

INAUGURATION CEREMONY

The inaugural function of this event was held at 10 am in Convention centre. **Mr. Laxman Subramanian**, Global Sourcing Manager, Apple Inc., California, United States inaugurated the symposium in the presence of **Dr. J. P. Ananth**, COE and Dean - Academics.



PAPER PRESENTATION

The **paper presentation** event was conducted in Convention Centre and BS-03. Out of 428 abstract submissions from the various institution across the nation, totally 21 teams were shortlisted. The selected teams were presented their innovative ideas Infront of expert members.

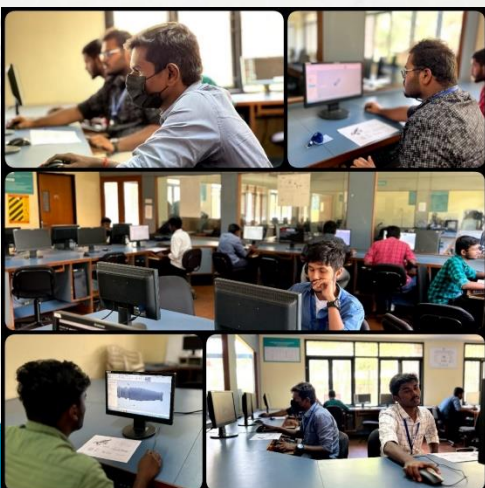
List of Themes: Robotics and Automation, Smart Agriculture, Blockchain, Alternate energy and fuel, Micro factories, IoT home, Smart vehicles, and Digital twin

FLASH CODE

As a part of Krizen'22 the **Flash Code** event has been conducted using the Hacker Earth portal for the participants, where they can improve their coding skills in a competitive way at Vankatram learning centre. In this event, the knowledge, speed, accuracy and confidence level of the participants were tested.

**CAD FEST**

The aim of this event "**CAD Fest**" was conducted at Virtual Instrumentation laboratory to bring out the esteemed minds of future engineers in the field of Mechanical Engineering. In which examined the drafting skills of participants. The participants were tested with their thinking and imaginary skills under the domain of Design Thinking.



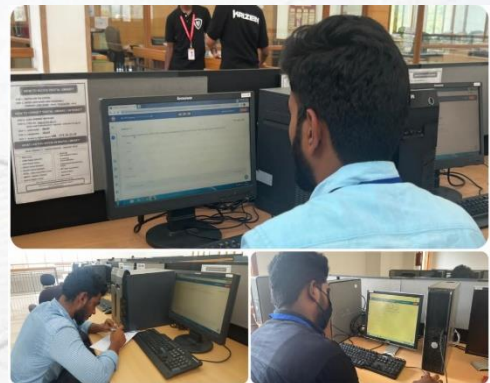
INDUSTRIAL IoT & AUTOMATION WORKSHOP



Conducted a workshop on **Industrial IoT & Automation** as a part of Krizen'22 to commemorate Engineer's Day 2022 at Convention Centre. The resource person of this workshop was **Mr. Laxman Subramanian, Global Sourcing Manager, Apple Inc., California, USA**. Around 1250+ participants were participated this event in hybrid mode. The key takeaways were, Autonomous vehicles, Electric vehicles (EV), Automation features in EV, Companies making autonomous vehicles and etc.,

ElectrioQuiz

The event **ElectrioQuiz** was conducted in Vankatram learning centre. In which the participants were lightened up by their knowledge in the branch of electrical and electronics. This event confronts the attendees' analyzing skills within a limited time.



INTERVIEWWIND

Interviewwind event was conducted with three rounds. Round 1 Aptitude MCQ was conducted in online mode, and remaining two rounds have been conducted at Vankatram Learning Centre.
Round 2 - Group Discussion
Round 3 - Mock Interview



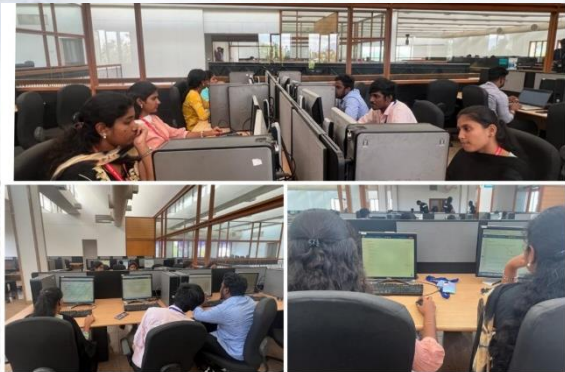
LINE FOLLOWER ROBOT



As a part of Krizen'22, the event "**Line Follower Robot**" was conducted on 15.09.2022 at Classroom Block- 5. The participants from various institutions were actively participated in this event.

MECHANIQUIZ

MechaniQuiz event was conducted with two rounds. Round 1 was conducted in online mode on 12.09.2022, and second has been conducted through Hacker Earth portal at 12:15 pm in Vankatram Learning Centre on 15.09.2022.



CULTURAL EVENTS

Totally **6 non-technical events** were conducted as a part of Krizen'22 over online mode on 15.09.2022.

List of Events:

- ✚ Soul Steps
- ✚ Rhythm
- ✚ Foto Hunt
- ✚ Beyond Inks
- ✚ Meme Craft
- ✚ Video Visions



VALEDICTORY



The Valedictory function of the second edition of a national level symposium KRIZEN has been conducted at convention centre. The Valedictory ceremony of the symposium was presided by **Dr. V. Ragavi**, Dean - Students Affairs. The prize winners of 7 offline events, Project Expo 2K22, and 6 online events were felicitated in the valediction ceremony.

COORDINATORS

Overall Faculty Coordinator: **Mr. S. Madhankumar**

Overall student Coordinators:

1. **A. Dheeraj**, III MCT A
2. **K. V. Deepak**, III MCT A
3. **C. Tharun Kumar**, III MCT B
4. **Udayasri**, III MCT B

Overall Technical Coordinators:

1. **G. Stanely**, III MCT B
2. **P. Linga Sri**, III MCT B

Overall Non-technical coordinators:

1. **Arul Murugan**, III MCT A
2. **D. Helan Jemima**, III MCT A

INAUGURATION

SRI KRISHNA
COLLEGE OF ENGINEERING AND TECHNOLOGY
KUNNAMURTHI, COIMBATORE, INDIA

DEPARTMENT OF MECHATRONICS ENGINEERING
in association with
KYUNGPOOK NATIONAL UNIVERSITY, South Korea

We cordially invite you for the INAUGURATION of
**INTERNATIONAL CONFERENCE ON
INNOVATIONS IN ROBOTICS, INTELLIGENT
AUTOMATION AND CONTROL (ICIRIAC 2022)**

Robotics Society of India

Keynote Speakers

Dr. ANAND PAUL
Director, Connected Computing and
Media Processing Laboratory, Kyungpook
National University, South Korea

Presided by
Dr. J. Janet
Principal

Mr. MUTHIAH
Computation Engineer,
Akka Technologies,
Germany

14 Oct, 2022
9:30 am

BS - 03



The Department in association with **Kyunpook National University, South Korea** organized **International Conference on Innovations in Robotics, Intelligent Automation and Control (ICIRIAC 2022)**. Dr. S. Sophia, Dean, Research and Development presided over the function and Dr. M. Lydia, HoD, Mechatronics Engineering and Convener of this conference welcomed the gathering. **Dr. Anand Paul, Director**, Connected Computing and Media Processing Lab, Kyunpook National University, inaugurated the conference.

KEYNOTE ADDRESS



SRI KRISHNA
COLLEGE OF ENGINEERING AND TECHNOLOGY
KUNNAMURTHI, COIMBATORE, INDIA

DEPARTMENT OF MECHATRONICS ENGINEERING
in association with
KYUNGPOOK NATIONAL UNIVERSITY, South Korea

Proudly Presents
**INTERNATIONAL CONFERENCE ON
INNOVATIONS IN ROBOTICS, INTELLIGENT
AUTOMATION AND CONTROL
(ICIRIAC 2022)**

Keynote address on
**DIGITAL TWIN TO METAVERSE: RECENT
TRENDS IN AI**

Dr. ANAND PAUL
Director, Connected Computing and
Media Processing Laboratory,
Kyungpook National University,
South Korea

OCT 2022
10:00

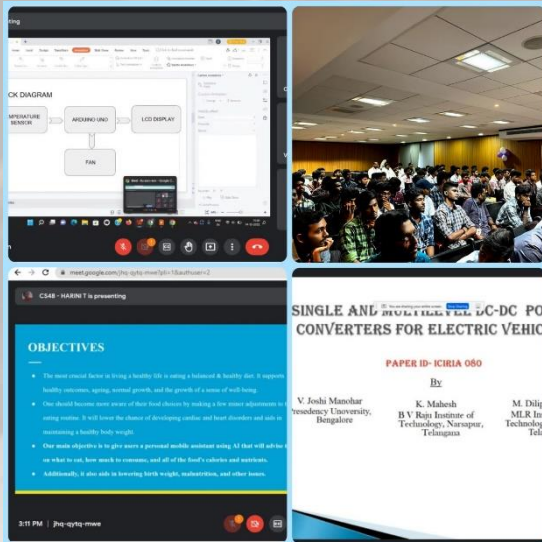
Scan to join the meet

Dr. Anand Paul, Director, Connected Computing and Media Processing Lab, Kyunpook National University delivered Keynote Address on **Digital Twin to Metaverse: Recent Trends in AI** in the ICIRIAC 2022.

Session Highlights:

- Digital Twins
- Cyber-physical Systems
- Aircraft Simulator Tools
- Metaverse
- NFT
- Digital assets

TECHNICAL SESSION



Technical Sessions:

- Track 1: Innovations in Robotics and Automation
- Track 2: Advancements in Mechatronics Systems
- Track 3: Intelligent Systems & Algorithms
- Track 4: Robot Intelligence

KEYNOTE ADDRESS

Mr. Muthiah, Computation Engineer, Akka Technologies, Germany delivered the Keynote Address on **Evolution of Intelligence Automation and Controls in Automotive Sector.**

Session Highlights:

- Industrial Automation
- Automotive Control Systems
- Hardware in loop
- Dynamic Torque Vectoring
- Magic Body Control
- Advanced Driver Assistive Systems



VALEDICTORY



The **Valedictory Session** of the ICIRIAC 2022 organized by the Department of Mechatronics Engineering in association with Kyunpook National University, South Korea was held on 14.10.2022. Best Paper Awards were announced and appreciated. The organizing committee members, Chairs, Co-chairs, student volunteers were appreciated with certificates.

AUTODESK FUSION 360



Department hosted the the '**Fusion 360 Design Challenge**' in association with Autodesk on 19.10.2022. **Dr.M.Lydia**, HoD, Mechatronics Engineering delivered the Welcome address. Dr.P.Ashoka Varthanan, HoD, Mechanical Engineering briefed the insights about the Hackathon. The resource people from Autodesk gave a lecture on **Fusion 360 software**. A total of 135 teams from Mechanical and Mechatronics Engineering departments registered for the Hackathon.

GUEST LECTURE

Department organized **Guest Lecture** on **Recent trends in Embedded systems**. Mr. Baburaj Thillaigovindan, Manager, ASIC Design, Maxlinear, Chennai was the Resource person.

Session Highlights:

- ✦ Multicore embedded systems
- ✦ Field Programmable SOC
- ✦ Jetracers
- ✦ AI Racing Robot pro



SEMINAR

Department organized a **Seminar** on "**Higher studies opportunities in Europe Countries**" on 18.10.2022. Ms.Sasikala from Western Education briefed about the following,

- ✦ Basic academic requirements for Europe Countries
- ✦ German and IELTS requirement
- ✦ How to choose universities
- ✦ How to apply for universities
- ✦ Documents required for application



GUEST LECTURE



Department organized a Guest Lecture on **"Discover the Entrepreneur in You"** on 28.11.2022. **Mr. Earnest Chelladurai**, Managing Director, DFF Textiles, Coimbatore was the resource person.

Session Takeaways:

- Multi National Entrepreneurship
- How to do Successful Business Globally
- Understanding the Financial needs
- Partnership for setup of facilities
- Indian Governments' Opportunities

ALUMNI INTERACTION

Mr. Ashik Raja (2014-2018 Batch), **Director, Bharani Industries, Coimbatore**, shared his insights on **Entrepreneurship** and interacted with 2019-23 and 2020-24 batch students on 31.10.2022.



INDUSTRIAL VISIT

2021-25 batch students from the Department were undergone an **Industrial visit** at **DFF Textiles**, Coimbatore on 26.11.22.

Visit Takeaways:

- Plant layout demonstration
- Yarn Manufacturing Process
- PLC in Textile machines
- Quality Checking of Yarn
- Carding Process Machines
- Automation in Textile machineries
- Cotton Spinning Process



IoT EXPO



As a part of IoT course, 2020-24 batch students enthusiastically exhibited their **IoT based Projects** - an activity towards outcome-based learning. The Head of the Department **Dr.M.Lydia** evaluated the projects. The best projects were applauded and the top three projects were awarded with cash prize as a symbol of motivation and appreciation for their smart work. The Course was handled by **Dr.J.Indirapriyadharshini**.

INDUSTRIAL VISIT



2021-25 batch students from the Department were undergone an **Industrial visit** at **LMW, Unit - II, Kaniyur, Coimbatore** on 26.11.22.

Visit Takeaways:

- Various textile machines
- CNC Machines and its types
- Need for low cost automation
- Fiber Laser Cutting and Laser Cutting
- Powder Coating and Sheet Metal Assembly
- Automation in Textile machineries

GUEST LECTURE

Department organized a **Guest Lecture** on '**Problem solving and ideation**' on 12.11.2022. Resource Person **Mr.Selvame Pazhany**, General Manager -Engineering Division, CEAT Limited, Chennai Plant.

Session Takeaways were Problem Solving Process, Startup, Ideation, Idea to Reality and Design Thinking.



WORKSHOP



Department in association with **Solar Electric Vehicle Championship** is conducting a two days' workshop on Session on **Transmission system of Vehicles, Electrical Circuits and components** from 11.11.2022 to 12.11.2022.

FACULTY DEVELOPMENT PROGRAMME

Department organized Two Days Online FDP on "**Additive Manufacturing for Environmental Sustainability**" from 24.11.2022 to 25.11.2022.

- The inaugural session began with felicitation address by Dr. M. Lydia, HOD.
- Dr. R. Manikandan, Assistant Professor delivered the welcome address. Dr. G. Veerappan, Assistant Professor presented an overview of the workshop's sessions.
- The Guest of Honour **Dr. S. Vinodh**, Professor, Department of Production Engineering, NIT, Trichy, delivered the Inaugural address.
- Dr. D. Pritima, Professor proposed the Vote of Thanks.

**DAY 1 - Session 1:****Resource Person:**

Dr. S. Vinodh, Professor,
Department of Production Engineering,
NIT, Tiruchirappalli.

Session Highlights:

- Rapid Prototyping
- Trends of 3D printing
- Sustainability
- Virtual Reality
- Industry 4.0 Protocols.
- Industrial Applications

Session Title: Additive Manufacturing and the Industry

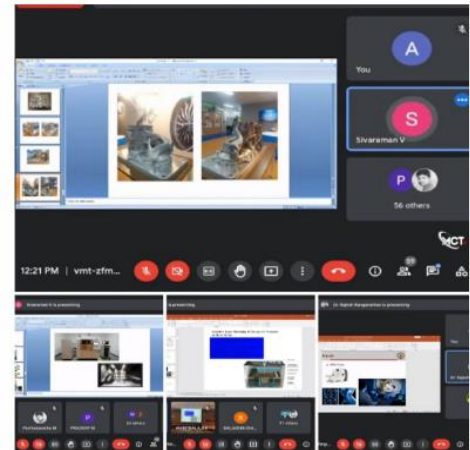
DAY 1 - Session 2:**Resource Person:**

Dr. V. Sivaraman, Director (Industry Institute Relations), Domain Expert (IIT)

Session Title: Additive Manufacturing: Trends and Applications

Session Highlights:

- Introduction to AM
- Subtractive Vs. Additive Manufacturing
- Common Filament Materials
- Wax Materials and its influence

**DAY 1 - Session 3:****Resource Person:**

Dr. Rajesh Ranganathan, Professor, Department of Mechanical Engineering, CIT, Coimbatore

Session Title: Additive Manufacturing for HealthCare Engineering

Session Highlights:

- Internal & External Prosthesis
- Case studies on wearable devices
- Club foot treatment
- Developed laparoscopic surgical tools
- Diabetic foot Insole

**DAY 1 - Session 4:****Resource Person:**

Dr. Arun Tom Mathew, Professor & Dean, School of Mechanical Engineering, VIT, Vellore

Session Title: 3D/4D - Printing: Printing the Future

Session Highlights:

- Steps involved in RPT
- Bio materials
- Bio 3D printing
- Active Materials
- 4D Printing technology



DAY 2 - Session 1:

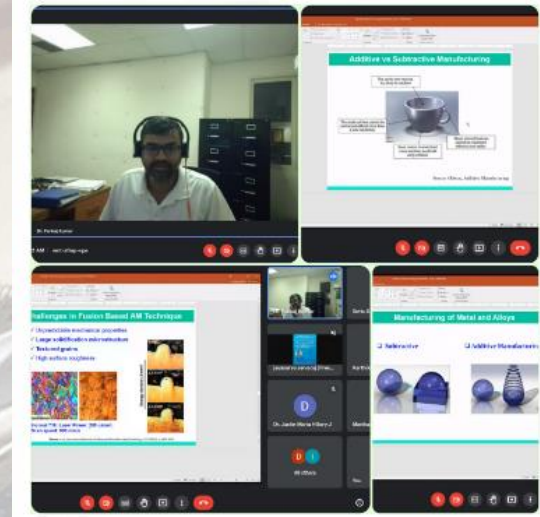
Resource Person:

Dr. Pankaj Kumar, Department of Mechanical Engineering, University of New Mexico

Session Title: Additive Manufacturing/3D printing of metals and alloys - Process, properties and challenges

Session Highlights:

- Generic AM Process
- Selection Process
- Laser Powder Bed Fusion



DAY 2 - Session 2:

Resource Person:

Dr. K. Senthilkumaran, Department of Mechanical Engineering, IITDM, Kancheepuram

Session Title: Additive Manufacturing: Process Parameter Optimization studies

Session Highlights:

- Sustainability
- Life Cycle Analysis
- Hybrid Additive Manufacturing



DAY 2 - Session 3:

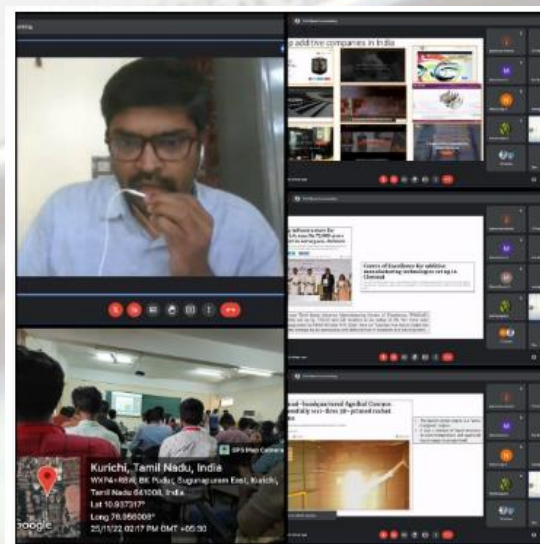
Resource Person:

Dr. V. Ezhilmaran, Dept. of Mechanical Engineering, Mepco Schlenk Engineering College, Sivakasi

Session Title: Strategic Challenges and Barriers ahead in Additive Manufacturing

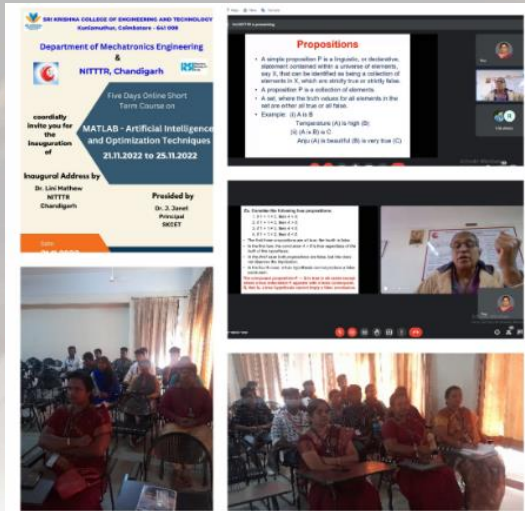
Session Highlights:

- Govt's 3D printing policy
- Top AM companies in India
- Government funding contribution



SHORT TERM COURSE

Department organized Five Days Online short-term course on **MATLAB Artificial Intelligence and Optimization Techniques** from 21.11.2022 to 25.11.2022, in association with NITTTR, Chandigarh.



DAY 1:

Resource Person:

Dr. Lini Mathew, Professor, Electrical Engineering, NITTTR, Chandigarh

Session Title: Soft Computing Techniques

Session Highlights:

- Introduction to Soft Computing Techniques
- Optimization Techniques
- Genetic algorithm
- MATLAB implementation of GA

DAY 2:

Resource Persons:

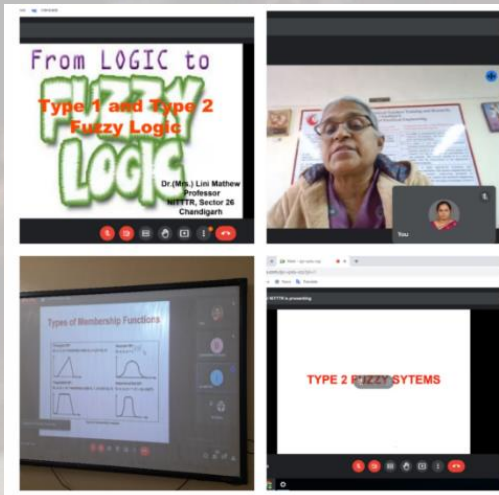
1. Dr. Rishemjit Kaur, Principal Scientist, CSIO, Chandigarh
2. Er. Pratyush Roy, Mathworks India, Bangaluru

Session Title: Particle Swarm Optimization and Optimization using MATLAB

Session Highlights:

- Particle Swarm optimization Techniques
- MATLAB implementation of PSO
- Latest features of MATLAB and Simulink
- Optimization using MATLAB





DAY 3 – Session 1:

Resource Person:

Dr. Lini Mathew, Professor, Electrical Engineering, NITTTR, Chandigarh

Session Title: Type 1 & Type 2 Fuzzy Logic

Session Highlights:

- Introduction Fuzzy logic
- MATLAB Implementation of Fuzzy Logic

DAY 3 – Session 2:

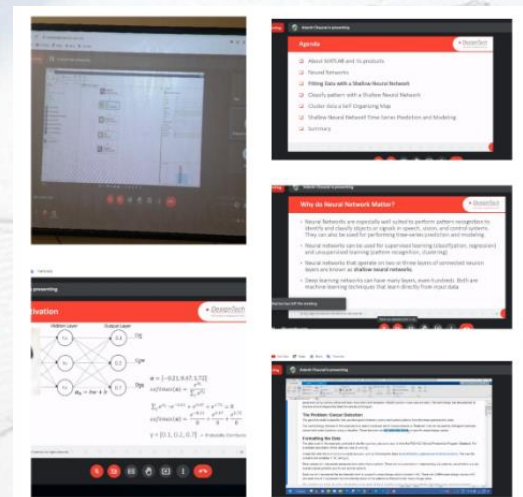
Resource Person:

Er. Adarsh Chaunal, Application Engineer, Designtech Systems, New Delhi

Session Title: Shallow Neural Networks (SNN) in MATLAB

Session Highlights:

- Fitting data with SNN
- Classify Pattern
- Self-Organizing Map
- Time Series Prediction and Modeling



DAY 4 – Session 1:

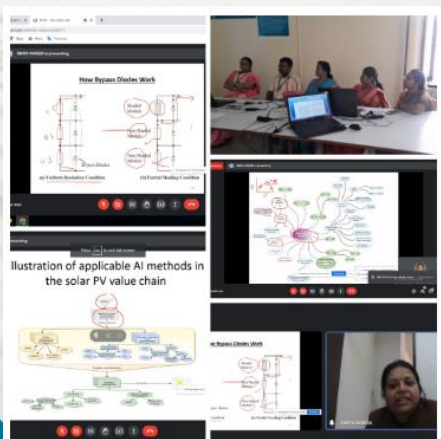
Resource Person:

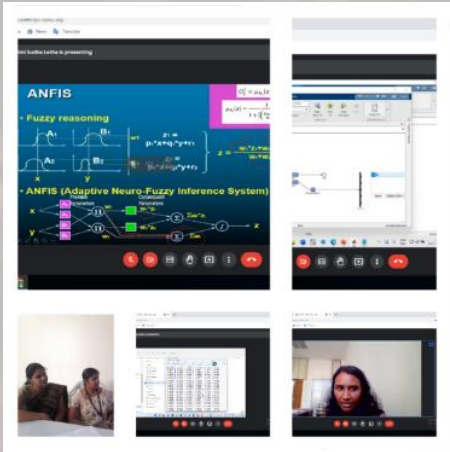
Dr. Smitha Pareek, Associate Professor, B. K. B. Institute of Engg. & Tech, Pili

Session Title: Deep Learning and Convolutional Neural Networks

Session Highlights:

- Solar PV systems
- Partial shadings
- Methods to increase output power





DAY 4 – Session 2:

Resource Person:

Dr. Shimi. S. L, Assistant. Professor, Electrical Engineering, NITTTR, Chandigarh

Session Title: Artificial Intelligence and Optimization Techniques in Solar PV Systems

Session Highlights:

- Adaptive Neuro Fuzzy inference system
- Implementation in MATLAB
- ANFIS model

DAY 5 – Session 1:

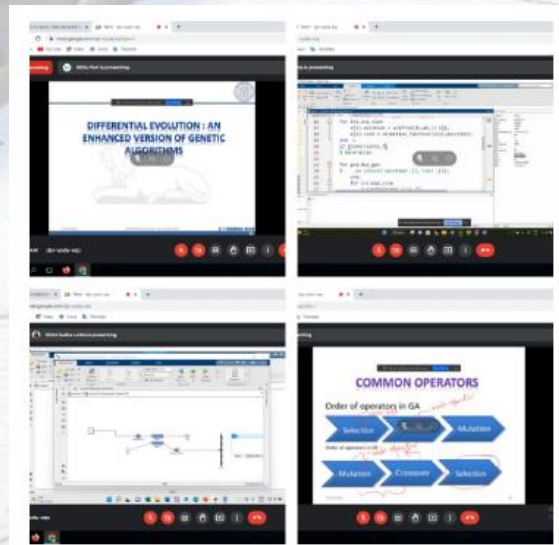
Resource Person:

Prof. Milli Pant, Professor, IIT Roorkee

Session Title: Differential Evolution Algorithm

Session Highlights:

- Genetic Algorithm
- Order of operators in GA
- Differential Evolution (DE)
- MATLAB implementation of DE



DAY 5 – Session 2:

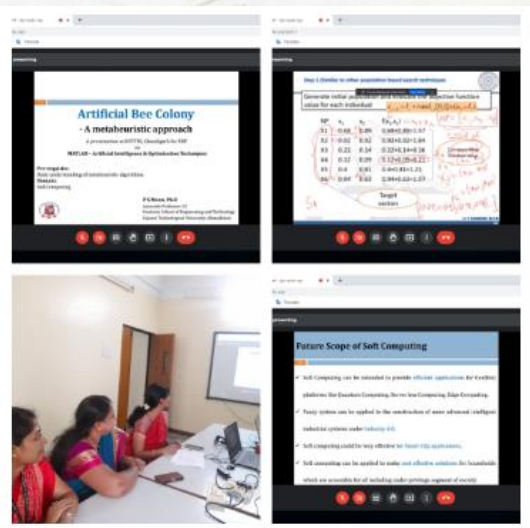
Resource Person:

Dr. Palwinder S Mann, Associate Professor, GSET, Ahmedabad

Session Title: Artificial Bee Colony – A Metaheuristic Approach


Session Highlights:

- Artificial Bee Colony Optimization
- Hard Computing vs Soft Computing
- Applications of Soft Computing
- Future scope of Soft Computing



JOURNAL PUBLICATIONS

Exploration of Various Forging Route Performance of Cast A356 Alloy Reinforced with Fly Ash and MWCNT Hybrid Composites

R. Soundararajan , A. Sathishkumar , L. Feroz Ali  & K. Kaviyaranan 

Journal of The Institution of Engineers (India): Series D (2022) | [Cite this article](#)

Indexing: Scopus

Cite score: **1.6**

DOI: <https://doi.org/10.1007/s40033-022-00401-6>

Indexing: SCI & Scopus

Cite score: **7.2**

DOI: <https://doi.org/10.1155/2022/1668924>

Adsorption Science & Technology



+ Journal Menu

 PDF

Article Sections

Show citation

Finite Element Method-Based Spherical Indentation Analysis of Jute/Sisal/Banana-Polypropylene Fiber-Reinforced Composites

Nitish Kaushik,¹ Ch. Sandeep,² P. Jayaraman,³ J. Justin Maria Hillary,⁴ V. P. Srinivasan ,⁵ and M. Abisha Meji ⁶

Tungsten Nanoparticle Reinforced AA7055 via Friction Stir Process Route with Multi-groove Strategy

L. Feroz Ali , R. Soundararajan , & S. Sivasankaran 

Journal of Materials Engineering and Performance (2022) | [Cite this article](#)

79 Accesses | [Metrics](#)

Indexing: SCIE & Scopus

Cite score: **3.1**

DOI: <https://doi.org/10.1007/s11665-022-07325-y>

Indexing: Scopus






Cite score: **2.3**

DOI: <https://doi.org/10.1016/j.matpr.2022.09.227>

materialstoday:
PROCEEDINGS

Volume 68, Part 6, 2022, Pages 2509-2514

Evaluation of the polyamide's mechanical properties for varying infill percentage in FDM process

L. Feroz Ali , R. Raghu , M. Yogesh Muthu Ram , V. Harshavardhan Reddy , N. Shakil Kanna 



Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering

MECHANICAL ENGINEERING

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Advanced Materials For Promoting Sustainability







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Investigation of Mechanical and Tribological Properties of AA6061/MWCNT/B₄C Hybrid Metal Matrix Composite

P. Satishkumar ,¹ N. Natarajan ,² Rajasekaran Saminathan ,³ J. Justin Maria Hillary,⁴ Biru Birhanu ,⁵ Arnold C. Alguno,⁶ Rey Y. Capangpangan ,⁷ Vishnu Raj ,⁸ and Stephen Livingston ⁹

Indexing: Scopus
 Cite score: **2.3**
 DOI: <https://doi.org/10.1016/j.matpr.2022.11.018>



Available online 18 November 2022
 In Press, Corrected Proof

Investigations on ZnO reinforced composite materials for electronic applications – A review

R. Greesan^a, J. Jegan^b, S. Kannan^c, S. Dineshkumar^d, A. Kavalvizhi^e

Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering

Impact Factor: 1.822 / 5-Year Impact Factor: 1.761

Restricted access | Research article | First published online November 25, 2022

Microstructure, mechanical and wear characteristics of CeO₂-Mg metal matrix composites

V. Anand Babu^a, A. Kumaravel^b and B. Manikandan^c [View all authors and affiliations](#)

<https://doi.org/10.1177/09544089221139592>

Indexing: Scopus
 Cite score: **2.5**
 DOI: <https://doi.org/10.1177/09544089221139592>

Indexing: Scopus
 Cite score: **0.7**
 DOI: https://doi.org/10.1007/978-981-19-3379-0_27

Home > Recent Advances in Fluid Dynamics > Conference paper

Shape and Size Effects of Glass Mini-Channels on Infrared Sensors in Air–Water Two-Phase Flow

N. Mithran, K. Sowndarya & M. Venkatesan [✉](#)

Conference paper | [First Online: 25 September 2022](#)
 188 Accesses

BOOK CHAPTER PUBLICATIONS



Chapter

Real-time implementation of an implantable antenna using chicken swarm optimization for IoT-based wearable healthcare applications

By [M. Bhuvanewari](#), [S. Sasipriya](#), [R. Arun Chakravarthy](#)

Book [Internet of Things and Fog Computing-Enabled Solutions for Real-Life Challenges](#)

Edition	1st Edition
First Published	2022
Imprint	CRC Press
Pages	22
eBook ISBN	9781003230236

ISBN: 978-93-91772-01-7

CHAPTER – 6
EDUCATION INNOVATION AND RESEARCH – INTEGRATED TEACHING AND TRANSFER OF KNOWLEDGE

Dr. R. Arun Chakravarthy
 Associate Professor, Department of Information Technology
 KGISL Institute of Technology, Coimbatore, Tamil Nadu, India

Ms. M. Bhuvanewari
 Assistant Professor, Department of Mechatronics Engineering
 Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu, India

Home > Proceedings of the 6th International Conference on Advance Computing and I... > Conference paper

Design of Automatic Headlamp Control Using Light-Dependent Resistor Sensors and Night Vision Camera

[S. Madhankumar](#) [✉](#), [K. Abhinav Kumar](#), [S. Arunachalam](#), [R. Bavan Kalyan](#), [K. Hrithik](#), [S. Rajesh](#) & [Mohan Rao Thokala](#)

Conference paper | [First Online: 22 September 2022](#)
 119 Accesses

Part of the [Lecture Notes in Networks and Systems](#) book series (LNNS, volume 428)

DIGITAL TWIN

A digital twin is a virtual model of a physical object. It spans the object's lifecycle and uses real-time data sent from sensors on the object to simulate the behavior and monitor operations. Digital twins can replicate many real-world items, from single pieces of equipment in a factory to full installations, such as wind turbines and even entire cities. Digital twin technology allows you to oversee the performance of an asset, identify potential faults, and make better-informed decisions about maintenance and lifecycle.

Benefits of Digital Twins:

A number of industries are increasingly using digital twins to build virtual representations of their real-world systems. Some of them include the following.

- Construction
- Manufacturing
- Energy
- Automotive
- Healthcare

**Types of Digital Twins:**

1. Component twins - Component twins, or parts twins, are the digital representation of a single piece of an entire system. These are essential parts of the operation of an asset, such as a motor within a wind turbine.

2. Asset twins - In digital twin terminology, assets are two or more components that work together as part of a more comprehensive system. Asset twins virtually represent how the components interact and produce performance data that you can analyze to make informed decisions.

3. System twins - A higher level of abstraction from asset twins are system twins, or unit twins. A system twin shows how different assets work together as part of a broader system. The visibility offered by system twin technology allows you to make decisions about performance enhancements or efficiencies.

4. Process twins - Process twins show you the digital environment of a whole object and provide insight into how its various components, assets, and units work together. For example, a digital process twin can digitally reproduce how your entire manufacturing facility is operating, bringing together all of the components within it.

- **Mr. T. Vignesh**

Assistant Professor

ChatGPT

ChatGPT, or Generative Pre-trained Transformer models, are a type of machine learning algorithm that has been gaining traction in the supply chain industry. At their core, these models are designed to understand natural language and generate responses that mimic human interaction. With the ability to interpret and respond to human language, ChatGPT systems can facilitate better communication between stakeholders in the supply chain network. This, in turn, can help businesses optimize their operations, streamline their processes, and enhance overall efficiency. From inventory management to last-mile delivery, ChatGPT systems are being used in various ways to improve Supply Chain Management (SCM).

The Role of ChatGPT in Revolutionizing SCM:

The integration of ChatGPT in the SCM system has created new possibilities for businesses to streamline their operations and optimize their processes. With the ability to understand and interpret human language, ChatGPT systems can facilitate better communication between different stakeholders in the supply chain network.

For instance, manufacturers can use ChatGPT to manage inventory levels by getting real-time insights into supply and demand patterns. They can also use ChatGPT to communicate with their suppliers and logistics partners to coordinate the delivery of raw materials and finished goods.

Overall, the role of ChatGPT in revolutionizing the supply chain industry is significant. By facilitating better communication, improving decision-making, and optimizing operations, ChatGPT systems are enabling businesses to stay ahead of the competition. As such, it is no surprise that more and more companies are exploring the potential of ChatGPT in their SCM systems.

Five Practical Use Cases of ChatGPT in SCM:

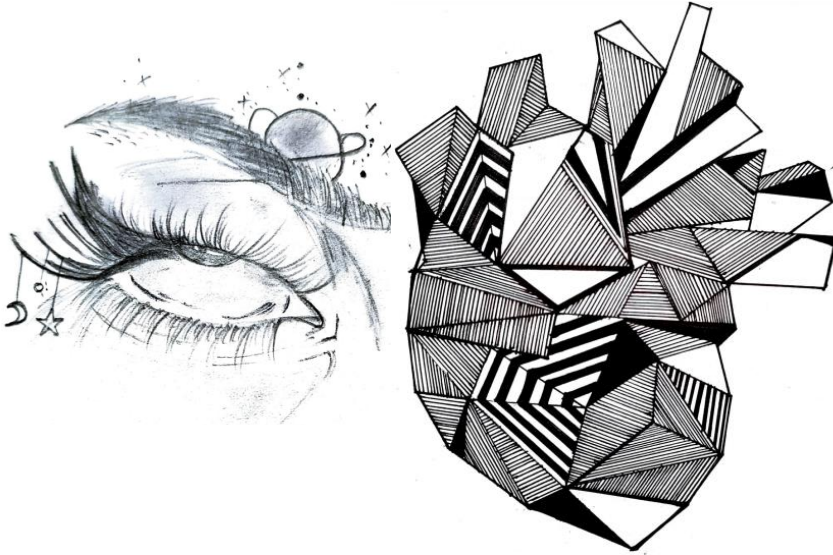
- Answering Customer Queries
- Executing Excel Tasks
- Train Teams Quicker
- Creating Content
- Problem-Solving



- Dr. M. Bhuvaneshwari
Assistant Professor



- **K. Amrit Balaji**
(2021-25 Batch)



- **S. P. Sharmietha**
(2021-25 Batch)



- **S. Akilan**
(2020-23 Batch)



- **Mr. S. Madhankumar**
Assistant Professor



- **Ms. S. Kannaki**
Assistant Professor

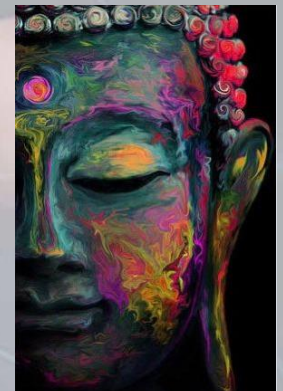
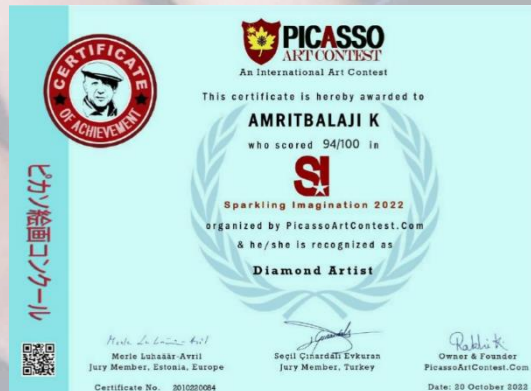
WEBATHON



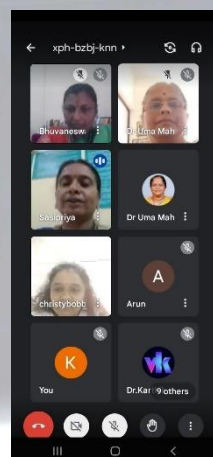
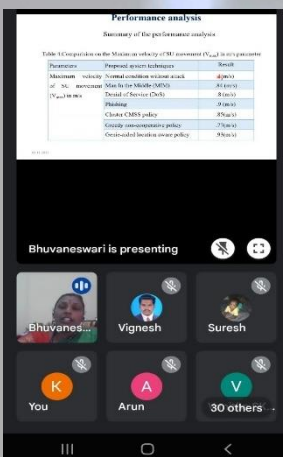
Nithesh Anand M S, Cheran R and Cibidharan P, students of Second year have bagged **First Prize** in the **Webathon Challenge** organized by the IET held at The Feather hotel, Chennai during the Industry Institute Submit 4.0. The team was honored with a cash prize of Rs.15000/- and **three months internship by Nokia** in their Chennai plant. Team Mentors: Mr.T.Vignesh & Mr.S.Madhankumar

PICASSO AWARD

K. Amritbalaji, 2021-25 Batch has won **Diamond Artist Award** organized by Picasso Art Contest.com – An International Art contest. The art will be showcased in the London Museum art gallery.



Ph.D. COMPLETION



Mrs. M. Bhuvanewari, Assistant Professor has successfully defended her **Ph.D Viva voce** on the topic, "A specific investigation on the efficient resource allocation and secure communication against attacks in cognitive wireless power communication systems is using multiple input and multiple output" on **03.11.2022**. The examiners highly appreciated her Research work.



SOLAR KART



Student Team **Astra** (Solar kart team) won

- 2nd Runner-up with cash prize of Rs.16000
- Best Captain Award
- Best Build Quality award – Rs. 3000
- Virtual Round Winner – Rs. 5000

in **Solar Electric Vehicle Championship** Event conducted by Hindustan College of Engineering and Technology from 01.09.2022 to 04.09.2022.

Mentor: Mr. Vignesh T (AP/MCT)

KARATE



Mr. J. Bharanidharan, 2021-25 Batch has won **Silver & Bronze Medals** in **National Urban Games - 2022 - Karate**

Event: +18 Years Men's Kumite (Fighting) - 67kg

Placed: Silver

Event: + 18 Years Men's Kata

Placed: Bronze



E-VEHICLE

Student Team bagged **1st Prize** with cash award Rs. 6000 in **ELITZ 2K22 National Level E - Vehicle Contest** organized by Department of Electrical and Electronics Engineering held at Karpagam Institute of Technology, Coimbatore, on 26.11.2022.

Mentor: Mr. M. Vigneshwaran, Assistant Professor



E-BIKE



E- BIKE Team Eco throttlers, a student team from the Department has won **Best Engineering Design Award** and **Selfie Contest Award** in the Electric Bike Design challenge (EBDC 2022 Season 2) held at SRIT, Coimbatore from 26.09.2022 to 29.09.2022.

Mentor: Mr. M. Vigneshwaran, Assistant Professor

SKATING

K. Amritbalaji, 2021-25 Batch has won **2 Gold medals** in District Skating Championship 2022 held at **Coddisia KSFA skating** academy Coimbatore.

- **Speed slalom** (First prize with Gold Medal)
- **Classic slalom** (First prize with Gold Medal)



PAPER PRESENTATION



Nitesh Anandh M.S and **Hariharan M** of 2021-25 Batch won **First prize** in **Technical Paper Presentation** conducted as a part of **Pragyostav 2022: A National Level Technical Test** held at Easwari Engineering College, Chennai.

PROJECT EXHIBITION

Student team has won the **Best Model Award** for the project "**Low Cost Humanoid Bot with Covid 19 SOP**" in the State Level Project Exhibition conducted by the Tamil Nadu State Council for Science and Technology, Government of Tamil Nadu on 25 & 26th November 2022.

Mentor: **Mr.T.Vignesh**, Assistant Professor



TONGUE TWISTERS

1. Peter Piper picked a peck of pickled peppers
A peck of pickled peppers Peter Piper picked
If Peter Piper picked a peck of pickled peppers
Where's the peck of pickled peppers Peter Piper picked?
2. Betty Botter bought some butter
But she said the butter's bitter
If I put it in my batter, it will make my batter bitter
But a bit of better butter will make my batter better
So 'twas better Betty Botter bought a bit of better butter
3. How much wood would a woodchuck chuck if a woodchuck
could chuck wood?
He would chuck, he would, as much as he could, and chuck
as much wood
As a woodchuck would if a woodchuck could chuck wood

- Mr. S. Panneerselvam
Assistant Professor

BRAINTEASERS

1. There are 50 bikes, each with a tank that holds enough gas to go 100 km. Using these 50 bikes, what is the maximum distance that you can go?
2. Given 9 balls, all of which weigh the same except for one, what is the minimum of weighing's necessary to find the ball with the different weight?
3. In front of you are three light switches. Only one does anything, and it turns on the light downstairs. From where you are standing, you can't see the downstairs light, and it makes no sound. You must determine which switch operates the light, BUT you can only go check it once. How do you figure out which switch is for the light?

Answers: 1. 350 km, 2. 2, and 3. It takes 2 flicks of the switch and a portion of time you can't get back :)

- Mr. S. Madhankumar
Assistant Professor

The rays that steers out from a broken light
May not be that much bright
But it has a point to recite,
That life will always be alright
If you come out of your fright
Which made you to be quiet
Not just to reach great height
But also to rediscover your true delight... ❤️



- Elango

Sat under the moonlight
Thinking of some random stuffs
Suddenly a smile glowed on my face
Without any specific reason.
I Tried to figure it out
But it doesn't make sense
As smile comes only in unexpected moments
Only thing you can do is Just feel it...
That's it... ❤️

- Elango

Blog: <https://acrostic-poetry.blogspot.com/>

- C. Elango
(2020-24 Batch)



- **Mr. Sujith**
BYJUS
(2017-21 Batch)

SKCET has always believed in helping and guiding its students and it was no different during the placement season. Regular classes conducted at our college helped us with our aptitude and technical skills. The mentors at SKCET helped in enhancing my academic and interpersonal skills. Our placement team also guided and encouraged me at each step thereby helping me secure my placement at such a reputed company. The years spent here have been full of learning opportunities that were full of fun and frolic and sometimes with academic grind that one has to go through. Thanks to my parents, SKCET Management, Principal and the entire SKCET family for the wonderful opportunity.

My four-year Engineering journey at SKCET is indeed has built a dynamic personality. It has given lots of opportunities to explore in different fields. It has never been sticking to academics only. All the faculty members were of great support for everything we wanted to pursue during our time in the college. I was motivated to participate in various competitions. SKCET aims at overall development of an individual and also provides multiple opportunities and exposure to develop new skills. Students are able to showcase their talent not just through technical but also through extra-curricular activities. The competitive environment always pushed me to perform my best. I extend my gratitude to our Placement cell. I am very much grateful to my parents for choosing SKCET. Thanks to our Principal Madam and the entire SKCET faculty team.



- **Mr. Sivashankaran**
UGAM
(2017-21 Batch)



- Team E-Bike



- Team KRIZEN'22



- Team ASTRA



- Team BRAINIACS

Cheers to health, happiness, and prosperity in 2023!

- Team ECHO