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News on Electrical Engineering

1. Lithium-Ion Batteries

Lightweight and rechargeable, lithium-ion batteries power everything from mobile phones to electric vehicles. Today, they are poised to energize a sustainable world.

Lithium-ion batteries are popular because the cost to produce them has declined (85% between 2009 and 2019), they are lightweight, and their stability has improved. Key applications include mobile phones and renewable energy. The tech's developers won a Nobel Prize for their contribution to renewable energy's future. One of the largest lithium-ion battery installations is in San Francisco, generating 1,200 MWh.

2. Robotics

A robot is an automatically controlled machine that replaces human effort. Key applications for robots are simple, repetitive and hazardous tasks. An emerging application since the COVID-19 pandemic is helping ensure workplace safety. Collaborative robots (cobots) work alongside human workers to help ensure their safety from virus transmission. Markets report predicts the global cobot market would grow 41.8% between 2020 and 2026.

3. GPS

The GPS (Global Positioning System) in cars, computers, and smartphones helps us find our way. But scientists are turning to GPS for more than just navigation.

GPS captures signals from satellites and measures their arrival time to Earth. It can be accurate to the millimeter. Emerging applications include tracking and analysing earthquakes, volcanoes, ionospheric changes, and solar eclipses.

4. Wearable Technology

Wearable technology, from smart watches to devices designed to reduce stress, has streamlined consumer interaction with information. Statista (The Statistics Portal for Market Data) expects the number of connected wearable tech devices to top 1 billion globally by 2022.

Wearable tech has myriad applications, including monitoring glucose, tracking fitness, and enabling smart textiles. A Grand View Research market analysis report projects the wearable tech market will expand 15.9% from 2020 to 2027, thanks to the technology's many benefits, such as increased awareness of behaviour and health issues.

5. Drones

A drone is an unmanned aerial vehicle used for military, industrial, or commercial purposes. Even more, drones shoot aerial video, inspect properties, and deliver aid during natural disasters. Their popularity is soaring.

Drones are increasingly available and affordable. Their many uses include surveillance, recreation, and film. Sales are expected to top \$12 billion in 2021. Self-monitoring smart drones with safety features are on the horizon.

6. Eye-Tracking Technology

Eye-tracking measures eye motion relative to the head. Initially embraced by market researchers, its beneficial uses have swiftly grown in other fields, such as medicine.

Marketing developments in eye tracking include webcam tracking and mobile trackers. Other new applications for eye-tracking tech include developing safer cars and assisting people with limited mobility.

7. Virtual and Augmented Reality

Virtual reality is the computer-generated simulation of a 3D environment with which people interact as if it were real. Augmented reality is an interactive experience where a person's view of real objects is enhanced by computer-generated information.

The applications for immersive technology are growing. For example, the medical, industrial,

education, and entertainment fields are using either virtual or augmented reality in innovative ways.

Department Events



Department association EDISON inaugurated for AY 2021-22 on 19.06.2021 with a guest lecture by Mr. P.Balaji, BE., MBA., Project Manager, Active safety (braking systems), Robert Bosch Engineering and Business Solutions, Coimbatore. All UG and PG students were participated in the event.

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Learning is a Celebration!
|An Autonomous Institution|

INSTITUTION'S INNOVATION COUNCIL
University of Education

IEEE

Department of Electrical & Electronics Engineering

Motivational Webinar on
"D - D - D - D"
(Dream, Desire, Dedication, Destiny)
06.08.2021 | 2:00 - 4:00 pm

Dr. Prof. Regunath Parakkal
Consultant - Counselling (Psychology)
Manappully Kavu, Palakkad, Kerala

Convenors
Dr. S. Padma
Dr. R. Shivakumar

Coordinator
Dr.M.Gopila, Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Organizer
Dr. C.B.Venkatramanan Asso.Prof /EEE
Dr.B.Karthik, Asso.Prof /EEE

Online Guest Lecture conducted on 06.08.2021 in D-D-D-D (Dream, Desire, Dedication, Destiny) by Dr. Regunath Parakkal, Consultant- Counselling (Psychology), Manappully Kavu, Palakkad, Kerala, India. Third year students are benefited through this event.

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INSTITUTION'S INNOVATION COUNCIL
University of Education

IEEE

Department of Electrical & Electronics Engineering

Guest Lecture on
Embedded Electronics in Electric Vehicles
03.08.2021 | 10:00 - 11:30 am

Mr. Royan Alphonso
Engineer, Vehicle Electronics
Physics Motors Technology Pvt Ltd.
Karnataka, India

Convenors
Dr. S. Padma
Dr. R. Shivakumar

Coordinator
Dr.M.Gopila, Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Organizer
Dr.S.Vijay Shankar, Asso.Prof / EEE
Dr.C.Kalaivanan, Asst.Prof / EEE

Online Guest Lecture conducted on 03.08.2021 in Embedded Electronics in Electrical Vehicles by Mr. Royan Alphonso, Engineer, Physics Motors Technology Pvt. Ltd. Karnataka, India. Third year students are benefited through this event.

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INSTITUTION'S INNOVATION COUNCIL
University of Education

IEEE

Department of Electrical & Electronics Engineering

Alumni Guest Lecture on
Energy Storage for Renewable Power Generation
7.10.2021 | 2.30 - 4.00 pm
for Third year and Final year students

Dr.Gayathri V
Assistant Professor (Senior)
CO₂ Research and Green Technologies Centre,
Vellore Institute of Technology, Vellore..
Sona Alumni - 2010 Batch (EEE)

Convenors
Dr. S. Padma
Dr. R. Shivakumar

Coordinator
Dr.K.Krishnamoorthi, Asso.Prof / EEE
Dr.M.Panneerselvam, Asst.Prof / EEE

Organizer
Dr.M.Gopila Asst.Prof (Sr.G)/EEE
Dr.G.Suresh, Asst.Prof/EEE

Online Guest Lecture conducted on 07.10.2021 in Energy Storage for Renewable Power Generation by Dr. V. Gayathri, Assistant Professor, CO₂ Research and Green Technology Centre, Vellore Institute of Technology, Vellore India. Third year students are benefited in this event.

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Department of Electrical & Electronics Engineering

Industrial Guest Lecture on
Electronic Interlocking in Railways
23.10.2021
11:30 am – 1:00 pm



Mr. Prakash S
Sr.Engineer – Signalling Systems
TVM Signalling & Transportation Systems Pvt. Ltd.
Bangalore.
(Sona Alumnus - EEE)

Conveners
Dr.S.Padma
Dr.R.Shivakumar

Coordinators
Dr.M.Gopila Asst.Prof (Sr.GV/EEE)
Dr.G.Suresh, Asst.Prof/EEE

Organizers
Prof.S.Arunkumar, Asst.Prof / EEE
Dr.S.Madhubalan, Asst.Prof / EEE

Online Guest Lecture conducted on 21.10.2021 in Electronic Interlocking in Railways by Mr. S. Prakash, Sr. Engineer, TVM Signalling & Transportation Pvt. Ltd., Bangalore, India. Second year students are benefited through this event.

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Department of Electrical & Electronics Engineering
ORGANISES

EDISON 2021
A NATIONAL LEVEL TECHNICAL SYMPOSIUM
29.10.2021

TECHNICAL EVENTS
• PAPER PRESENTATION • CIRCUIT DEBUGGING
• QUIZONICS • PROJECT EXPO

NON-TECHNICAL EVENTS
• TREASURE HUNT • CONNECTIONS • VIDEO QUIZ

WIN EXCITING Prizes

ENTRY FEE
Rs.100
(all the events)

For Further Details, Contact
S.SANJAY : 91 94399 96042
G.PADMANABHAN : 91 94377 80715
EZHIL KUMARAN : 91 93443 60790

CONVENORS
Dr.S.PADMA | Dr.R.SHIVAKUMAR

CO-ORDINATOR
Dr.M.GOPILA

LAST DATE FOR REGISTRATION: 19/10/2021
(Limited participants for offline events)
<https://forms.gle/RmCSQoQDRarjKA>

FOR PAPER PRESENTATION SEND YOUR ABSTRACT TO : eedison2021@gmail.com

Technical & Non-Technical Events



"EDISON'21" national Level Technical Symposium conducted on 29.10.2021, Students from various institutes participated and exhibited their talents in the events.

Student Achievements



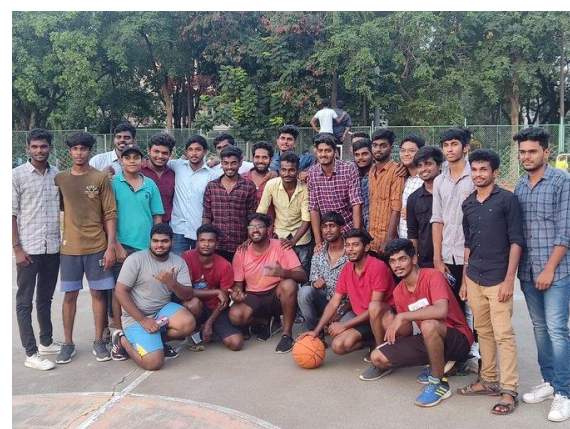
The third year EEE students have successfully completed the training on JAVA Essentials organized by the department in association with LiveWire and certificates were issued.



EEE Students delivered their talk on various technical and non-technical topics in speakers forum.



Mr. Sabari R, second year, Department of Electrical Electronics Engineering, got Eminent Engineer Award 2021 from Engineer's Day Competition conducted by Imagecon India Pvt., Ltd., on 17.09.2021.



EEE students won first place in basketball, sports day



Mr R. Sabari from 2nd year EEE Won 1st Prize for Best Photography in National level Project Expo (Meet up 5.0) Conducted at KPR college of Engineering and Technology, Coimbatore.

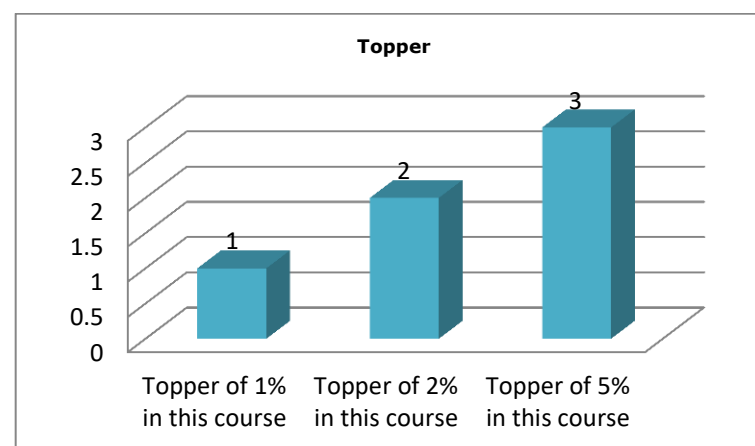
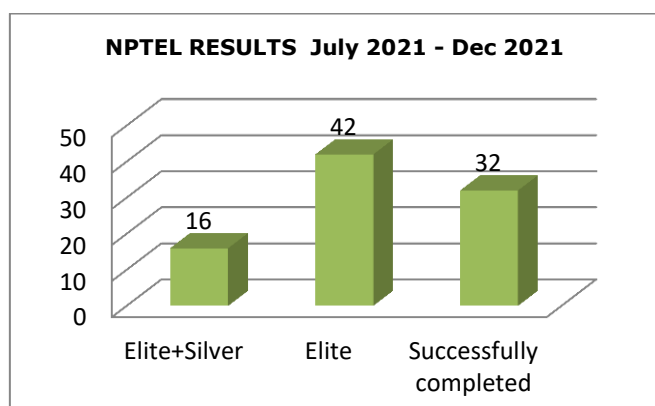


3rd year EEE Won 1st Prize for idea presentation in National level Sensathon'22 Hackathon Conducted by ECE Department, Sona College of Technology. Title: "Eye Gaze Controlled Wheel chair"



EEE students of Sona got the semester wise topper awards during the 25th Annual day celebrations at Sona college of Technology

NPTEL Results of Students



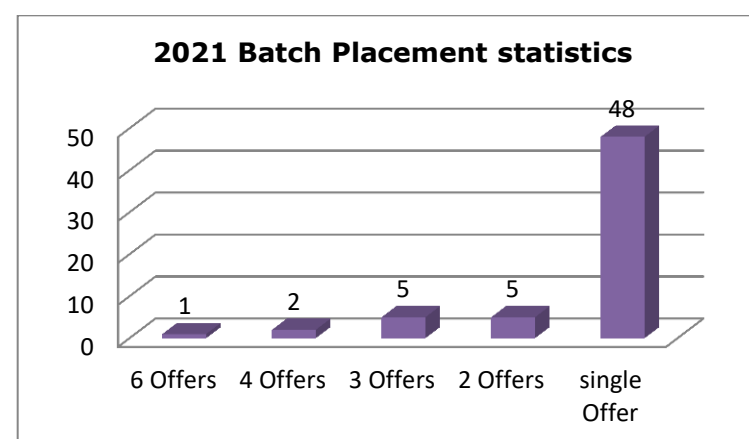
NPTEL course "Solar Energy Engineering and Technology"

Jayachanduru K secured 1% topper, Kanimozhi S M and Mounica S C secured 2% topper, and Dhanesh A, Naveenkumar S and Kirubananth T secured 5% topper in NPTEL during the July 2021 – December 2021.

Paper Presentation

Mr. Thilahaswar PC and Yamuna M, second year EEE students presented a paper in national level technical symposium "MINDFEST" at Sri Sairam Institute of Technology, 25-11-2021.

2021 Batch Placement statistics



Students with Multiple Offers

SN	Name	Placed Companies	Offers
1	ANUPRIYA R	APTIV, HCL, ASPIRE, VEETECH, ACCENTURE, INFOSYS	6
2	SUJATHA S	INFOSYS, CTS, TCS, DELL	4
3	PACCHIAPPAN KARTHIKEYAN R	INFOSYS, TCS, CTS, BRAKES	4
4	TAMILSELVAN A	INFOSYS, TCS, WIPRO	3
5	SWETHA K	FACE, APTIV, HCL	3
6	PAVITHRA MAYEE M	APTIV, HCL, VEETECH	3
7	HARIHARAN M	CTS, MINDTREE, ACCENTURE	3
8	AJITHAMERCY C	DELL, CTS, TCS, LTTS	3
9	NARENDRAN R	TCS, CTS	2
10	KAVIYA S	APTIV, DATTENDRIYA	2
11	SNEHA P	APTIV, HCL	2
12	KAMALESHWAR H	PENTAGON SWITCHGEARS, MONTBLEW	2
13	VIMAL KARTHIK H	EMF, CONSERVE	2

Placement statistics Company Wise

SN	Company Name	CTC (LPA)	Count	Sector
1	CALIBER	3	1	Core
2	DELL	4.86	2	Core
3	EMFI	2.4	5	Core
4	PENTAGON SWITCHGEARS	2.8	3	Core
5	SAEILABS	2.5	1	Core
6	STANADYNE	2.4	8	Core
7	GGTRONICS	2.44	1	Core
8	INFOSYS	4	7	Software
9	TCS	4	6	Software
10	CTS	4.5	8	Software
11	WIPRO	3.5	1	Software
12	DOWELL ENGINEERS	1.8	1	CORE
13	FACE ACADAMEY	3.06	1	Software
14	IM GEARS INDIA LTD	1.6	1	CORE
15	APTIV COMPONENTS	2.4	15	CORE
16	NETAFIM	2.2	1	CORE
17	ASPIRE	3.6	1	SOFTWARE
18	DATTENDRIA	4	1	SOFTWARE
19	HCL	3.5	5	SOFTWARE
20	VEE TECHNOLOGIES	2.4	2	SOFTWARE
21	ACCENTURE	4.5	2	SOFTWARE
22	CONSERVE	2	1	CORE
23	MONTBLEW	3	3	SOFTWARE
24	MINDTREE	4	1	SOFTWARE
25	BLACKSTRAW	4.5	1	SOFTWARE
26	BRAKES	4.9	1	CORE
27	MEGAWIN	1.2	4	CORE
28	CAPEGEMINI JAPNESE	4	1	SOFTWARE
29	LTTS	4.5	6	CORE
Avg. CTC & Total		3.5	91	

Faculty Achievement



Dr. V. Shanmugasundaram, Assistant Professor, received the Best Senior Faculty award from Sri Karunanandar Charitable Trust, Thiruvannamalai, on 19.12.2021.

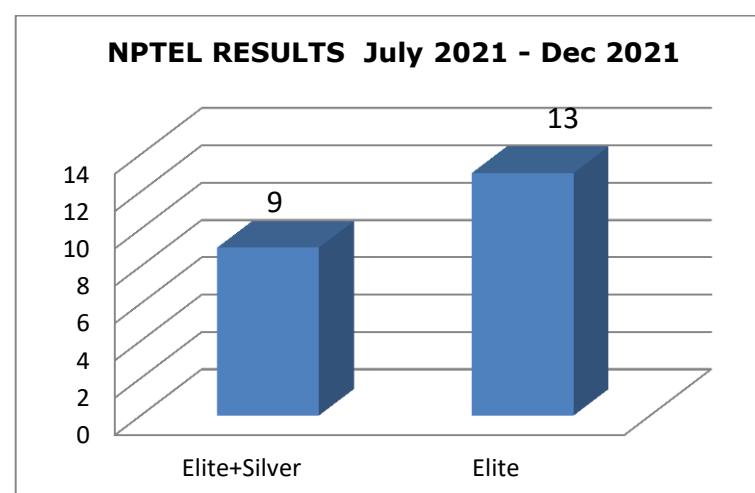
Book Published by the Faculties

Dr. A. Jagadeeshwaran, Published the book chapter on "Transition Within the Teaching Pedagogy: A Stochastic Opportunity to Engage Problem Solving Skill Through CODE" in SPRINGER August 2021.

Dr. A. Jagadeeshwaran, Published the book chapter on "Pandemic Measures for the COVID19 Outbreak Control in Malaysia: A Correlative Comparison with China" in SPRINGER September 2021.

Dr.V.Shanmugasundaram, Published the book on "Electric Vehicle Adoption to Revolutionize Automobile Sector" in IIP publishing House (IPH), 2021.

NPTEL Results of Faculties



Mr Sugumaran M secured 1% topper, Senthil Kumar M and Venkatramanan C B secured 5% topper in NPTEL during the July 2021 – December 2021.

Publications of Faculties

Dr. M. Senthilkumar

"Power Quality Improvement in Distribution System Based on Dynamic Voltage Restorer Using Rational Energy Transformative Optimization Algorithm" in Journal of Electrical Engineering & Technology, September 2021.

"Self-adaptive rainfall optimization based reconfiguration of distribution networks" in Journal of Circuits, systems and Computers, September 2021.

"Modified rainfall optimization based method for solving distributed generation placement and reconfiguration problems in distribution networks" in International journal of numerical modelling Electronic Networks, Devices and fields, November 2021.

Dr. R Arulmozhiyal & Dr. M.Murali

"Efficient flyback converter with h6 inverter using mathematical modelling of smfo for performance improvement in grid connected pv system" in Dynamic Systems & Applications, October 2021.

Dr. S. Vijay Shankar

"Design and Implementation of Comprehensive Converter" in Journal of Electrical Engineering & Technology, July 2021.

Dr. G. Karthikeyan

"Improved Privacy of Data Transaction in IoT Enabled Privacy Based Algorithm" in Bioscience Biotechnology Research Communications, August 2021.

"Three phase induction motor position control using V20 drive" in AIP conference proceedings, November 2021.

Dr. B. Karthik

"Modelling of lossless contactless power transformer using improved particle swarm optimization algorithm" in Power Technology, November 2021.

Dr.G.Suresh and Dr.V.Shanmugasundaram

"Machine Learning based Methodology for Intrusion Detection in Mobile Adhoc Networks" in Design Engineering, August 2021.

Dr.V.Shanmugasundaram

"Design, development and performance testing of a novel utility solar cooker with highlighting its significance in current scenario" in Materials Today: Proceedings, July 2021.

"Solar energy capacity assessment and performance evaluation of a standalone PV system using PVSYST" in Materials Today: Proceedings, July 2021.

Projects in R&D Centers**SonaSPEED R&D Centre:**

Prof N Kannan, Dr S Vijay Shankar and V M Periyasamy team to develop and supply the 22.5° Permanent magnet simplex stepper motor to Vikram Sarabhai Space Centre.

Prof N Kannan, Dr S Vijay Shankar and V M Periyasamy team to develop and Supply Duplex stepper motor to Human Space Flight Centre, Bengaluru.

SonaPERT R&D Centre:

Dr.S.Chandrasekar has successfully completed the Nano Mission project on "Development of nanofluid insulation with carbon quantum dots covered insulative / semi conductive / magnetite nanoparticles and investigation of its partial discharge characteristics for power transformers" to DST.

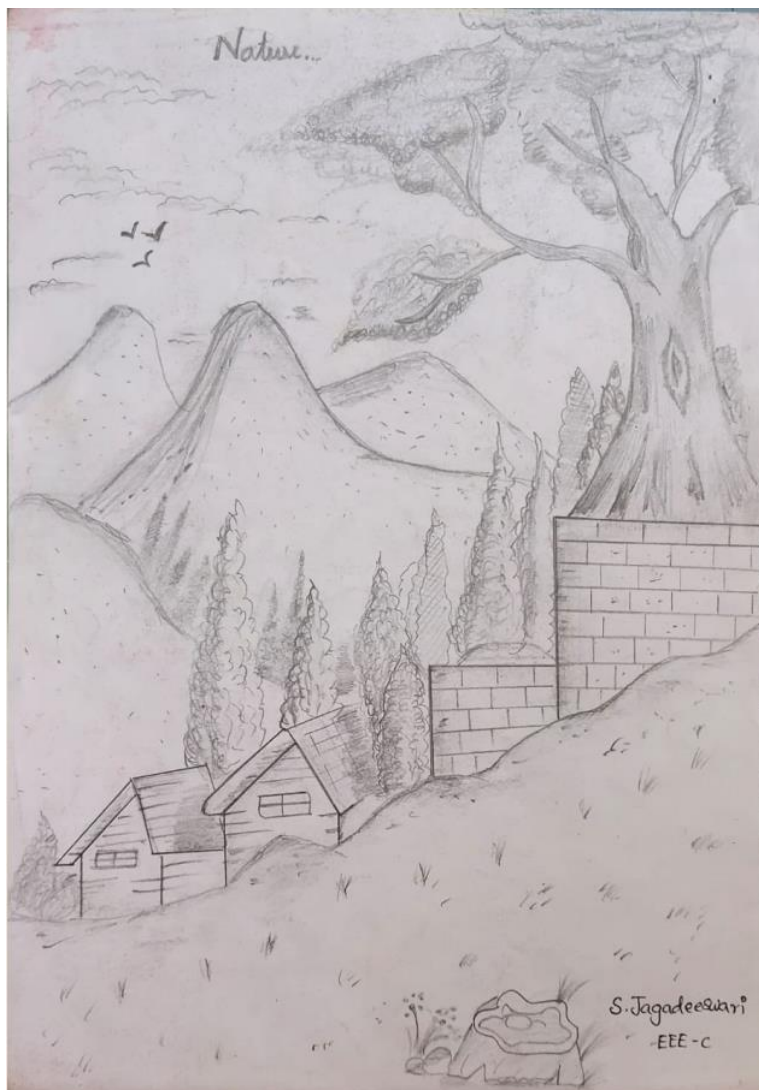
Dr.S.Chandrasekar has successfully completed the AGRO project on "Development of low-cost, energy-efficient, solid state pulsed electric filed system for non-pasteurization applications of food processing industries" to DST.

panel two modes are setup as manual mode and automatic mode. The operation such as speed of stepper motor, roller control clamping and declamping of cylinder, air gun supply control and temperature setting for air gun are performed.



Manoharan M III Year EEE B





Editorial Board Members

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