



KCG

COLLEGE OF TECHNOLOGY



Department of
Electrical and
Electronics Engineering

EnErgize

Volume - III
Jul - Dec 2022

VISION

KCG College of Technology aspires to become a globally recognized centre of excellence for science, technology & engineering education, committed to quality teaching, learning and research while ensuring for every student a unique educational experience which will promote leadership, job creation, social commitment and service to nation building.

MISSION

- Disseminate knowledge in a rigorous and intellectually stimulating environment.
- Facilitate socially responsive research, innovation and entrepreneurship.
- Foster holistic development and professional competency.
- Nurture the virtue of service and an ethical value system in the young minds.

KCG College of Technology was founded in 1998 to fulfill the Founder-Chairman, Dr. KCG Verghese's vision of "To Make Every Man a Success and No Man a Failure". It is a Christian minority institution, affiliated to Anna University (Autonomous), Chennai and approved by AICTE, New Delhi.

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

VISION

The Department of Electrical and Electronics Engineering aims to be a centre of excellence recognized for high quality teaching, learning and research, producing competent professionals to serve the nation.

MISSION

- Impart quality technical education in Electrical and Electronics Engineering domain
- Nurture industrial collaboration in research and development activities
- Maintain state-of-the-art facilities to provide opportunities for knowledge up-gradation
- Invoke the desire and ability of life-long learning in the students for a successful career

EDITOR'S DESK

Welcome to the first issue of EnErgizE, the official newsletter of the Department of Electrical and Electronics Engineering at KCG College of Technology. This publication reflects our department's milestones, from academic achievements to innovative research contributions. It highlights the dynamic and industrious spirit of our faculty and students as they contribute to the world of technology.

Chief Editor	Dr. T.Anuradha
Editor	Dr. R.Murugan
Faculty coordinator	Dr. B.BrindhaSakthi
Students representatives	1.A.Afreen Sulthana -II YEAR 2.Alwin Tennyson.K -II YEAR 3.Priyadarshini.J -II YEAR 4.Arjun.S -II YEAR 5.Ilakkiya.C.S - III YEAR 6.Snega.K - III YEAR 7.Suraj.B - III YEAR 8.Alen Thomas -III YEAR 9. Prem Kumar -IV YEAR 10. Ayush Pandey -IV YEAR 11. Kamaliga S - IV YEAR

RESEARCH ACTIVITIES

Faculty Research Publications

Dr. P. Deiva Sundari

"A ranking-based fuzzy adaptive hybrid crow search algorithm for combined heat and power economic dispatch"
Published in Expert Systems with Applications on July 1, 2022



Dr. T. Anuradha

- "Prediction of Maintenance Time and IoT Device Failures using Artificial Intelligence"
Published in IEEE Xplore on July 1, 2022

- "The Performance Evaluation of Adaptive Energy Conservation Scheme Using IoT"
Published in Springer, Singapore Smart Innovation, Systems and Technologies book series on July 26, 2022

- "An Overview of Blue Eye Constitution and Applications" Published in Springer, Singapore Expert Clouds and Applications on August 18, 2022

- "Load based Fuzzy Controller for Bipolar Stepper Motor" Published in IEEE Xplore on September 21-23, 2022
- "Application of Synthetic Aperture Radar (SAR) based Control Algorithms for the Autonomous Vehicles Simulation Environment" Published in IEEE Xplore on October 13-15, 2022

Dr. R. Murugan

- "Design of 24 watts sepic DC-DC converter for renewable source application"
Published in IEEE Xplore on September 21-23, 2022
- "A ranking-based fuzzy adaptive hybrid crow search algorithm for combined heat and power economic dispatch" Published in Expert Systems with Applications on July 1, 2022



Dr. R. Gayathri

- "Three Phase Buck Boost Converter with PFC for Indian Rails" Published in IEEE Xplore on September 21-23, 2022
- Ms. Jitha Varghese "A Smart Voltage Control Strategy using Sepic Converter for DC Microgrid" Published in IEEE Xplore on September 21-23, 2022
- Ms. A.V. Suganya "Medical Docking System" Published in IEEE Xplore on September 21-23, 2022



Ms. Brindha Sakthi

- "Design and Development of Grass Cutter using Solar" Published in IEEE Xplore on September 21-23, 2022
- Mr. Arvin Tony "Energy Management system for KCG campus" Published in IEEE Xplore on September 21-23, 2022

Mr. Balaji S

- "Implementation of PID controller for an Interleaved Buck-Boost Converter for Fuel Cell Applications" Published in Journal of Positive School Psychology in August 2022



EVENTS

Seminars and Workshops Beginning your Professional Journey

A workshop focused on "Beginning Your Professional Journey" was held on September 15, 2022, with an impressive turnout of 350 participants. The event featured Ms. Rajini Seshadri, Founder Director of indePenn Connections and former Vice President of TCS, as the esteemed resource person. Ms. Seshadri's extensive experience and insights undoubtedly provided valuable guidance to those embarking on their professional careers.



Heritage Walk - Chennai George Town

A heritage walk through Chennai's historic George Town was conducted on September 24, 2022, with 25 participants. The walk was led by Dr. T. Anuradha, who shared her expertise and knowledge of the area's rich history and cultural significance. Participants had the opportunity to explore the historical landmarks and hidden gems of George Town, gaining a deeper appreciation for Chennai's past.

FACULTY DEVELOPMENT EVENTS:

A three-day, instructor-led, online Faculty Training Programme (ILO) on "Modeling & Control of EVs using Simulink & Simscape" was conducted from July 26th to 28th, 2022. The training was delivered by the MathWorks Training Team, with Dr. T. Anuradha and Ms. Jitha Varghese serving as the Faculty In charge.



INDUSTRIAL VISIT

DRDO Open day, Avadi

Batch: **2nd Year EEE**

No. of students: 25

Date: 18.08.2022

25 second-year EEE students visited the DRDO (Defence Research and Development Organisation) facility in Avadi on August 18, 2022, for the DRDO Open Day. This visit offered a unique opportunity for the students to witness firsthand the groundbreaking research and development being conducted by DRDO in various fields of defense technology. The students gained valuable insights into the latest advancements and innovations in areas such as aerospace, electronics, and materials science, providing a glimpse into the critical role DRDO plays in national security.

KEL company, Cochin

Batch: **3rd Year EEE & EIE**

No. of students: 25

Date: 23.09.2022

23 third-year students from the Electrical and Electronics Engineering (EEE) and Electronics and Instrumentation Engineering (EIE) departments visited Kitco Engineering Limited (KEL) in Cochin on September 23, 2022. KEL, a prominent engineering and consulting firm specializing in the power sector, provided the students with a valuable opportunity to explore its state-of-the-art facilities and gain insights into its diverse range of projects and services. The visit showcased KEL's expertise in areas such as power plant design, renewable energy solutions, and grid integration, giving the students a firsthand look at the practical applications of their studies.



CSIR Foundation Day Celebration- Open Day

Batch: **2nd Year EEE & 3rd year EIE**

No. of students: 25

Date: 26.09.2022

25 students from the second-year EEE and third-year EIE programs attended the CSIR (Council of Scientific and Industrial Research) Foundation Day Celebration Open Day on September 26, 2022. This event provided a valuable opportunity for the students to explore the diverse research and development activities conducted by various CSIR laboratories and institutes. They interacted with scientists, participated in interactive demonstrations, and gained insights into cutting-edge advancements in fields such as materials science, biotechnology, and environmental engineering.

STUDENT ACHIEVEMENTS

Afreen Sultana, Suganthi M. S. (II year EEE)

- I Prize in National Level Technical Symposium SIT-SCIHUM-22 at Sai Ram Institute of Technology on 07.06.2022.

Shaik Althaf (EEE/III Year)

- Participated in KPIT Sparkle 2023 on 25.07.2022.
- Participated in HackaversubMM - National Level Hackathon on 10.08.2022.
- III prize in I-DAPT Hub Pitch Challenge conducted by I-DAPT Hub Foundation, Haryana on 22.08.2022 to 23.08.2022.
- Finalist in Smart India Hackathon, 2022 conducted by SIH, 2022 on 25-08-2022 to 29-08-2022.
- Participated in eyantra Innovation Challenge 2022 in IIT Mumbai on 25.09.2022.
- Participated in Global Innovation Challenge 2022 conducted by Social Shifters on 30.10.2022.
- Participated in East Asia Summit (EAS) Hackathon: "Combatting Marine Plastic" – Application conducted by TAF, CSIRO, and the ASEAN Foundation on 31.11.2022.
- Build a Climate Fintech App – Important on 02.12.2022.
- Technology Infusion Grand Challenge (TIGC) – 2022-23 on 10.12.2022.
- Presented conference paper on the topic "Organic Farming in Drainage Systems with Advanced Automation through Robotics and IoT" in 2022 IEEE World Conference held at Sai Ram Institute of Technology on 16.12.2022.

Mohammad Rizwan, Ayush Pandey (EEE/IV year)

- Finalist in Smart India Hackathon, 2022 conducted by SIH, 2022 on 25-08-2022 to 29-08-2022.

Rahul G, Afreen Sultana, Suganthi M. S. (EEE/II year)

- III rank Mindspark 2022- Project Presentation conducted by IUCEE Foundation on 20.09.2022.

Kamaliga S, Giridharan K, Bharat Raj S (EEE/IV year)

- II rank Mindspark 2022- Project Presentation conducted by IUCEE Foundation on 20.09.2022.

S. Vijay (EEE/III year)

- Won Silver Medal for Tamilnadu in All India Inter Zonal Karate championship held at New Delhi on 02.12.2022.
- Won Gold Medal for Anna University Inter zonal Karate championship held at Kumaraguru College of Technology, Coimbatore on 23.12.2022.
- Qualified for All India Karate championship held at Meerut on 25.12.2022.

AWARDS RECEIVED BY FACULTY & DEPARTMENT

In the latter half of 2022, the faculty and departments of KCG College of Technology have been recognized for their outstanding achievements, showcasing the institution's commitment to excellence.

Faculty Honors

Dr. P. Deiva Sundari - Shining Beacon of Academic Leadership

Dr. P. Deiva Sundari - Shining Beacon of Academic Leadership

The esteemed Dr. P. Deiva Sundari, Professor in the Department of Electrical and Electronics Engineering, has been awarded the prestigious "Outstanding Leader in Higher Education" accolade at the 14th ELETs Higher Education Summit held in Chennai on October 7th, 2022.

This prestigious recognition is a testament to Dr. Deiva Sundari's unwavering dedication to advancing the field of higher education and her transformative impact on the institution. Her visionary leadership, innovative teaching methodologies, and steadfast commitment to student success have earned her the admiration of her peers and the broader academic community.

Departmental Achievements

Department of Electrical and Electronics Engineering (EEE) - Industry-Linked Excellence

The Department of Electrical and Electronics Engineering at KCG College of Technology has been honored with the "Best Industry linked Institute in Electrical and Allied Engineering (Degree)" award from the prestigious AICTE-CII Industry Linked Survey 2021, announced on September 1st, 2022.

This prestigious recognition underscores the department's strong industry collaborations, hands-on learning opportunities, and its ability to produce industry-ready graduates. The award is a testament to the department's commitment to bridging the gap between academia and industry, ensuring that its students are equipped with the necessary skills and knowledge to thrive in the ever-evolving technological landscape.

The faculty and the entire KCG College of Technology community are elated to have received these esteemed accolades, which serve as a testament to the institution's unwavering dedication to academic excellence and its pursuit of innovation. These awards will undoubtedly inspire the institution to continue its trajectory of excellence, further strengthening its position as a leading center of higher education.

