

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING (EEE)

### ABOUT THE DEPARTMENT:

Electrical engineers synthesize science, mathematics, technology, and application-oriented designs into world-class consumer products, timely microprocessors, state-of-the-art computers, advanced electronic components, and much more. From cutting-edge technology revolutions to real life applications, the innovations of electrical engineers continue to lead the future and elevate the standards in the marketplace. With a shortage of electrical engineering talent in the job market, the demand for graduates with an electrical engineering degree remains at an all-time high.

### VISION:

To mould Electrical and Electronics Engineers with competent knowledge and skills to solve real time problems in Industry and Society.

### MISSION:

- To facilitate students to adept latest technology in addressing the challenges in transmission and distribution of electricity.
- To engage and collaborate with industry to build unified technology.
- To kindle the students to innovate in designing and developing new products to solve real time problems in society and industry.
- To inculcate the need of green energy in the minds of students to sustain Mother nature.





# SRI RANGANATHAR

## INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)  
(An ISO 9001:2015 Certified Institution)

Athipalayam, Coimbatore - 641 110. Web site: www.sriet.ac.in Ph: 0422 2697792





## SRIET – EEE NEWSLETTER

Academic Year 2020-21 (EVEN SEM)

June 2021

### SRIET Profile:

*Sri Ranganathar Institute of Engineering and Technology (SRIET) came into existence in 2011, out of an ardent desire of Dr. V. Narayanasamy to contribute manifold to the society that nurtured him. SRIET is an Innovative Educational Institution where the curiosity, creativity and intellectual joy of students all drive to academic excellence. Our Institution provides complex problem-solving skill and imbibes service to the public good. SRIET is defined by strong association and working in ways that excel in traditional boundaries.*

*SRIET's academic excellence is rooted in a student-centred model of learning. The Curriculum is an accurate approach to education that pushes the students to be creative thinkers, intellectual risk-takers and entrepreneurial problem-solvers. SRIET leaves students prepared to thrive as independent and innovative leaders and equipped with the tools they need to become the next generation of leaders in their respective fields.*

### LIST OF CONTENT:

- Students Activity
- Program Organized
- Faculty Seminar/Workshop Attended
- Faculty FDP/STTP Attended

### Student Editors Board:

<b>Chief Editor:</b> <b>Mr Dinesh R IV-EEE</b>	<b>Editor:</b> <b>Mr Guna III-EEE</b>	<b>Designer:</b> <b>Ms Vaishnavi II-EEE</b>
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### Staff Editors Board:

<b>Board member 1:</b> <b>Dr J Maalmarugan HoD/EEE</b>	<b>Board member 2:</b> <b>Mr K Muthuraj AP/EEE</b>
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### **PROGRAM OUTCOMES (PO)**

<b>PO1: Engineering knowledge</b>	Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
<b>PO2: Problem analysis</b>	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
<b>PO3: Design/ development of solutions</b>	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
<b>PO4: Conduct investigations of complex problems</b>	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
<b>PO5: Modern tool usage</b>	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
<b>PO6: The engineer and society</b>	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
<b>PO7: Environment and sustainability</b>	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
<b>PO8: Ethics</b>	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
<b>PO9: Individual and team work</b>	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
<b>PO10: Communication</b>	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
<b>PO11: Project management and finance</b>	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
<b>PO12: Life-long learning</b>	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### **PROGRAM SPECIFIC OUTCOMES (PSO)**

<b>PSO1</b>	Capable to provide socially acceptable technical solutions to complex electrical engineering problems with the application of modern and appropriate techniques for sustainable development.
<b>PSO2</b>	Comprehend, analyses and design products in core domains namely power, control and energy to meet the ever-changing demands of industry and society.



## Students Activity:

- Mohanapriya M, Vertivel S from IV EEE Got placement offer from “KMIL Motherson Group of Companies”, Chennai on 08.02.2021.
- Gunalan, Jegan, Nithishkumar and Mithunchakkaravarthy form IV EEE got Placement offer from ROOTS CAST PRIVATE LTD, Coimbatore.
- Ms R Rohini Final year EEE for starting a Start Up in the name of REAL EAGLE PIX.COM, her turnover is around 300\$ per month on 22.02.2021.
- Pandiaraj N got placement offer from “Robert Bosch”, Coimbatore on 27.02.2021.
- N. Pandiaraj, T.Soniya Gandhi from IV EEE presented a paper titled “Highway Cruise Control Systems for Vehicles using Low Power RF Technology and CAN Protocol” in the National Conference on “Intelligent Computing and Automation – INSTRUVISION 21” during 09.04.2021 at Kamaraj College of Engineering and Technology, Madurai.
- K. Pushparaj, R. Rohini from IV EEE presented a paper titled “Embedded Based Smart Helmet Safety and Security System by Using Arduino” in the National Conference on “Intelligent Computing and Automation – INSTRUVISION 21” during 09.04.2021 at Kamaraj College of Engineering and Technology, Madurai.
- Nandhini D from III EEE participated in Webinar on “Dell-ICC Factory Innovation Tour” during 08.05.2021 by Mohamed Sathak Engineering College.
- Pandiaraj N from Final EEE attended Quiz Series on Electric Vechiles-XVII conducted by KPR Institute of Engineering &Technology during 19.06.2021.



## Program Organized:

- EEE Initiated GATE coaching through whatsapp for II and III year students from 02.02.2021.
- Started Skill Development Training Program (SDTP) for III-year EEE students on 18.02.2021.



- Organized One day Guest Lecture on “Unleash your Potential to Become a Successful Entrepreneur” delivered by Mr.C.Rahuram, Head, Placement and Corporate Relations, Sri Krishna Adithya College of Arts and Science, Coimbatore during 23.02.2021.
- EEE organized a Seminar on “Introduction to E-Vehicle System” on 19.4.2021.
- EEE organized a Online Webinar on “Introduction to TINKERCAD” during 13.05.2021 presented by Dr.P.Gowtham, M.E., Ph.D., Associate Professor/ECE, JIT, Coimbatore.



- Organized a Seminar on Awareness of Covid 19 and important of vaccination during 07.06.2021 presented by Dr.DIVYA.M Associate Consultant/ Apollo hospital Trichy.
- Organized a Seminar on “Revised Bloom Taxonomy” during 16.06.2021 presented by Dr.Surekha Rathi Samundi.D Assistant Professor /Aero/ Bharathi Institute of Higher education and Research.

## Faculty Activities:

## Journal Publications:

- Dr J Maalmarugan published the paper titled on “Synthesis, growth, XRD, NLO, CHNSO, structure by theoretical approach, dielectric, absorbance, photoconductivity and bio studies of 4-(4-Acetyl-5-Methyl-1H-1, 2, 3-Triazol-1-yl) Benzonitrile crystals for optical, opto-electronic, and photonics utilities” during 27.04.2021 under the journal of Materials Science: Materials in Electronics indexed by Springer US Scopus, UGC AU. Annex.1.
- Dr J Maalmarugan published the paper title on Synthesis, growth, XRD, NLO, CHNSO, computational-structural, dielectric, photoconductivity, hardness and biostudies of diethyl 2-amino-5{4-[bis(4-methylphenyl) amino] benzamido} thiophene-3,4-dicarboxylate (DABMPABTD) macro-, nano crystals for device fabrication, pharma, electronic uses during 2-05-2021 under the Journal of Materials Science: Mater Electron indexed by Springer US Scopus, UGC AU. Annex.1
- Dr.J.Maalmarugan published a paper titled on Massive Waste Management for Smart Cities under the Journal of Huazhong University of Science and Technology Volume: 50 Issue 06-2021 Paper ID: HST-0621-522 indexed by Scopus.



## Conference:

- Mrs M Malathi presented a paper titled “Highway Cruise Control Systems for Vehicles using Low Power RF Technology and CAN Protocol” in the National Conference on “Intelligent Computing and Automation – INSTRUVISION 21” during 09-04-2021 at Kamaraj College of Engineering and Technology, Madurai
- Mrs M Shanthi presented a paper titled “Embedded Based Smart Helmet Safety and Security System by Using Arduino” in the National Conference on “Intelligent Computing and Automation – INSTRUVISION 21” during 09-04-2021 at Kamaraj College of Engineering and Technology, Madurai

## FDP/STTP/Seminar/Workshops:

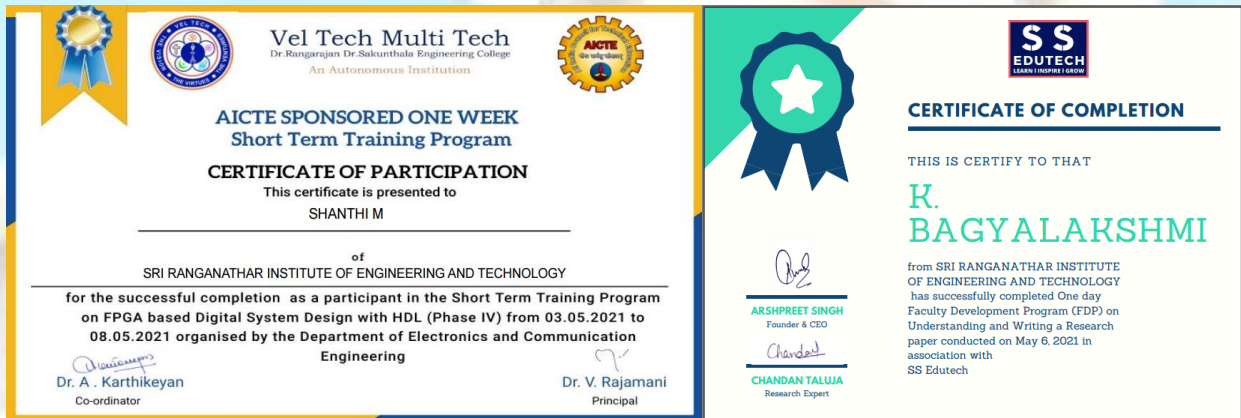
- Mr. Alex George participated in AICTE-sponsored FDP on “Computer vision and Image processing” organized by PSNA college of engineering from 30.12.2020 to 13.01.2021.
- Mr. Alex George successfully completed NPTEL course on “Principles of Management” and secured ELITE during January 2021.
- Mr. Alex George attended Webinar on “Recent trends in SMART GRID” organized by ARASU Engineering college during 29.01.2021.
- Mr. Alex George attended AICTE sponsored STTP on “Future Perspective and Challenges of Clean Energy Utilization in India” organized by PSNACET from 01.02.2021 to 06.02.2021.
- Mrs M.Malathi attended AICTE sponsored STTP on “Future Perspective and Challenges of Clean Energy Utilization in India” organized by PSNACET from 01.02.2021 to 06.02.2021.
- Mrs M Shanthi attended AICTE sponsored two-week online FDP on “Applications of Augmented Reality (AR) and Virtual Reality using MATLAB” organized by IFET College of Engineering from 01.02.2021 to 06.02.2021.



- Mr. Alex George attended AICTE sponsored STTP on “Electric Vehicles Evolution Impact on Power Grid” organized by SV college of Engineering 08/02/2021 to 13/02/2021.
- Dr.J.Maalmarugan send the ISTE proposal for Self-financing SHORT-TERM TRAINING PROGRAMMES(STTP) on the Title of “OPPORTUNITIES AND CHALLENGES IN SMART MANUFACTURING” on 12.02.2021.
- Mr. Alex George attended international webinar on “Electrical Design Methodology for Industries” organized by Arasu Engineering college during 13.02.2021.
- Mr. Alex George attended AICTE sponsored STTP on “Applications of Artificial Intelligence towards industry 4.0” organized by Sri Sai Ram Engineering College from 15.02.2021 to 20.02.2021.
- Mr. Alex George attended AICTE sponsored STTP on “Advancement in Signal Processing and Artificial Intelligence in Health Care” organized by Indian Institute of Information Technology from 15.02.2021 to 24.02.2021.
- Mr. Alex George attended AICTE sponsored FDP on “Reliability Engineering and System Safety” organized by Vishnu Institute of Technology from 15.02.2021 to 27.02.2021.
- Mr. Alex George attended AICTE Conducted FDP on “EXAM REFORMS” from 15.02.2021 to 18.02.2021.
- Mrs D. Nivea successfully got CERTIFICATE OF APPRECIATION for being recognized as “NPTEL ENTHUSIAST DEC 2020” during 17.02.2021.
- Mr. Alex George attended International virtual seminar on “Emerging Trends in science and Technology” organized by Hindusthan college of Arts & Science during 24.02.2021.
- Mrs K.Bagyalakshmi attended 6 days FDP on “Recent trends in Industrial Engineering Strategies” from 26.04.2021 to 01.05.2021 at Sathyabama Institute of Science and Technology.
- Mr.D Palanivel attended 6 days FDP on “Energy Management and Control System for Smart Renewable Energy Remote Power Generation” from 05.04.2021 to 10.04.2021 at Annamacharya Institute of Technology and Science, Rajampet.
- Mr Alex George attended one day national level workshop on “Managing Entrepreneurship for Sustainable Future” during 04.04.2021 at Institute for Policy Research in Economics, Management and Social Development.
- P. Meenakshi Sundaram successfully completed 5 days Training on “Master Class on Power Electronics Using MATLAB” from 12.04.2021 to 16.04.2021 at Pantech Prolabs India Pvt Ltd.



- Mr. ALEX GEORGE attended two days state level virtual Technical Workshop on ‘INTELLECTUAL PROPERTY RIGHTS’ at Tamilnadu State Council for Science and Technology 26/04/2021 & 27/04/2021.
- Mrs.M.Shanthi attended 6 days STTP on “FPGA based Digital System Design with HDL (Phase IV)” at VEL TECH MULTI TECH Institution from 03/05/2021 to 08/05/2021.

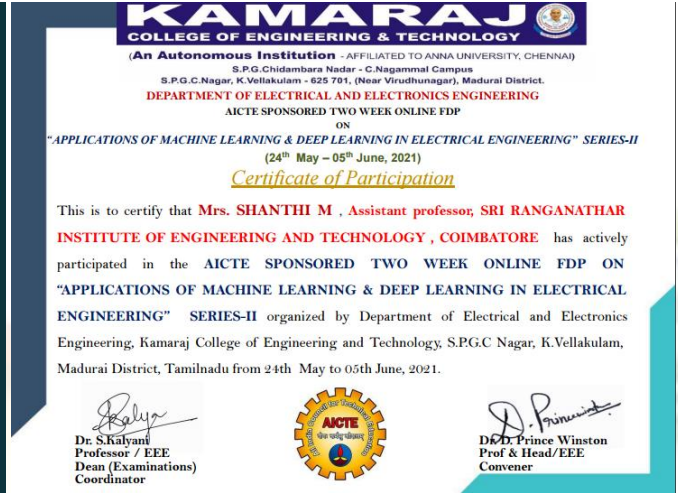


- Mrs K.Bagyalakshmi attended one day FDP on “Understanding and Writing a Research Paper” at SS EDUTECH during 06-05-2021.
- Mr. ALEX GEORGE attended five days FDP on “Innovation in Computer Vision” at Kings Engineering Collage Chennai from 10/05/2021 to 14/05/2021.
- Mr. ALEX GEORGE attended webinar entitled ‘TaraNG for Electromagnetics’ at K.Ramakrishnan college of Technology, Trichy during 12/052021.
- Mrs K.Bagyalakshmi attended a Six Day Online FDP on "Machine Learning and Optimization"-Phase-III from at Ahalia School of Engineering and Technology Palakkad from 17/05/2021 to 22/05/2021
- Mr. ALEX GEORGE attended FDP on ‘GEOINFORMATICS AND WEB TECHNOLOGIES’ at Banasthali Vidyapith of Earth Science from 18/05/2021 to 22/05/2021.
- Mr. ALEX GEORGE attended webinar on “Industrial Revolution 4.0” at Francis Xavier Engineering College, Tirunelveli during 22/05/2021.



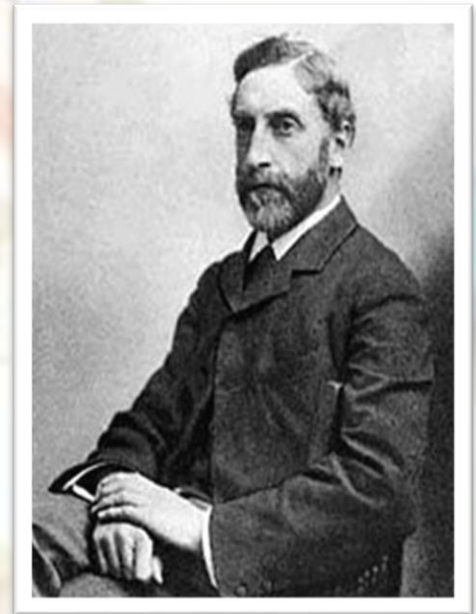
- Mr. ALEX GEORGE attended webinar on 'Industrial Robotics' at CSI College of Engineering, Ooty during 26/05/2021.
- Mr. ALEX GEORGE attended Six days FDP on 'Energy Management' at KIT, Coimbatore from 24/05/2021 to 29/05/2021.
- Mrs K.Bagyalakshmi attended a Online FDP on "Ant Colony Optimization Algorithm in Artificial Intelligence" Mohamed Sathak Engineering College during 27.05.2021.
- Mrs M Shanthi and Mr.P.Meenakshi Sundaram attended two week online FDP on "Applications of Machine Learning & Deep Learning in Electrical Engineering" SERIES-II at Kamaraj college of Engineering and Technology during 24.05.2021 to 05.06.2021.
- Mr Alex George attended Faculty Development Programme on "Future Trends in Shipping" organized by AMET Deemed to be University, Chennai during 01.06.2021 to 05.06.2021.
- Mr Alex George attended FDP on "Internet of Things" at Nelson Mandela Marg, Vasant Kunj, New Delhi during 01.06.2021 to 05.06.2021.
- Mrs K.Bagyalakshmi attended Virtual Faculty Development Programme on "AI & MI Skills Industry4.0" by Er. Perumal Manimekalai college of Engineering, Hosur – 635117 during 03.06.2021 to 05.06.2021.
- Mr Alex George attended Webinar on "Environmental Sustainability" by Sri Vdyaniketan Engineering College during 05.06.2021.
- Mrs K.Bagyalakshmi attended FDP on "AI and IoT- Based Technology for Precision Farming and Smart Agriculture" at KGiSL Institute of Technology during 07/06/2021 to 11/06/2021.
- Mr.P.Meenakshi Sundaram attended 3 days FDP on "ICT tools for Effective Teaching Learning" at Kamal Nehru Mahavidyalaya, Nagpur during 08.06.2021 to 10.06.2021.
- Mr Alex George attended FDP on "Green Technology and Sustainable Development" at Amity University, Rajasthan during 14.06.2021 to 18.06.2021.
- Mrs K.Bagyalakshmi attended International Faculty Development Programme "RESEARCH INNOVATIONS AND EMERGING ADVANCES IN ELECTRICAL ENGINEERING" at Easwari Engineering College during 14.06.2021 to 19.06.2021.
- Mr Alex George, Mrs M Shanthi, Mrs.M.Malathi and Mr Muthuraj K attended FDP on "Revised Bloom Taxonomy" during 16.06.2021.
- Mrs M Shanthi, Mrs.M.Malathi, Mr D Palanivel attended Five Days FDP on "Recent Trends and Developments in Electrical Power Engineering" organized by Chadalawada Ramanamma Engineering College (Autonomous), Tirupati during 21.06.2021 to 25.06.2021





## Technical Message:

**John Hopkinson, FRS, (27 July 1849 – 27 August 1898)** was a British physicist, electrical engineer, Fellow of the Royal Society and President of the IEE (now the IET) twice in 1890 and 1896. He invented the **three-wire (three-phase) system** for the **distribution of electrical power**, for which he was granted a patent in 1882. He also worked in many areas of **electromagnetism and electrostatics**, and in 1890 was appointed professor of electrical engineering at King's College London, where he was also director of the Siemens Laboratory. In 1883 Hopkinson showed mathematically that it was possible to connect **two alternating current dynamos in parallel**, a problem that had long bedevilled electrical engineers. He also studied magnetic permeability at high temperature, and discovered what was later called the Hopkinson peak effect.



The series-parallel method of **electric motor control**, for which Hopkinson was granted a British patent in 1881, would prove to be an important advance in the development of **electric railways**.