



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

NEWSLETTER

2020



Achievements



The team comprising of ECE S7 students Mr. Alwin Emmanuel, Ms. Rose Mol James, Ms. Akshitha Saji and Ms. Reema James along with their guide Asst. Prof. Beena A.O, participated in the Student Engineering Model Competition (SEMC) sponsored by DST, Govt. of India, and organized as part of the 5th India International Science Festival (IISF)- 2019 in Kolkata during November 5-8, 2019. The team won First prize in the theme 'DIGITAL INDIA' for their model "COST EFFECTIVE SMART BRAILLE PRINTER". The team also won the Second prize in the overall competition among 500 colleges from different parts of India.



The team of members Mr. Sree Sankar E, Mr. Joel Abraham, Mr. Reuben George Mathai, Mr. Sandeep Narayanan, Ms. Keerthana S & Ms. Jeswin Elsa James from S8 ECE, mentored by Er. Jyothish Chandran G were the title winners of Reboot Kerala Hackathon 2020 (Theme: Health Care and Social Justice) organized by ASAP, Kerala from 6 - 8 March 2020, at FISAT, Angamaly.

Dr. Shajimon K John and Dr. Riboy Cheriyan are recognized as Research Supervisors of APJ KTU.

The open defense of Smt. Beena A O on the topic "Techniques for Channel Estimation and PAPR Reduction in MIMO-OFDM Systems for Mobile Communication" was held on 28th May through online mode.

Er. Dhanusha P B, Assistant Professor, Department of ECE won the Saintgits Best Library User Award - 2019.

Er. Marie Kottayil James passed the IUCEE International Engineering Educators Certification Program (IIECP) with distinction (91%). Based on her performance and interest in the work of IUCEE, she was offered to work as Assistant Faculty in the IUCEE Students Leadership Course 2020 (for engineering students) as well as IIECP Spring 2020 (for engineering teachers).

Dr. Ansal K A passed the IUCEE International Engineering Educators Certification Program (IIECP) with 89.8% score.

Placement: 14 students of 2016-20 batch got placed in various companies.

Number of FDPs (Both online & offline) attended by Faculty Members: 60

Number of Online Certification Courses done by Faculty Members: 98

Srishti 2020 My Big Idea competition 1st prize was bagged by Arjun Shankar P B (S8 ECE) for his idea "AI based Spectacle for Blind people".

The project titled "High Performance sustainable e-bike using recycled laptop batteries" by Reuben George Mathai, Sandeep Narayanan, Joel Abraham and Sree Sankar E guided by Dr. Riboy Cheriyan bagged the first prize in Internal Projects category (S8 ECE) of Srishti 2020 conducted on 10th & 11th Feb 2020.

The project titled "An aid for visually impaired: Education and employment" by Alwin Emmanuel, Akshitha Saji, Rosemol James and Reema James guided by Er. Beena A O bagged the second prize in Internal Projects category (S8 ECE) of Srishti 2020, conducted on 10th & 11th Feb 2020.

Joel Abraham and Sree Sankar E bagged the 1st prize in the Intercollegiate Electronic quiz/Project exhibition and competition 'Fiesta T 20' organized by Department of electronic equipment maintenance of St. Aloysius College, Edathua, Alappuzha on 17,18 February 2020

Akshitha Saji and Alwin Emmanuel bagged the 3rd prize in the Intercollegiate Electronic quiz/Project exhibition and competition 'Fiesta T 20' organized by Department of electronic equipment maintenance of St. Aloysius College, Edathua, Alappuzha on 17,18 February 2020.



Vijay R of 2019-23 ECE and Allen Kurian Philip of 2019-23 R&A participated in the IUCEE Annual Student Forum 2020 held at Anurag group of Institutions, Hyderabad from 4th to 7th January 2020. The team of Allen Kurian Philip won cash prize of Rs. 5000/-, certificates and trophies for their project idea presentation.

Mariyam Susan Philip of S1 ECE (2019-2023 Batch) secured first prize in the debate competition organized by SESA as a part of World Students Day celebration on 15th October, 2019.

The idea "AI Spectacles for Blinds" applied under Assistive Technologies idea theme of Young Innovators' Program 2019 by Arjun Shankar PB and team of 2016-20 Batch ECE, shortlisted for presentation before the Kerala Development & Innovation Strategic Council (K-DISC)-KSUM nominated evaluation panel at the district (Kottayam+Pathanamthitta) venue, Saintgits College of Engineering on 6th November, 2019.

3 teams from ECE department got selected for the next phase of Reboot Hackathon Kerala 2020 (Phase I), an event by Government of Kerala with the help of Higher Education Institutes of the state, executed via ASAP. The teams selected are 1. Sree Sankar E & team of 2016-2020 Batch ECE. Mentor: Er. Jyothish Chandran G; 2. Gokul M Saji & team of 2018-2022 Batch ECE. Mentor: Er. Jyothish Chandran G; and 3. Ashby Stefin Kuriakose & team of 2019-2023 Batch ECE. Mentor: Er. Sreekala K S

The team consisting of Iyryn Sara Varghese, Naveen Raji Eapen of 2017-21 Batch ECE, Kevin Kallikunnil Varghese and Georgy Jacob of 2018-22 Batch ECE won third prize in the Union Budget Prediction competition conducted by The Department of Corporate Economics, Saintgits College of Applied Sciences on 29th Jan 2020.

Ajith Mathew Jose of 2017-2021 Batch ECE, Aiswarya Rose Mathew and Milna M S of 2018-2022 Batch ECE participated in the second edition of Professional Students Summit 2020 held at CUSAT campus, Kalamassery on 15th February, 2020. Er. Jyothish Chandran was the Faculty coordinator from Saintgits College of Engineering.

Beena A.O and Roshni Oommen selected for full fellowship of IIT Guwahati (FFI5) for participating Third ISEA International Conference on Security and Privacy 2020 (ISEA-ISAP 2020) during 27th February 2020 to 1st March 2020.

Er. Beena A O, selected and presented for an oral presentation on "Low Cost Smart Braille Printer" in 107th Indian Science Congress held at University of Agricultural Sciences, Bangalore during 3rd to 7th Jan 2020.

Er. Nishanth P R and Er. Chinn Mohanan presented a poster titled "Affordable presentation player for teachers" as part of the IUCEE poster presentations, in the International conference on Transformations in Engineering Education held at Anurag group of Institutions, Hyderabad from 5th to 8th Jan 2020

Aleena Achenkunju, Allen Kurian Philip and Arya Ashok Nair of 2019-23 R&A participated in the Academic Conclave WINGS 2020 of PMI Kerala Chapter on 7th March 2020, at Thiruvananthapuram.

Project Smart Braille Printer, done by Mr. Alwin Emmanuel, Ms. Rosemol James, Ms. Akshitha Saji and Ms. Reema James under the guidance of Asst. Prof. Beena A.O won 3rd prize in inter collegiate project competition NIRMAAN '2020 held at St. Aloysius College, Edathva, Kerala, during 17th to 18th February 2020.

An exhibition stall of our student projects were set up at Kuriakose Elias English Medium School, Mannanam as a part of the science and cultural exhibition from 17th to 19th November, 2019. Justin John and Joby George of 2018-22 Batch ECE, Christy Zachariah, Julian Thomas Prasad, Nithin Thomas and Ryan C Roy of 2017-21 Batch ECE, Gokul M Saji and Georgy of 2018-22 Batch ECE had volunteered for the various duties of the exhibition.

Jewel Moncy John, 2016-2020 Batch ECE attended the Induction ceremony for new members of PMI Kerala Academic Forum of Saintgits College of Engineering for AY 2019-2020 conducted on 19th Oct 2019

Patents

"A system and method of IoT based intelligence Green House surviving system with cloud computing systems" with Application number 201941033012 by Dr. Riboy Cheriyan & Dr. Saravanan K was filed on 15-08-2019 and published on 20-09-2019 in Indian Government IPR web.

"Development of IOT Based Part Inspection System" with application number 202041016738 by Dr. Ansal K A was filed on 18/04/2020 and published on 05/06/2020 in Indian Government IPR web.

"Effective extraction of solar energy system design with LabView environment" with Application number 201941020561 by Er. Aravindhan A was filed on 24-05-2019 and published on 14-06-2019 in Indian Government IPR web.

Funded Projects

Projects selected for funding by CERD:

- Machine Learning-Based Fingerprinting for Accurate Positioning of Things in GPS denied Environment using Lora WAN-Long Range Wide Area Networks: Dr. Riboy Cheriyan (Investigator), Dr. Ansal K A (Co-Investigator), Joel Abraham, Sree Sankar E, Reuben George Mathai, Sandeep Narayanan (Student Members). Amount Sanctioned: Rs. 32,000/-
- IoT Enabled Cost Effective Braille Printer with an Efficient Embosser: Beena A O (Investigator), Roshni Oommen (Co-Investigator), Rosemol James, Akshitha Saji, Alwin Emmanuel, Reema James (Student Members). Amount Sanctioned: Rs. 26,000/-
- AI Based Spectacles for Blinds: Ashly John Assistant Professor (Investigator), Ashwin P. V (Co-Investigator), Arjun Shankar P. B, Arunima C. V (Student Members). Amount Sanctioned: Rs. 24,500/-
- Automated wheelchair and Human automation.: Ashly John (Investigator), Hanna Mathew (Co-Investigator), Aiswarya Satheesh, Akhila Vinod, Arya R Anil, Sreya M James (Student Members). Amount Sanctioned: Rs. 13,547/-

Publications

- Dr. Ansal K A published an article titled " A Band Pass Coupled Line filter with DGS for Ultra Wide Band Application", in Science Direct Elsevier Procedia Computer Science in June 2020, Scopus Indexed.
- Dr. Ansal K A published an article titled " Dual band CPW fed antenna with Reduced SAR rate by Embedding Comb shaped EBG", in Emerging Technologies for sustainability Taylor & Francis CRC Press, Scopus Indexed.
- Dr. Ansal K A and Dr. Riboy Cheriyan published an article titled "CPW fed antenna with Bevelled Radiating strip and ground plane for Ultra Wide Band Application", in Lecture Note on Data engineering and Communication Technologies LNDECT Springer, Scopus Indexed.
- Dr. Ansal K A published an article titled "Comparative analysis of CPW fed Antenna with different substrate materials of varying thickness" in Elsevier materials Today Proceedings in June 2020, Scopus Indexed.
- Dr. K. Saravanan published the paper "Design of Priority Based Reconfigurable Router in Network on Chip" in Journal of Microelectronics, Electronic Components and Materials Vol. 49, No. 4(2019), 203 – 21, SCI indexed
- Dr. Shajimon K John and Dr. Riboy Cheriyan published an article titled " Next-generation rooftop tribo–piezo electric energy harvesting from rain power", in Springer: Applied Nanoscience, Volume 10, Nov 2019, SCI Indexed.
- Dr. K. Saravanan, Dr. Shajimon K John and Dr. Riboy Cheriyan published an article titled "Hardware based cyber physical system using High Performance Crypto Hash Bloom filter for Network security & Privacy-preserving record linkage in medical research Applications" in A Handbook of Internet of Things in Biomedical and Cyber Physical System, Intelligent Systems Reference Library 165 (Springer Nature Switzerland AG 2020, Page: 39-59)
- Er. Ajith Ravindran published an article titled "Double Gate High Electron Mobility Transistors" in the book titled "Handbook for III-V High Electron Mobility Transistor Technologies", Taylor & Francis CRC Press, 2019. pp 403-422.

DISTINGUISHED LECTURE PROGRAMME: Department of ECE in association with IEEE SSCS conducted a Distinguished Lecture Programme on the topic "Adaptive and Resilient Circuits for Processors" and a Mini Workshop on "Tape out of an IC" by Dr. Keith A Bowman, Principle Engineer and Manager in the Processor Research team at Qualcomm Technologies Inc. in Raleigh, NC, USA on 6th March, 2020. IEEE SSCS Chapter Advisor - Er. Ajith Ravindran.



HORIZON – The Annual Technical Festival of Department of ECE was conducted in association with ASGEC - Association of Saintgits Electronics and Communication Students on 25th August 2019, as part of SAMYOG-2k19. This year the one-day technical fest was conducted based on the theme – COSMOS commemorating the 50th anniversary of the mankind's first leap on the moon.

Project Manager: Joel Abraham,

Staff Coordinator: Dr. Ansal K A.

The Saintgits IEEE Student Branch celebrated the '**IEEE Day 2019**' on 2nd October, 2019 at our campus. The event contained technical competitions, workshops and fun filled activities. IEEE SB Chairman: Joel Abraham (2016-2020 Batch ECE). IEEE SSCS Advisor: Er. Ajith Ravindran

Workshops, FDPs STTPs & Other training programmes

Department of Electronics & Communication Engineering and Department of Electrical & Electronics Engineering jointly organized a five days Faculty Development Programme on "Image Processing and Deep Learning using MATLAB" in association with Mathworks during December 9-13,2019.



A two-day workshop on "IOT and Drones" in collaboration with leadingindia.ai initiative was conducted from 16th to 17th Nov 2019, as part of the collaborative activities among Bennett University and SAINTGITS College of Engineering. The participants were students of 1st year B. Tech R&A, CSE & MCA. Resource persons were Dr. Gourav Singal (Asst. Prof., Dept of CSE, Bennett University) and Mr. Manish Sharma (Research Associate, Bennett University). Coordinator: Dr. M Wilscy, Dean, CSE & IT; Co-coordinator: Er. Nishanth P R, Asst. Prof., ECE.



APJ Abdul Kalam Technological University sponsored Faculty Development Program (FDP) on “Future of Multiprocessor System: Networks-on-Chip” was conducted from 16th to 20th December, 2020. Coordinator - Er. Aravindhan A and Co-coordinator - Dr. Saravanan K.



Workshop and Hackathon on Internet of Things – Cynosure was conducted as part of Horizon 2019- National Level Annual Technical Fest of ECE, in association with IEEE SSCS and ASGEC on 9th and 10th September, 2019. Workshop Charge - Er. Jyothish Chandran G, ASGEC charge - Dr. Ansal K A, IEEE SSCS advisor - Er. Ajith Ravindran, Resource Person - Sandeep B Kadam.



The Department of ECE organized a one-day Train the Trainers programme on “Utilization of Canvas Instructure -A Leap Towards Professional Teaching Learning Process” for all faculty members on 20th July, 2019. The session was handled by Er. Marie Kottayil James. Program in-charge: Er. Anu Raj.



The Department of ECE organized a one-day Train the Trainers programme on “Signals and Systems” for all faculty members on 10th & 18th January, 2020. The session was handled by Er. Hanna Mathew and Er. Abraham K Thomas. Program in-charge: Er. Anu Raj.



Er. Jyothish Chandran G, Asst. Professor and Mr. Rakhul Kunjumon, Technical Staff, Department of ECE, Saintgits College of Engineering were the resource persons for the skill development programme on “LED Bulb making” organized by National Service Scheme volunteers at Higher Secondary School, Ithithanam, Kottayam.



A talk on the topic “Motivation during examinations” was organized by the department, in association with ISTE on 20th November 2019, for the students of ECE. It was taken by Dr. Saravanan K., Associate Professor, E.C.E. Dept, who is also a trained counsellor and hence an apt person for the task.



A Workshop on LaTeX was conducted for first year M. Tech students and Ph.D scholars of Saintgits college of engineering on 18th October, 2019. Resource Person was Er. Aravindhan A.

Technical Talks

Department of CSE and ECE jointly conducted a session on “Future of jobs” on 17th February, 2020. Mr. Chinten Oza, Advisor, Lloyds Ventures, Mumbai was the resource person.



Department of ECE in association with Institution of Electronics and Telecommunication Engineers (IETE) Students Forum and ASGEC organized an invited expert talk and interactive session with Dr. K.R. Madhu Kumar, Rtd. Executive Engineer, Dr. Narla Tata Rao Thermal Power Station (V.T.P.S), Andhra Pradesh, for final year/pre-final year students in UG, PG students and faculty members of ECE and EEE departments on 23rd October, 2019. Coordinator - Er. Beena A O, External talk charge - Er. Maheswary Sreenath,



An expert talk, funded by IEEE SSCS, on the topic “Industry Expectations on the Basic Concepts of Electronics” was conducted for the students of Tailor Made Course in IC Design on 18th January, 2020. The resource person was Mr. Emil Zacharia George, Senior Hardware Design Engineer, Digital Core Technologies, Kakkanad, Kerala”. IEEE SSCS Chapter Advisor - Er. Ajith Ravindran.



Dr. Shajimon K John, Vice Principal, Saintgits College of Engineering was the Guest speaker for the webinar on topic “POST COVID – 19 Digital Era – Reimaging Fresh Engineering Graduates” organized by Dhanalakshmi Srinivasan College of Engineering, Coimbatore on May 12th 2020.

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Dr. Shajimon K John, Vice Principal, Saintgits College of Engineering delivered a plenary talk on the topic “Smart agriculture” in the International Conference on Emerging Trends in Engineering & Management - 2020 organized by Dhanalakshmi Srinivasan College of Engineering, Coimbatore from 2nd & 3rd March 2020.



Department of ECE in association with IETE and ASGEC conducted a seminar on "Modern Embedded Industry and its Opportunities" by Er. Siva Prasad S M (Managing Director, Diligent Spark Embedded

Technologies Ltd., Ernakulam for S5 and S7 ECE students. Coordinator - Dr. Riboy Cheriyan, External talk charge - Er. Maheswary Sreenath.

Dr. Shajimon K John, Vice Principal, Saintgits College of Engineering delivered a session on “Autonomy, the future of Engineering Education” in BarCamp Discuss Education 2020 held at Integrated Startup Complex, Kinfra Park, Kochi.



Dr. Beena A O delivered a Science Talk on “Future Wireless Networks” in AIR, Delhi, Rajadhani Radio on 6/1/2020.

Gyanikkoppam

Walk with the Scholar programme was conducted on 6th March, 2020 with Dr. Keith A Bowman, Principle Engineer and Manager in the Processor Research team at Qualcomm Technologies Inc. in Raleigh, NC, USA. In-charge - Er. Ashwin P V, Er. Beena A O

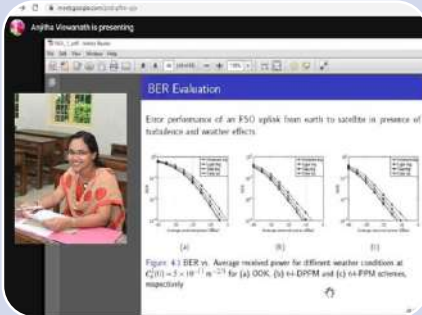


Walk with the Scholar programme was conducted with Dr. K.R. Madhu Kumar, Rtd. Executive Engineer, Dr. Narla Tata Rao Thermal Power Station (V.T.P.S), Andhra Pradesh on 23rd October, 2019. In-charge - Er. Ashwin P V.



Webinar Series

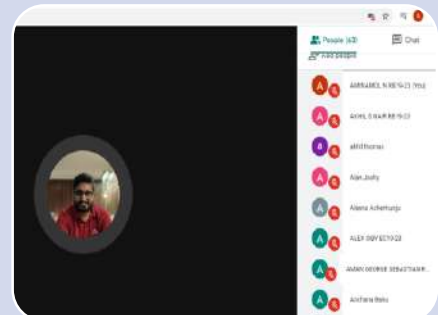
Department of ECE is conducting expert talk series in order to bridge the gap between the curriculum and industry. In light of the COVID-19 outbreak, it has been decided to conduct the event online. Google meet platform was utilized to conduct all the sessions. External Talk in-charge: Er. Maheswary Sreenath



Webinar 1: Department of ECE in association with ISTE students chapter conducted a webinar on Free Space Optical Communication (FSO) on 8th May 2020. The guest speaker was Dr. Anjitha Viswanath, Scientist/Engineer SD, ISRO-Inertial Sensors Unit, VSSC, Thiruvananthapuram.



Webinar 2: Department of ECE in association with IETE students' forum conducted a webinar on the topic 'Ultrasonic Waveguide Sensors For Process Industries' on 8th May 2020. The guest speaker was Dr. Nishanth Raja is the Chief Executive Officer of Xyma Analytics, an IIT Madras incubated company and a spin out from Centre for Non-



Webinar 3: Department of ECE in association with ASGEC conducted a webinar on "The role of an electronics engineer in the current industry scenario. Tips to make yourself befitting to the technology trends" on 9th May 2020. The guest speaker was Er.Chethan E M, Hardware Design Engineer, Intel India Pvt. Ltd.



Webinar 4: Department of ECE in association with ISTE students chapter on the topic "Opportunities in Space Science and Astronomy" on 15th May 2020. The guest speaker was Mr. Alikhan Basheer, Project Engineer-1 (Optics), India TMT Coordination Center (ITCC), Indian Institute of Astrophysics.



Webinar 5: Department of ECE in association with ISTE conducted a webinar on "Micro / Nano Systems Technology and Processes – an industry perspective " on 25th May, 2020. The guest speaker for the event was Dr Laxma Reddy Billa, Senior module process engineer at Dynex Semiconductor Ltd., UK.



Webinar 6: The Department of ECE in association with ASGEC conducted a webinar on "Telecom Transmission Networks" on 30th May, 2020. The resource person for the session was Er. Nebin Nazar, Functional Lead – Fiber Planning & Delivery, Network Operations, Accenture Solutions Pvt. Ltd.

Add-on Courses

The Department of ECE organized various add on courses for different semesters. Faculty in charge of Add on courses: Er. Roshni Oommen.



Three-day add-on course on “ANSYS-HFSS” for students of S8 ECE from 6th Jan to 9th Jan, 2020. This course was handled by Entuple Technologies. The resource persons were Er. Shashikumar R and Er. Dinesh Chavan, Application Engineers, Entuple Technologies, Bangalore.



Three-day add-on course on “Introduction to MATLAB and ANSYS-HFSS” for students of S5 ECE from 26th July to 30th July, 2019. The resource persons were Er. Preena Prasad and Dr. Riboy Cheriyan.



Four-day add-on course on “Python programming” for students of S4 ECE from 14th to 17th Jan, 2020. The resource persons were Er. Tibin Thomas, Er. Hari M, Er. Justin Mathew, Assitant Professors, Computer Science and Engineering Department, Saintgits College of Engineering.



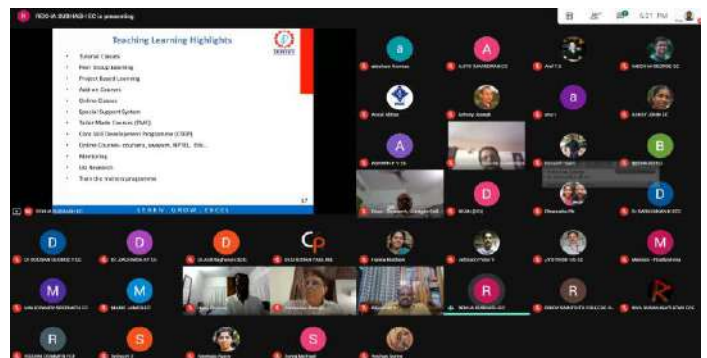
IETE sponsored two-day add-on course on “Hands-on workshop on Soldering practice and LED bulb making”, for students of S2 in ECE on 10th Jan and 18th Jan, 2020. The resource persons were Rakhul Kunjumon, Babu Geoge, Arun P.S, Technical staff, ECE Department.



The Phase-I of the “Add-on courses on Robotics” for the 1st year B.Tech Robotics and Automation students was conducted on 26th October 2019, 17th and 18th January 2020. Er. Nishanth P. R., Er. Chinn Mohanan, Dr.Youhan Sunny, Er. Vinu Koshy Abraham, Er. Maheswary Sreenath were the mentors of the program.

DAB Meeting

The 8th advisory board meeting of Department of ECE was conducted in online mode through google meet on 6th June 2020. The members of DAB reviewed the activities of academic year 2019-20, actively discussed and finalized the action plan of academic year 2020-21.



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