

ELECTRO MEDIA

Department News Letter

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Vision

- To provide innovative teaching and learning methodologies for excelling in a high-value career, higher education and research to the students in the field of Electronics and Communication Engineering to meet the needs of the industry and to be a part of the advancing technological revolution.

Mission

- To create engineers of high quality on par with international standards by providing excellent infrastructure and well qualified faculty.
- To enhance the collaborative and multidisciplinary activities to develop human and intellectual qualities.
- To provide technical expertise to carry out research and development.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: Graduates will be able to comprehend Mathematics, Science, Engineering fundamentals, laboratory and work based experience to formulate and solve problems related to the domain and shall develop proficiency in computer based engineering and the use of computational tools.

PEO2: Graduates will be prepared to communicate and work teambased on the multidisciplinary projects practicing the ethics of their profession with a great sense of social responsibility.

PEO3: Graduates will recognize the importance of lifelong learning to shine as experts either as entrepreneurs or as employees and thereby broadening their professional knowledge.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT ORGANIZED EVENTS

- ❖ Two Day Techno Cultural and Management Fest Dhruva 2019 on 14th March 2019 and 15th March 2019. Under this fest the Department of ECE has organized various events tabulated below

Sl. No	Event Name	Coordinators
i)	Exquizme- Quiz	Ms. V.Mithya AP/ECE
ii)	Dynamic Dudes - Treasure Hunt	Dr. P. Eben Sophia AP/ECE
iii)	Mind Benders - Slide Show Projection	Dr. C . Priya ASP/ECE
iv)	Scientia Census - Circuit Debugging	Mr. G. Arun Francis AP/ECE
v)	Technia Bouncing - Arduino Project	Dr. A. Mohan Babu AP/ECE
vi)	Recent Trends in IoT for Industrial Applications	Mr. M. Naveenraj AP/ECE Dr. P. Eben Sophia AP/ECE
vii)	Hands on Training on LoRa	Ms. V.Mithya AP/ECE Mr. G. Arun Francis AP/ECE
viii)	Hands on Traning on Embedded Systems using Java	Dr. A. Mohan Babu AP/ECE Dr. P. Sivakumar Professor/ECE
ix)	Hands on Training on Introduction to CST Tool for Antenna Design	Ms. V.Mithya AP/ECE Mr. G. Arun Francis AP/ECE
x)	Drone Race - Championship Event	Ms. L. Saranya AP/ECE



FACULTY ACHIEVEMENTS

Journal Publications

Dr.P.Karthigaikumar Prof and Head / ECE

- ❖ Jausmin, K. J., published a paper titled "Security Measures, Challenges and Energy Consumptions of Blockchain Technology, Its Applications." *Journal of Green Engineering*, Vol. 11, No. 1, pp. 547-555, 2021.
- ❖ Dr.P.Karthigaikumar., published a paper titled "Implementation of Interior Noise Control System using Adaptive Filter for on Road Car Applications", *Wireless Personal Communications*, Vol.104, pp.339-356, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "FPGA Implementation of an Optimized Key Expansion Module of AES Algorithm for Secure Transmission of Personal ECG Signals", *Design Automation for Embedded Systems*, Vol.22, pp. 13-24, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "Mobile Cloud Computing for ECG Telemonitoring and Real-Time Coronary Heart Disease Risk Detection", *Biomedical Signal Processing & Control*, Vol. 44, pp. 138-145, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "An Immersive Learning Model using Evolutionary Learning", *Computers and Electrical engineering*, Vol. 65, pp. 236-249, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "An Optimized S-Box Circuit for High Speed AES Design with Enhanced PPRM Architecture to Secure Mammographic Images", *Journal of Medical Systems*, Vol. 43, No. 31, pp. 441-455, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "Meticulous Fuzzy Convolution C Means for Optimized Big Data Analytics: Adaptation towards Deep Learning" in *International Journal of Machine Learning and Cybernetics*, Vol. 10, pp. 3575-3586, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "Novel Chroma Subsampling Patterns for Wireless Capsule Endoscopy Compression", *Neural Computing and Applications*, Vol. 32, pp. 6353-6362, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "FPGA Implementation of High Speed Compact S –box", *International Journal of Pure and Applied Mathematics*, Vol. 119, No. 16, pp. 1703-1711, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled "Automatic Retinal Lesions Detection of Diabetic Retinopathy using Curvelet Based Enhancement", *IJPHRD*, Vol 10, No. 2, pp. 1047-1053, 2019.

Dr.B.Nagaraj Prof / ECE

- ❖ Dr.B.Nagaraj., published a paper titled "A deep analysis on optimization techniques for appropriate PID tuning to incline efficient artificial pancreas", *Neural Computing and Applications*, Vol. 32, No. 9, pp. 3687-3698, 2019.
- ❖ Dr.B.Nagaraj., published a paper titled "Tuning of a PID Controller using Evolutionary Multi Objective Optimization Methodologies and Application to the Pulp and Paper Industry", *International Journal of Machine Learning and Cybernetics*, Vol. 10, pp. 2015-2025, 2019.
- ❖ Dr.B.Nagaraj., published a paper titled "Meticulous Fuzzy Convolution C Means for Optimized Big Data Analytics: Adaptation towards Deep Learning", *International Journal of Machine Learning and Cybernetics*, Vol. 10, pp. 3575-3586, 2019.
- ❖ Dr.B.Nagaraj., published a paper titled "Soft computing based industrial process: A review", *Pakistan Journal of Biotechnology*, Vol. 15, No. 1, pp. 107-110, 2019.
- ❖ Dr.B.Nagaraj., published a paper titled "Medical image classification for disease diagnosis by DBN methods" *Pakistan Journal of Biotechnology*, Vol. 15, No. 1, pp. 185-189, 2019.
- ❖ Dr.B.Nagaraj., published a paper titled "Smart real time rescue system for fishermen", *Pakistan Journal of Biotechnology*, Vol. 15, No. 1, pp. 219-227, 2019.

Dr.A.Rajendran Prof / ECE

- ❖ Dr.A.Rajendran., published a paper titled "An Integrated Multi Model Classification Approaches Towards Diagnosis of Parkinson Disease", *Caribbean Journal of Science*, Vol. 53, No. 1, pp. 2172-2182, 2019.

Dr.C.Arvind Prof / ECE

- ❖ Dr.C.Arvind., published a paper titled "A millimeter wave generation scheme based on frequency octupling using LiNbO3 Mach-Zehnder Modulator", *National Academy Science Letters*, Vol. 42, No. 5, pp. 401-406, 2019.
- ❖ Dr.C.Arvind., published a paper titled "A Novel scheme for Optical Millimeter Wave Generation using LiNbO3 Mach-Zehnder Modulator without amplifier", *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, Vol. 1, No. 1, pp. 1-6, 2019.
- ❖ Dr.C.Arvind., published a paper titled "An optical millimeter wave generation using carrier suppression modulation scheme based on frequency 12-tupling Lithium Niobate Mach Zehnder Modulator without an optical filter", *AIP conference Proceedings*, Vol. 2034, No. 1, pp. 2021-2026, 2019.

Dr.P.Sivakumar Prof / ECE

- ❖ Dr.P.Sivakumar., published a paper titled "Big Data based Image Retrieval Model using Shape Adaptive Discreet Curvelet Transformation", *Springer Nature*, 2019.
- ❖ Dr.P.Sivakumar., published a paper titled "Electrostatic Precipitator in Ash Removal System:A Comprehensive Review", *IJITEE*, Vol. 8, No. 4s, pp. 321-324, 2019.
- ❖ Dr.P.Sivakumar., published a paper titled "Feature Extraction through Chaotic Metrics for Weld Flaw Classification", *IJITEE*, Vol. 8, No. 4s, pp. 422-426, 2019.
- ❖ Dr.P.Sivakumar., published a paper titled "On the Performance of Rectangular Microstrip Patch Antenna using Rogers RT/ Duriod 5880", *IJITEE*, Vol. 8, No. 5s, pp. 353-357, 2019.

Dr.P.Eben Sophia Prof / ECE

- ❖ Dr.P.Eben Sophia., published a paper titled "An Optimized Predictive Coding Algorithm for medical image compression", *International Journal of Advanced Intelligence Paradigms*, Vol. 10, No.10, pp. 236-243, 2019.

Mr.G.Arun Francis Asst. Prof / ECE

- ❖ Mr.G.Arun Francis., published a paper "Solution to Environment Disturbances Using IoT", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 406-409, 2019.
- ❖ Mr.G.Arun Francis.,published a paper "IoT based Vehicle Emission Monitoring System" *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 410-412, 2019.
- ❖ Mr.G.Arun Francis.,published a paper "Object Detection using Ultrasonic Sensor", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 6s, pp. 207-209, 2019.

Ms.V.Mithya Asst. Prof / ECE

- ❖ Ms.V.Mithya., published a paper "Smart Toilets using Turbidity Sensor", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 413-417, 2019.
- ❖ Ms.V.Mithya., published a paper "Smart Gardening System", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 422-426, 2019.
- ❖ Ms.V.Mithya., published a paper "Smart Highway Toll Collection System", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 418-421, 2019.

Mr.M.Naveenraj Asst. Prof / ECE

- ❖ Mr.M.Naveenraj., published a paper "Smart Mobile Detector for Unapproved Usage of Cell Phones", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 427-431, 2019.
- ❖ Mr.M.Naveenraj., published a paper "Lung Image Segmentation using Modified K-Means Algorithm", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 5s, pp. 432-434, 2019.

Ms.A.Nivedita Asst. Prof / ECE

- ❖ Ms.A.Nivedita., published a paper "Impact on Failure in an Electro Mechanical Actuator based servo system using sequel", *International Journal of Systems Signal Control and Engineering Application*, Vol. 11, No. 3, pp. 41-47, 2019.

R. Arunkumar Asst. Prof / ECE

- ❖ Mr.R.Arun Kumar., published a paper titled "Meticulous Fuzzy Convolution C Means for Optimized Big Data Analytics: Adaptation towards Deep Learning", *International Journal of Machine Learning and Cybernetics*, Vol. 10, pp. 3575-3586, 2019.
- ❖ Mr.R.Arun Kumar., published a paper titled "Medical image classification for disease diagnosis by DBN methods" *Pakistan Journal of Biotechnology*, Vol. 15, No. 1, pp. 185-189, 2019.
- ❖ Mr.R.Arun Kumar., published a paper titled "Smart real time rescue system for fishermen", *Pakistan Journal of Biotechnology*, Vol. 15, No. 1, pp. 219-227, 2019.

Mr.M.Pradeepraj Asst. Prof / ECE

- ❖ Mr.M.Pradeep., published a paper titled "Smart real time rescue system for fishermen", *Pakistan Journal of Biotechnology*, Vol. 15, No. 1, pp. 219-227, 2019.

Conferences

- ❖ Ms.L.Saranya has participated and presented a paper entitled "Optimization of Power in 8T SRAM cell by Using Transistor Stacking Method" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Mr.C.Mukuntharaj has participated and presented a paper entitled "Online Fingerprint Verification System" at Kongu Engineering College on 25th Jan 2019.
- ❖ Mr. P. Ajay has participated and presented a paper entitled "A survey on Security and Various Attack in wireless sensor Network" at

Dr.N.G.P Institute of Technology on 15th Feb 2019.

- ❖ Ms.MunmunSardar has participated and presented a paper entitled "IoT Based Vehicle Parking of Management System" at Kalasalingam Institute of Technology on 16th Feb 2019.
- ❖ Dr.A.Mohan Babu has participated and presented a paper entitled "IoT Based Andriod Technology for People with Disabilities" at SRM Institute of Science and Technology on 28th Jan 2019.
- ❖ Ms.Vanapalli S Sunitha Ragaventi has participated and presented a paper entitled "Smart Parking Using IoT Technolgy" at SRM Institute of Science and Technology on 28th Feb 2019.
- ❖ Ms.V.Mithya has participated and presented a paper entitled "Soldier Security and Health Monitoiring" at Kongu Engineering College on 25th Jan 2019.
- ❖ Mr.R. Selvakumar has participated and presented a paper entitled "Intelligent Traffic Control System Using GSM" at Kongu Engineering College on 25th Jan 2019.
- ❖ Dr.A.Rajendran has participated and presented a paper entitled "Automatic Driver Drowsiness Alert System by GSM" at Kongu Engineering College on 25th Jan 2019.
- ❖ Dr.P.Eben Sophia has participated and presented a paper entitled "Automation of a paper Based Waste Tracking System" at Kalasalingam Institute of Technology on 16th Feb 2019.
- ❖ Mr.EbinEphrem Elavathingal has participated and presented a paper entitled "Implementation of Room Automation with Cloud Based Monitoring System" at Kalasalingam Institute of Technology on 16th Feb 2019.
- ❖ Mr. R. Arunkumar has participated and presented a paper entitled "Fuel Allocation and Lock out System" at Kalasalingam Institute of Technology on 16th Feb 2019.
- ❖ Ms.R. Adeline Daisy has participated and presented a paper entitled "IoT Bsed Automation and Solution for Medical Drug Storage Smart Drug Store" at Kalasalingam Institute of Technology on 16th Feb 2019.
- ❖ Ms. M. J. Nisha has participated and presented a paper entitled "Intelligent Medicine Box for Medication Management using IoT" at SRM Institute of Science and Technology on 28th Feb 2019.
- ❖ Ms. T. Janani has participated and presented a paper entitled "Nanotechnology Phenomena in the Light of the Solar Energy" at SRM Institute of Science and Technology on 28th Feb 2019.
- ❖ Mr. M. Naveenraj has participated and presented a paper entitled "Energy Efficient and Security Requirement of Wireless Medical Sensor Network" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Ms. S. Malini has participated and presented a paper entitled "A significant Methods for Image Enhancement" Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Dr .S.Deepa has participated and presented a paper entitled "Machine Learning Paradigms For next Generation Wireless Network" DR.N.G.P Institute of Technology on 15th Feb 2019.
- ❖ Dr.C.Priya has participated and presented a paper entitled "A significant Methods for Image Enhancement" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Dr.R.Vimalathithan has participated and presented a paper entitled at "Security of the network Based on Duration of Attacks" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Ms. A. Nivedita has participated and presented a paper entitled "Security of the network Based on Duration of Attacks" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Mr.G.Arun Francis has participated and presented a paper entitled "Energy Efficient and Security Requirement of Wireless Medical Sensor Network" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Dr. B. Nagaraj has participated and presented a paper entitled "A Survey on Security and Various Attacks in Wireless Sensor Network" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.
- ❖ Mr. N. PrasannaRaj has participated and presented a paper entitled "A Survey on Security and Various Attacks in Wireless Sensor Network" at Karpagam College of Engineering during 24th Jan 2019 and 25th Jan 2019.

Workshops Attended

- ❖ Dr.C.Priya ASP/ECE and Ms.L.Saranya AP/ECE has attended a two day workshop entitled "Embedded Systems with IoT" at SNS College of Technology on 24th Jan 2019 and 25th Jan 2019.

STUDENT ACHIEVEMENTS

Co-Curricular and Extra-Curricular Achievements

- ❖ Kumaran C.S (17L125), P.Jagadhesh (17L315) has participated and presented a paper “A survey on Security and Various Attack in wireless sensor Network” and secured the 1st Prize at Dr.N.G.P Institute of Technology on 15th Feb 2019.
- ❖ Arunkumar B (17L106), Moulishankar P (17L128) has participated and presented a paper entitled “Nanotechnology Phenomena in the Light of the Solar Energy” at and secured the 2nd Prize SRM Institute of Science and Technology on 28th Feb 2019.
- ❖ Kumaran C.S (17L125),P.Jagadhesh (17L315) has participated and presented a paper “A survey on Security and Various Attack in wireless sensor Network” at Dr.N.G.P Institute of Technology on 15.02.2019.
- ❖ Arunkumar B (17L106) , Moulishankar P (17L128) has participated and presented a paper entitled “Nanotechnology Phenomena in the Light of the Solar Energy” at SRM Institute of Science and Technology on 28.02.2019.
- ❖ Arthi C.V (17L204) has participated in a One Day workshop entitled “Introduction to Robotics” at Kumaraguru College of Technology on 22.3.2019.
- ❖ Priyadharshini M (17L136) has participated in a One Day workshop entitled “Introduction to Robotics” at Kumaraguru College of Technology on 22.3.2019.
- ❖ Shilpa Roshini D (17L143) has participated in a One Day workshop entitled “Introduction to Robotics” at Kumaraguru College of Technology on 22.3.2019.
- ❖ Agasthiya D (17203) has participated in a One Day workshop entitled “Introduction to Robotics” at Kumaraguru College of Technology on 22.3.2019.
- ❖ Varsha K R(17L151) has participated in a One Day workshop entitled “Introduction to Robotics” at Kumaraguru College of Technology on 22.3.2019.
- ❖ Vanishwari V D(17L150) has participated in a One Day workshop entitled “Introduction to Robotics” at Kumaraguru College of Technology on 22.3.2019.
- ❖ Madhushree A (17L126) has participated in a two day workshop entitled “IoT-Fundamentals and Applications” at Kongu Engineering College during 16.4.2019 and 17.4.2019.
- ❖ Nithesh Kumar R (17L131) has participated in a two day workshop entitled “IoT-Fundamentals and Applications” at Kongu Engineering College during 16.4.2019 and 17.4.2019.
- ❖ Sakthivel K (17L139) has attended an in-plant training conducted at BSNL Coimbatore during 26.5.2019 to 30.5.2019.

Chief Editor(s):

Mr. G.ARUN FRANCIS,
ASSISTANT PROFESSOR, DEPARTMENT OF ECE.
Mr.C.MUKUNTHARAJ,
ASSISTANT PROFESSOR, DEPARTMENT OF ECE.

Students Editorial Member(s)

16L140 SOUNDARYAN K
16L127 POORNESH KUMAR G
17L216 INFANT NISHANTH J
17L219 JEMSHAD J
18L232 RANJITHKUMAR K
19L601 PRAVIN SUNDHAR K

Programme Outcomes:

The following are the program outcomes of the department of Electronics and Communication Engineering. At the end of the program the students will have

PO1:	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2:	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3:	Design/ Development of solutions: 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.
PO4:	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid
PO5:	Modern tool usage: 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.
PO6:	The engineer and society: 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.
PO7:	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8:	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9:	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10:	Communication: 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
PO11:	Project management and finance: 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.
PO12:	Life-long learning: 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.

The Program Specific Outcomes:

The program specific outcomes are defined as

PSO1:	Good knowledge and hands-on competence to solve emerging real-world problems related to Electronic Devices and Circuits, Communication Systems, Digital Systems, and Electro-magnetics.
PSO2:	Demonstrate proficiency in specialized software packages and computer programming useful for the analysis/design of electronic engineering systems and profession.