

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ELECTRO MEDIA

Department News Letter

IN THIS ISSUE

DEPARTMENT ORGANIZED EVENTS	02
FACULTY ACHIEVEMENTS	02
Journal Publication – International/National	02
Seminar / Workshop / FDPs / STTPs – Presented / Attended	04
Patents Awarded	05
NPTEL Certifications	05
STUDENT ACHIEVEMENTS IN COCURRICULAR / EXTRACURRICULAR ACTIVITIES	05

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 team-based 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 ACTIVITIES

DEPARTMENT ORGANIZED EVENTS

- ❖ Conducted Seminar on “Know Your Rights - IPR “on 23rd September 2019.
- ❖ Conducted Guest on “Practical Applications of Digital Signal Processing” on 25th September 2019.
- ❖ Conducted “One day National Level Seminar on Advanced JAVA based Embedded Systems” on 1st October 2019.
- ❖ Conducted “One day National Level Seminar on Low voltage 19nm IC Design in CMOS and Fabrication concepts on 5th December 2019.



FACULTY ACHIEVEMENTS

Journal Publication – International/National

Dr.P.Karthigaikumar, Professor and Head / ECE

- ❖ Dr.P.Karthigaikumar., published a paper titled “Convolutional Neural Network based early fire detection”, *Multimedia Tools and Application*, Vol. 79, pp. 9083-9099, 2019.
- ❖ Dr.P.Karthigaikumar., published a paper titled “Adaptive learning and game theory based cognitive radio networks”, *International Journal of Applied Mathematics and Information*, Vol. 13, No. 6, pp. 1015-1020, 2019.

Dr.A.Rajendran, Professor / ECE

- ❖ Dr.A.Rajendran., published a paper titled “Image Segmentation Techniques Implemented in Medical Images - A Research Review”, *IJPHRD* Vol. 10, No. 2, pp. 1091-1098, 2019.
- ❖ Dr.A.Rajendran., published a paper titled “A fuzzy responsibility-Based access organizer for Leukemia record protection using KWatts Algorithm”, *International Journal of Applied Mathematics and Information*, Vol. 13, No. 6, pp. 1047-1052, 2019.

Mr.G.Arun Francis, AP/ECE

- ❖ Mr.G.Arun Francis., published a paper titled “Health Monitoring with Alcohol Detection and Ignition Control System using IoT” *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 203-206, 2019.
- ❖ Mr.G.Arun Francis., published a paper titled “Smart Ticketing System in Metro Rail”, *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 200-202, 2019.

Ms.L.Saranya, AP/ECE

- ❖ Ms.L.Saranya., published a paper titled “Optimization of Power in 8T SRAM Cell by using Transistor Stacking Effect”, *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 276-279, 2019.
- ❖ Ms.L.Saranya., published a paper titled “Power Optimization in 10T Full Adder for 4 Bit Array Multiplier”, *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 280-283, 2019.

Dr.C.Priya, ASP/ECE

- ❖ Dr.C.Priya., published a paper titled “One Touch Alarm for Women’s Safety using Arduino”, *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 258-260, 2019.
- ❖ Dr.C.Priya., published a paper titled “A significant Methods for Image Enhancement”, *International Journal of Innovative*

Technology and Exploring Engineering (IJITEE), Vol. 8, No. 6s, pp. 271-275, 2019.

- ❖ Dr.C.Priya., published a paper titled "Pressure Monitoring and Thermal Power Generation in Bike using Wireless Technology", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 261-265, 2019.
- ❖ Dr.C.Priya., published a paper titled "An Efficient Method for Secure Image Compression", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 266-270, 2019.
- ❖ Dr.C.Priya., published a paper titled "Blood Vessel Segmentation in Fundus Images", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 20-23, 2019.

Dr.S.Deepa, ASP/ECE

- ❖ Dr.S.Deepa., published a paper titled "Advanced Sensor Dynamic Measurement and Heuristic Data Analysis Model for Bridge Health Monitoring System", *International Journal of Recent Technology and Engineering*, Vol. X, No. X, pp. 1907-1912, 2019.
- ❖ Dr.S.Deepa., published a paper titled "Performance analysis of fuzzy multilayer support vector machine for epileptic seizure disorder classification using auto regression features ", *The Open Biomedical Engineering Journal*, Vol. 13, No. 1,M2, pp. 103-113, 2019.
- ❖ Dr.S.Deepa., published a paper titled "Advanced algorithms for medical image processing ", *The Open Biomedical Engineering*, Vol. 13, No. 1,M1, pp. 96-102, 2019.
- ❖ Dr.S.Deepa., published a paper titled "Recent innovations in soft computing applications", *Current Signal Transduction Therapy*, Vol. 14, No. 2, pp. 129-130, 2019.

Dr.P.Eben Sophia, AP/ECE

- ❖ Dr.P.Eben Sophia., published a paper titled "Five point feature recognition of face and body for driver safety in real time mobile applications", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 8s, pp. 574-579, 2019.
- ❖ Dr.P.Eben Sophia., published a paper titled "PIR and IR Sensor based smart home automation system using IOT for energy saving applications", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 8s, pp. 565-569, 2019.
- ❖ Dr.P.Eben Sophia., published a paper titled "Image enhancement technique using mean quantization transforms and equalization", *International Journal of Innovative Technology and Exploring Engineering*, Vol. 8, No. 8s, pp. 561-564, 2019.
- ❖ Dr.P.Eben Sophia., published a paper titled "Performance enhanced ripplelet transform based compression method for medical images", *Measurement: Journal of the International Measurement Confederation (IMEKO)*, Vol. 144, pp. 203 – 213, 2019.
- ❖ Dr.P.Eben Sophia., published a paper titled "Enhanced method of using Contourlet transform for medical image compression" , *International Journal of Advanced Intelligence Paradigms*, Vol. 14, No. 1/2, pp. 107-121, 2019.

Dr.A.Mohan Babu, AP/ECE

- ❖ Dr.A.Mohan Babu., published a paper titled "Analytical modeling of 2DEG with 2DHG polarization charge density drain current and small- signal model of quaternary AlInGa_N HEMTs for microwave frequency applications", *International Journal of Numerical Modelling*, Vol. 5, No. 6, pp.219-226, 2019.
- ❖ Dr.A.Mohan Babu., published a paper titled "Optimization of Enhancement mode P-Type Mg doped In_{0.2} Ga_{0.8} N ^ Gate DH-HEMT for Low loss high power efficient boost converter circuits", *Materials Science in Semiconductor Processing*, Vol. 103, No. 15, pp. 278-289, 2019.
- ❖ Dr.A.Mohan Babu., published a paper titled "Retinal Microaneurysms Detection using Local Convergence Index Features", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 7-11, 2019.
- ❖ Dr.A.Mohan Babu., published a paper titled "GSM Based Door Lock System", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 229-231, 2019.

Ms.V.Mithya, AP/ECE

- ❖ Ms.V.Mithya., published a paper titled "A Smart Helmet for Air Quality and Hazardous Event Detection for the Mining Industry", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 12, pp. 1447-1449, 2019.
- ❖ Ms.V.Mithya., published a paper titled "Water Reseach for Local Recharging of Ground Water Table", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 12, pp. 1420-1423, 2019.

Mr.M.Naveenraj, AP/ECE

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

- ❖ Naveen Raj M published a paper titled "IoT Based Anti-Poaching Alarm System For Trees In Forest", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8, No. 6s, pp. 193-195, 2019.

Seminar / Workshop / FDPs / STTPs – Presented / Attended

Dr.P.Karthigaikumar, Professor and Head / ECE

- ❖ Attended AICTE Sponsored short term training program on design fabrication and testing of antenna and design issues in modern antennas from 4th to 9th November 2019.

Dr.A.Rajendran, Professor / ECE

- ❖ Attended NPTEL Faculty Development Program on Control Engineering from 2nd July 2019 to 17th October 2019.
- ❖ Attended One Week Short Term Training Program on "Recent Challenges and Issues in Bio Medical Signal Processing" from 23rd to 28th September 2019.
- ❖ Attended Short Term Training Program on Design and Development of Engineering Applications using Free/Open source software from 25th to 30th November 2019.

Dr.T.K.Sethuramalingam, ASP / ECE

- ❖ Attended National level Training on Evaluation reforms in Higher education from 18th to 19th July 2019
- ❖ Attended two days FDP on "Analog and digital design using CADENCE EDA Tools" from 31st to 1st August 2019.
- ❖ Attended One Week Short Term Training Program on "Recent Challenges and Issues in Bio Medical Signal Processing" from 23rd to 28th September 2019.

Dr.V.Saminathan, ASP/ECE

- ❖ Attended NPTEL Faculty Development Program on Introduction to Wireless and cellular communication from 2nd July to 17th October 2019.
- ❖ Attended Short Term Training Program on Design and Development of Engineering Applications using Free/Open source software from 25th November to 30th November 2019.

Dr.S.Deepa, ASP/ECE

- ❖ Attended AICTE Sponsored short term training program on design fabrication and testing of antenna and design issues in modern antennas from 4th to 9th November 2019.
- ❖ Attended One Week Short Term Training Program on "Biofuels and its Application in IC Engines" from 10th to 14th June 2019.

Dr.A.Mohan Babu, AP/ECE

- ❖ Attended "Short Term Training Program on Design and Development of Engineering Applications using Free/Open source software" from 25th November to 30th November 2019.
- ❖ Attended "Hands on Training on Power Semiconductor Device Modelling and TCAD Simulation" from 29th November to 1st December 2019.

Dr.Anita Antony, AP/ECE

- ❖ Attended One day workshop on esim, first course in the IoT series for teachers on 21st September 2019.
- ❖ Attended One day workshop on esim, first course in the IoT series for teachers on 21st September 2019.
- ❖ Attended Two days national level workshop on practical approach to modern measurements and control techniques using LabVIEW from 19th September to 20th September 2019.

Ms.L.Saranya, AP/ECE

- ❖ Attended Faculty Development Program on discrete time signal processing from 17th to 22nd June 2019.
- ❖ Attended One Week Short Term Training Program on "Recent Challenges and Issues in Bio Medical Signal Processing" from 23rd to 28th September 2019.
- ❖ Attended AICTE Sponsored short term training program on design fabrication and testing of antenna and design issues in modern antennas from 4th to 9th November 2019.
- ❖ Attended One day Faculty Development program on Industrial automation on 7th December 2019.

Ms.T.Happila, AP/ECE

- ❖ Attended One Week Short Term Training Program on Recent Challenges and Issues in Bio Medical Signal Processing from 23rd to 28th September 2019.
- ❖ Attended two day National Faculty Development Program on Digital Signal processing from 13th December to 14th December 2019.
- ❖ Attended one day workshop on Machine learning using python Programming on 21st September 2019.

Ms.P.Archana, AP/ECE

- ❖ Attended One Week Short Term Training Program on “Recent Challenges and Issues in Bio Medical Signal Processing” from 23rd to 28th September 2019.
- ❖ Attended one day workshop on Machine learning using Python Programming on 21st September 2019.
- ❖ Attended one day Faculty Development program on Industrial Automation on 7th December 2019.

Patents Awarded

- ❖ Dr.S.Deepa has awarded with patent “Cleaning Device for Cylindrical Tanks” on 6th August 2019 [Patent No: 306728].
- ❖ Dr.S.Deepa has awarded with patent “Acupressure Foot Rejuvenator” on 6th August 2019 [Patent No: 306735].
- ❖ Dr.S.Deepa has awarded with patent “Tank Cleaning Equipment set” on 2nd December 2019 [Patent No: 306731].

NPTEL Certifications

- ❖ Dr.P.Karthigaikumar has successfully completed and awarded with Elite for the NPTEL course “Control systems “.
- ❖ Ms.L.Saranya has successfully completed and awarded with Elite for the NPTEL course “Digital Circuits “.
- ❖ Mr.N.M.Jayadevan has successfully completed and awarded with Elite+Silver for the NPTEL course “Digital Circuits “.
- ❖ Mr.N.M.Jayadevan has successfully completed and awarded with Elite for the NPTEL course “Control systems “.
- ❖ Mr.G.Rajaratnam has successfully completed and awarded with Elite+Silver for the NPTEL course “C Programming and Assembly Language“.
- ❖ Mr.G.Arunc Francis has successfully completed and awarded with Elite for the NPTEL course “Introduction to Electromagnetic Theory “.
- ❖ Mr.R.Selvakumar has successfully completed and awarded with Elite for the NPTEL course “Hardware modeling using Verilog “.
- ❖ Dr.A.Mohanbabu has successfully completed the NPTEL course “Microwave Theory and Techniques “.
- ❖ Dr.P. Eben sophia has successfully completed awarded with Elite+Silver for the NPTEL course “Digital Circuits “.
- ❖ Dr.A.Rajendran has successfully completed the NPTEL course “Control Engineering “.
- ❖ Ms.K.Kousalya has successfully completed and awarded with Elite+gold (Top 1 %) for the NPTEL course “C Programming and Assembly Language”
- ❖ Dr.Anita Antony has successfully completed the NPTEL course “Analog Electronic Circuit “.
- ❖ Dr.V. Saminathan has successfully completed the NPTEL course “Introduction to Wireless and Cellular Communications “.
- ❖ Dr.C Priya has successfully completed the NPTEL course “Digital Circuits “.
- ❖ Ms.T.Happila has successfully completed and awarded with Elite for the NPTEL course “Digital Circuits “.
- ❖ Ms.P.Archana has successfully completed and awarded with Elite for the NPTEL course “Digital Circuits“.

STUDENT ACHIEVEMENTS IN COCURRICULAR / EXTRACURRICULAR ACTIVITIES

- ❖ P.Abirami has successfully completed an NPTEL course and awarded with Elite.
- ❖ S.Pavithra has successfully completed an NPTEL course and awarded with Elite.
- ❖ E.Dhiva Bharathi has successfully completed two NPTEL courses and awarded with Elite.
- ❖ M.Dharshan has successfully completed an NPTEL course and awarded with Elite.
- ❖ L.Chandru has successfully completed an NPTEL course and awarded with Elite.
- ❖ K.Vanitha has successfully completed an NPTEL course and awarded with Elite.
- ❖ R.Vinodhini has successfully completed an NPTEL course and awarded with Elite.
- ❖ S.Shobika has successfully completed an NPTEL course and awarded with Elite.
- ❖ S.Rithika has successfully completed an NPTEL course and awarded with Elite.
- ❖ S.Shairam has successfully completed an NPTEL course and awarded with Elite+Silver.
- ❖ Rogith S has successfully completed an NPTEL course and awarded with Elite+Silver.
- ❖ Vanitha.K has successfully completed an NPTEL course and awarded with Elite.
- ❖ S.Sathish has successfully completed an NPTEL course and awarded with Elite.
- ❖ Gopinath A has successfully completed an NPTEL course and awarded with Elite.
- ❖ Divya Sivan has successfully completed an NPTEL course and awarded with Elite.
- ❖ Rithika has successfully completed an NPTEL course and awarded with Elite.

- ❖ Pavithira S has successfully completed an NPTEL course and awarded with Elite.
- ❖ A.P Kamaleshwarran has successfully completed an NPTEL course and awarded with Elite+Silver.
- ❖ P.J Jagadesh has successfully completed an NPTEL course and awarded with Elite+Silver.
- ❖ Charan S, Steffin S, Sendhuran B has participated in Ball Badminton Zone Event and Secured Runner up Position in the Anna University Zonal Tournaments for the Academic Year 2019-2020 at Government College of Technology from 18th to 20th August 2019.
- ❖ Sendhuran B and S. Steffin has participated in Shuttle Badminton Zone Event and Secured Runner up Position in the Anna University Zonal Tournaments for the Academic Year 2019-2020 at Government College of Technology from 18th to 20th August 2019.
- ❖ Sandhiya A has participated in Volley Ball (Women) Event and Secured Third Prize in the Anna University Zonal Tournaments for the Academic Year 2019-2020 at Government College of Technology on 20th August 2019.
- ❖ Haritha C, Initha S, Janani SP, Narmadha R, Srinithi, Ezhilarisi S, Monica A, Kanishiya A and Thiruneelakandan V has participated in Volley Ball Event and Secured Third Prize at Kumaraguru College of Technology from 22nd to 24th August 2019.
- ❖ T.Sathyabalan has participated in National Level Technical Symposium at PSG College of Technology from 28th to 29th September 2019.
- ❖ Merlin B, A Nivedita, R Pujaa and Muthu Vignesh has participated in Ball Badminton Zone Event and Secured Second Prize at P.A College of Engineering on 1st October 2019.

Chief Editor(s):

Mr. G.Arun Francis,

Assistant Professor, Department of ECE.

Mr.C.Mukuntharaj,

Assistant Professor, Department of ECE.

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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 conclusions.
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 effective presentations, and give and receive clear instructions.
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.