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*Newsletter of Electronics and Communication Engineering Department,
Christ College of Engineering, Irinjalakuda*



Exciting opening for placement season

71.4 % students in ECE placed till Dec. 2021

As the academic year reaches its halfway point, final year ECE students bag a total of thirty six job offers till December 2021. This include fifteen offers from TCS, ten from Wipro, three from Poornam Info Vision Ltd., two from RF Innovation Lab Pvt Ltd, one each from TCS Digital, Virtusa, Marlabs, Quest Global, IBS and Aspire Systems. Twenty five students out of thirty five got placed which comes to be 71.4%, and out of them, three students got three offers and five got two offers each.

'The numbers are expected to increase much further as the recruitment drives of many more companies for this season are yet to be rolled out. A few more results are expected to be published soon', said Roshan David, Placement Coordinator for the College. The total offers received in the college this year till December is 152, which is an impressive number at the mid-way of an academic year.



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VISION

To be a premier center of education, research and innovation in Electronics and Communication Engineering that nurtures adept engineers responsive to global challenges and societal needs.

MISSION

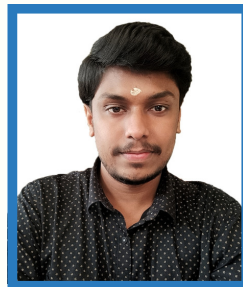
- To enhance the teaching-learning process by implementing state-of-the-art practices suitable for a challenging technological world.
- To promote innovative research in emerging areas for the advancement of knowledge towards developing sustainable solutions for the society.
- To foster ethics, values and an urge for continuous improvement vital for professionals to emerge as responsible leaders.

PSO

- Apply the concepts of Communication Engineering, VLSI, Embedded Systems, Signal Processing and allied disciplines to analyze, design and develop engineering systems.
- Proficiently use the latest hardware and software tools relevant to Electronics and Communication Engineering in solving real world engineering problems.
- Foster professional ethics, adaptive attitude, managerial skills and an inquisitive mind for continuous learning, essential for the core and allied engineering practices.

CONSULTANCY**ECE Department undertakes consultancy work for DRDO**

Group develops Low noise frequency synthesizers in association with RFMW Innovations Lab



Rahul Manohar O, Krishnaprasad C, Albin Joseph C R

A research group from ECE Department- Rahul Manohar O, (Assistant Professor), Albin Joseph C. R (S7 ECE) and Krishnaprasad C. (S7 ECE) successfully completed consultancy work for Defence Research Laboratory, a research lab under Defence Research and Development Organisation (DRDO), Government of India, in association with RFMW Innovations Lab Private Limited, Bangalore.

The team was assigned with the task of designing two Low-Noise Frequency Synthesizers with comprehensive Graphical User Interface for frequency tuning. The frequency synthesizer modules serve as integral parts of frequency up and down converters which are used in defense RADAR.

Upon efficient completion of the assigned work RF Innovation Lab Pvt. Ltd absorbed Albin Joseph C R and Krishna Prasad C as Digital System Design Engineers in their company with a CTC of 7 Lac per Annum, which is the highest package received by a student from CCE in the core Communication Engineering field ever.

EDITORIAL TEAM**STAFF EDITORS**

Tony C Thomas
Catherine J Nereveettil

STUDENT EDITORS

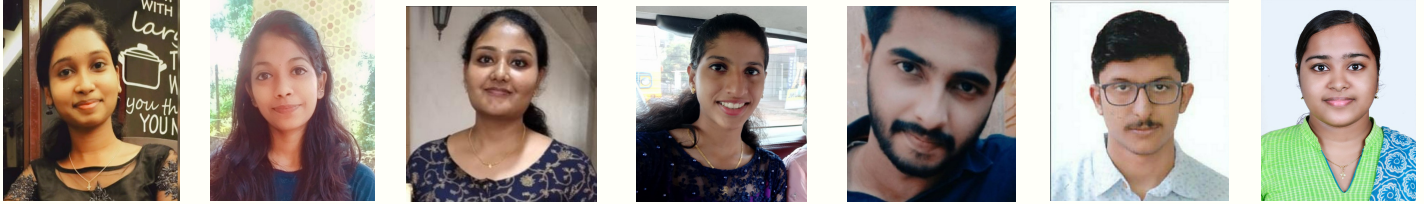
Alan Alphonse (S7 ECE)
Aldrin Varghese (S5 ECE)
Abhinav Menon (S3 ECE)
Paul Joji Chirayath (S3 ECE)

Rehan P R (S3 ECE)
Meghasyam (S3 ECE)
Sandra Palatty (S7 ECE)
Nancy Paul (S5 ECE)
Aparna K (S3 ECE)
Meenakshi P S (S3 ECE)
Aishwarya Abi (S3 ECE)
Aleena John Gratius (S3 ECE)
Helenmary Pulikkottil Anto (S1 ECE)

RESULTS

Six students from ECED in 'ten pointers' club'

Odd Semester results 2021 - 22



Class toppers: Mary Angel, Meenakshi P S (S1 EC), Anna Jose, Glenda P V, John Babu Kakkassery, Rhithik Raj V (S3 EC), Sona Davis (S7 EC)

Six students from ECE Department scored 10/10 SGPA in the recently announced results of first, third and fifth semester examinations conducted by APJ Abdul Kalam Technological University in 2020-21. In Semester 1 Examinations, Mary Angel and Meenakshi P S, secured first position with SGPA 10, Sanjay Krishna Sajeev secured the second position with SGPA 9.82 and Athul Krishna secured the third position with SGPA 9.76. In Semester 3 Examinations, Anna Jose, Glenda P V, John Babu Kakkassery and

Rhithik Raj V secured first position with SGPA 10, Gopika M S and Alan Lijo Thattil secured second position with SGPA 9.91 and Nancy Paul secured the third position with SGPA 9.86. In Semester 5 Examinations, Sona Davis secured the first position with SGPA 9.65, Eleena Sajan and Naveena P P secured the second position with SGPA 9.61 and Neha Raphy secured the third position with SGPA 9.13. The toppers were felicitated at the merit day celebrations of the college.

STUDENT ACHIEVEMENTS

Rohan Thanjan (S1 EC) recognised as one of the Top Six Finalist of GTH India 2021 organized by Glocal Pvt Ltd held on 10/12/21 at Pune, Maharashtra.

Safreen K Saleem (S3 EC) secured first in WORDHIPPO 2.0 word search competition on the topic 'nuclear power plant' organised by IEEE PES MEA Engineering College, first in digi Art hosted by IEEE ComSoc SBC CE Poonjar in association with WiE AG CE Poonjar as part of IEEE Day 2021 Celebrations and second position in Refrigeration and air conditioning conducted as part of SAE WEEK 2021.

Sreelakshmi KV (S3 EC) secured First position in INTO THE VOID Quiz competition conducted by IEEE SB TKMCE and Second position in SAE

Week process planning competition conducted by Mechanical Department of Christ college of Engineering.

Ivan and Jerin Joy (S3 EC) secured 2nd position in line follower robot competition held by KMEA college of engineering Thrikkakkara.

Vasudev Ravunni (S3 EC) secured 2nd prize in Quizzard environment tech

Paul Joji Chirayath (S3 EC) secured 111th position in SparkAR International competition for Cyberware Challenge held on 14th September to 13th October, 2021

Meghasyam Pulikkathara Modesh (S3 EC) secured 231th position in SparkAR International competition for Cyberware Challenge held on 14th September to 13th October, 2021.

CONTEST

CCE team emerges second runner up in V-Guard Big Idea Tech design contest 2021

An interdisciplinary team from Christ College of Engineering which includes members from ECE Department bagged the second runner-up position in V-Guard Big Idea Tech design contest 2021. The team guided by Dr. V Sampath Kumar (Professor, Department of ECE) and Mr Sunil Paul (Assistant Professor, Department of ME) consisting of Neha Raphy (S7 ECE), Rajeshwari PS (S5 EEE) and Albert Prakash (S3 EEE) received a cash prize of Rs. 25,000. The award was for designing a Voice enabled AI based smart water heater- a water heater that would work



Dr V Sampathkumar, (Prof.) , Neha Raphy (S7 ECE)



according to voice commands of the user, integrating AI. The focus of the design was on energy conservation, cost-effectiveness and ease of use.

The theme for Tech-Design Contest this year was “How can V-Guard enable a better quality of life with thoughtful and smart products that will bring home a better tomorrow”. This was meant for the participants to present insightful and innovative ideas for business growth in alignment with the business strategy of V-Guard.

RESEARCH

ECE students present paper in IEMPOWER 2021

Paper discussing the design and simulation of a novel patch antenna for sub 6GHz 5G applications will soon be published in AIP

Ann Treasa Benny, Sneha Mariya Vincent and Vineeta Varghese Thekkan, 2017-21 batch students mentored by Mr Rahul Manohar O, Assistant Professor, Department of ECE, presented a paper at ‘International Conference on Industrial Electronics (IEMPOWER 2021) organised by Institute of Engineering and Management, Kolkata. The paper titled ‘A low power patch antenna with improved gain for 5G applications’ discusses the design and

simulation of a novel patch antenna for sub 6GHz 5G applications in India. In order to enhance the gain, a metamaterial superstrate based on FR4 dielectric is introduced into the design. The novelty of the design lies in its compact size, with an average 30 percent miniaturisation with respect to the conventional antenna. The paper will get published in Scopus indexed proceedings by American Institute of Physics (AIP) soon.

INDUSTRY PARTNERSHIP

ECED signs MoU with Graphene Automation Pvt Ltd.

Step to initiate tie-up with automation industry

ECE Department of Christ College of Engineering signed a three year MoU with Graphene Automation



Private Limited, Kochi. The MoU aims at fostering industry- academic interaction through cooperation in a variety of joint programmes like joint academic research and consultancy projects, student internship, employment and comprehensive learning activities like seminars, workshops and conferences. At a ceremony held at Christ College of Engineering on 28th September 2021, Fr John Paliakara, Executive Director, CCE and Mr Gopalakrishnan S B, M D, Graphene Automation Private Limited signed the MoU on behalf of both the sides. Fr Joy Payyappilly, Dr V D John, Mr Rajiv T R, Dr Caren Babu were also present.

As part of the tie- up, students will be given opportunity to work in joint projects undertaken by

with Graphene Automation and ECE Department. The collaboration targets at enhancing the skill sets of students as per the requirements of automation industry.



Faculty interaction with ManasVR Labs on AR-VR

AR- VR technology demonstration and discussions for collaboration

To foster Industry - Academia Collaboration, the Department of ECE organised a one hour demonstration on AR/VR technology to faculty members of the Department. The session was handled by a team from Manas VR Lab headed by Ms. Soorya, CEO of the company. VR technology demonstration using Oculus Go unit was the key feature of the session. The possibilities of using Unity and C sharp in creating AR/VR videos associated with academic subjects, student internship opportunities and job opportunities in AR-VR area were also discussed.



ADD - ON PROGRAMME

'Fun with electronics' - 4 day boot-camp for freshers

Add-on course on ARDUINO and TINKERCAD by ECED and IEDC

The Department of Electronics and Communication Engineering in association with IEDC conducted a four day workshop 'FUN WITH ELECTRONICS' for the newly admitted students starting from 9th November, 2021. This workshop was conducted in order to bridge the gap between what the students were taught in the school and what they would be learning in B Tech. The resource persons for the workshop were Mr. Rajiv T. R. and Ms. Sreelekha T, Assistant Professors at CCE.

The first two days of the workshop were focused on giving the students an introduction to TINKERCAD, a free online platform for 3D designing, electronics and coding, wherein they were able to learn how to design and run electronic circuits. It was a fun and an innovative approach to teach the students about the basic elements and principles of a circuit.

The last two days of the workshop aimed at familiarising the students with the basics of Arduino boards and to give an introduction to IoT and Robotics. It provided a real hands-on experience where the students learned to

programme and control various components like LEDs, DC motors etc.

When asked about the workshop, a student who participated said "The workshop was very insightful and useful. Such workshops give us quality output from the college." "Being a Bio-Math student in high school, it was very useful that I attended this workshop. It gave me a rough idea about what all things we would be learning about." said another student.

During the valedictory function, Executive Director Rev. Fr. John Paliakara CMI, Joint Director Rev. Fr. Joy Payyappilly CMI, Principal Dr. Sajeev John and Vice Principal Prof. V. D. John addressed and congratulated the team for organising such a successful and fruitful event. The four day programme was coordinated by Dr Caren Babu, Associate Professor, Department of ECE with the technical support from Aswin T A and Linto Davis, Technical staff, ECED. Furthermore, they encouraged the students to take part in such workshops that will be conducted in the future with the same excitement and enthusiasm.



WORKSHOP

Training on 'Electronics and Industrial Automation' by Graphene Automation

ECE Department in association with Graphene Automation, Kakkanad, organized a workshop on "Electronics and Industrial Automation" on 10th October 2021. The final year ECE and EEE students attended the two hour hands-on session. Students were familiarized with the process emulator used in industries. An outline of projects being done in the company was also presented during the session.



INDUSTRIAL VISIT

2019 batch students visit Chethana studios, Thrissur

ECE Department organized a one day industrial visit to Chethana Sound Studios, Thrissur for S4 ECE students. It was an opportunity to study various acoustic techniques used to enable quality recording and reproduction of music and audio for professional requirements. Mr. Rajiv T R and Ms Sreelekha T (Assistant Professors), Bastin Jaison and Glenda P V (Class representatives) coordinated the programme.



INVITED TALK

'Birth of a chip' - invited lecture on VLSI technology

Lakshman M, ASIC Engineer, Juniper networks, delivers talk

Department of Electronics and Communication Engineering organised an interactive session for B.Tech ECE students titled "BIRTH OF A CHIP" - which describes the steps and procedures, their complexity and timeline through which a chip comes to life, on Saturday 25th, September 2021.

Lakshman M, ASIC Engineer, Juniper networks, Bangalore delivered an invited lecture and interacted with the students.

The lecture gave insights to VLSI design procedures and motivated the students to get placed in Core Companies. He also mentioned the scope of doing internships through which students could be absorbed into VLSI giants.

Manju I Kollannur and Della Reasa Valiaveetil, Assistant Professors, Department of ECE coordinated the event. The session was attended by around sixty students.

PRODUCT DEVELOPMENT

CCE family celebrates Christmas with 'Estrella' stars

Stalls of self- assembled stars made by students gain wide attention

'Twinkle twinkle little star, how I wonder what you are!'. ECE students made this Christmas special as self-assembled LED stars, developed in the department twinkled in the Christmas celebrations of the



Rs 450.

Sale of stars, titled 'Estrella', was inaugurated by Fr John Paliakara CMI, the Executive Director of the college, on 16th of November 2021. Fr. Joy Payyapilli CMI (Joint Director), Dr Sajeev John (Principal),

members of Christ family. ECTA team comprising of semester 3 and semester 5 students under the guidance of faculty members Manju I Kollannur and Della Reasa Valiyaveetil with the technical support from Aswin T A and Linto Davis, Technical Staff, assembled about seven varieties of LED stars with prices ranging from Rs 150 to

Dr. V D John (Vice-Principal), Mr. Rahul Manohar O, faculty members, Mr. Jeelson Paul (Alumni representative) etc. were also present. A special stall was also organised at Christ College (Autonomous) on 22nd November 2021 for the sale of stars which gained much attention .

'PACK UP!!!' - Farewell for 2017 batch students

On 2nd October 2021, a well organized farewell was conducted by the students of S7 ECE in association with ECTA for the pass out batch 2017-2021 of Electronics and Communication Department at Vanchipuram Beach, Kaipamangalam. The program was inaugurated by Rev. Fr. John Paliakara, Executive Director. Around hundred, comprising both students and teachers, gathered to make the event memorable with fun games and performances. The entire ambiance was so warm with outpouring emotions of the outgoing students but they left with happy faces and colourful memories.



PROFESSIONAL BODY

CCE hosts IETE Foundation Day Celebrations

68th IETE Foundation Day focusses on 'Advancing Skill Development to the Next Level - A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transitions'

The ISF unit of Christ College of Engineering hosted the 68th IETE Foundation Day celebrations of IETE Kochi Centre on 20th October 2021 in online mode. Fr John Paliakara CMI, Executive Director, Christ College of



Mr. S. Vijayan Pillai shared memories from his journey as a student, professional and an administrator. He encouraged students to grab the opportunities available to them through hard-work and perseverance.

Engineering, Irinjalakuda, delivered the opening address. Mr Arun Alex Coordinator-Industry Attachment Cell, APJ KTU , attended the function as the chief guest and delivered the keynote address on the topic “Advancing Skill Development to the Next Level - A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transitions”. In his talk, he emphasised the need for increasing the employability of the students.

Mr S. Vijayan Pillai, director of NPOL-DRDO, Kochi and senior IETE member, was honoured during the occasion. In his reply speech,

Dr Sajeev John, Principal, CCE, Mr Rahul Manohar O, HoD, ECE Department, Mr C Krishnakumar, Chairman IETE Kochi Centre, Mr. M N Narayanan, Vice-Chairman, IETE Kochi Centre, Dr Manju Bhaskar, Hon. Secretary, IETE Kochi Centre, Dr Ansiya Eshack, Hon. Treasurer, IETE Kochi Centre, and Mr Tony C Thomas, Staff Coordinator, ISF-CCE also spoke during the occasion.

The programme was hosted at zoom plat-forme and live streamed through Youtube. About 200 participants including IETE and ISF members attended the programme.

DEPARTMENT MAGAZINE

ECED releases 'Resonance' - annual magazine

The annual department magazine was released on 4th October 2021 by Executive Director Fr John Paliakara CMI. Titled 'Resonance', the magazine is rich with technical and non-technical articles, book reviews, short stories



Team Resonance with Fr John Paliakara CMI, Dr V D John, Prof. Premakumar N R, Mr Rajiv T R , Ms. Catherine J Nereveettil (Staff Coordinator).

etc. penned by students as well as alumni of the department. The editorial team include Ms Catherin J Nereveettil and Ms Shintu Abraham as the staff coordinators and Martin Pius as the Chief editor.

ALUMNI ACTIVITY

ECSA inaugurated

Electronics and Communication Student Alumni (ECSA), the official alumni association of ECE Department of Christ College of Engineering was inaugurated by Fr John Paliakara CMI, Executive Director, at its first ever official general body meeting organised on 4th October 2021. The gathering was held online and the committee of office bearers took charge with Shine Tharakan (2015 batch) as the President, Sandhya Satheeshan (2016 batch) as the General Secretary.

As its first initiative, ECSA had launched a campaign to collect textbooks from among its members and donated them to the Department Library.' The enthusiasm shown by the former students promises active involvement of the alumni in the future journey of the Department', said Agnel John K J , Assistant Professor and event Coordinator. More than sixty alumni members attended the meeting out of the total ninety alumni of the Department.

FACULTY ACHIEVEMENTS

Dr V Sampath Kumar and **Dr Caren Babu** were awarded guideship and co- supervisorship respectively in APJ Abdul Kalam Technological University.

Dr. Caren Babu published a paper titled "Efficient scheme for WCE image compression based on strategic chroma subsampling and encoding" in Biomedical Signal Processing and Control, Volume 71, Part B, 2022,(SCI journal with impact factor-3.88).

Mr. Rahul Manohar O served as the resource person for one-day workshop on 'creating a road-map for student entrepreneurship' organised by IEDC, St Joseph's College (Autonomous), Irinjalakuda and in Maschinen fest organised by Dept. of ME, CCE

Dr V Sampath Kumar acted as the session chair in National Conference on Recent Trends in Engineering organised by College of Engineering, Trikaripur on Dec 13-14 (TEQIP sponsored)

Dr V Sampath Kumar served as resource speaker in a webinar ' Introduction to design thinking and innovation' at University of Technology and Applied Sciences, Ibra

Dr Caren Babu served as primary evaluator for national level competition 'Toyachthon 2021' organised by AICTE.

SOCIAL MEDIA

Protalks - "More Knowledge in less time"

Social media initiative by ECE students to enrich online platforms with positive thoughts and essential information

'Protalks'-a sequence of info-talks from experts on various topics which is a novel initiative from S5 ECE students is gaining attention on social media,

mainly instagram. Five episodes on five different topics with five different experts have been released with the objective of enriching online platforms with positive thoughts and essential information. Dr. Reshma Jose (Taluk Hospital, Chalakudy), Varghese Benny (CEO, Rabitsquare), Veena Jaykumar (Assistant Prof. , Bharat Matha College, Thrikkakara), Dev Tharakan (Independent Cyber



security Consultant, Canada) and Fr John Paliakara (Executive Director, Christ College of Engineering) appeared in episode one to five.

The design of an episode starts with collecting questions and doubts from students which would be answered by the resource persons through short videos which would be released through instagram. The concept was guided by Deepika A K and Sreelekha T, Assistant Professors and class tutors.