A. J. Institute of Engineering & Technology

AJIET

PRATHIBIMB

The Reflection of EC @ AJIET

Volume 2

Issue 1

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Academic Year (Jul-Sept): 2020-2021

ABOUT THE DEPARTMENT

The Department of Electronics and Communication (E&C) Engineering in AJIET is one of the highly sought after engineering departments with an intake of 60 students. The department can boast of an excellent infrastructure with state of the art laboratories and very dynamic team of experienced Faculty. The course contents and the training are intended to equip the students with the pragmatic skills required in-line with the present scenario in E&C related Industries, so that once the students reach their final year, they become industry ready. The major thrust areas the department is focusing upon in Research and Training are embedded systems, signal processing, VLSI Design, Robotics, Artificial Intelligence and Machine learning to name a few. The department gives more emphasis for practical aspects in various domains of electronics and communication engineering by undertaking mini and major projects, technical talks from eminent personalities of the industries and frequent industrial visits which help in the overall development of budding engineers who shape the future of our country. The Department of Electronics and Communication (E&C) Engineering is also equipped with incubation center linked with EPITAS.

VISION

To be recognized as a centre of excellence in the region by nurturing the young innovative minds into skillful and ethical professionals to cater the global industrial and societal needs.

MISSION

- To establish state-of-the art laboratories to facilitate research and innovation to upgrade the knowledge and skills.
- To provide industry interaction for training programs on latest technology.
- To provide ethical and value based education by promoting activities addressing the societal needs.

HOD-DESK

Electronics & Communication Engineering, is one of the largest and fastest growing sectors in the present industrial scenario. We work with equipment that uses extremely small amounts of power. The role of the electronics engineer is pivotal in realms ranging from toy industry to consumer electronics, from household articles to space/satellite communication. Our course includes theory, design, fabrication, production, testing and manufacture of complex products and systems. We fulfill the requirement of equipment and components for major industries, including medical, automotive, robotic, computer and networking sectors. Further, the design of data processing systems for communication, including the defense requirements falls under our purview. Department is working under AJ institute of Engineering and Technology, Academic Unit of Laxmi Memorial Education Trust (R). The institute is affiliated to Visvesvaraya Technological University, Belagavi and recognized by All India Council for Technical Education(AICTE), New Delhi. The Department has One professor, two Associate professors and eleven Assistant professors. Our faculty members are highly experienced and dedicated in moulding the students to cope with competitive career, higher studies and research activities. Faculty members have published many international journal papers, attended many workshops and FDP to impart their knowledge to the student's overall development.

Prof. Prakash K. Shetty
Head of the Department

Farewell

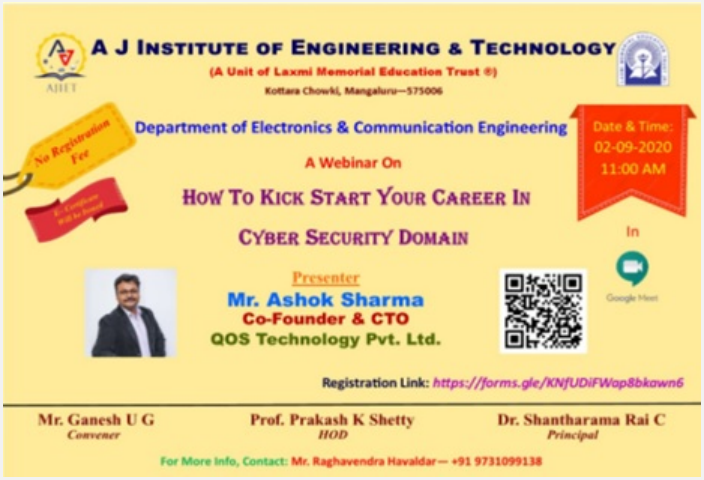
Virtual Farewell was organized by the Department of Electronics and Communication Engineering in association with Electro-Vertz Student Association, for the first outgoing batch of Students (Academic Year: 2016-2020) on 11/09/2020 from 11:30AM. The virtual farewell link https://www.youtube.com/watch?v=uG4zTt3dHDY

Webinars

- A webinar on "***Building Blocks of Integrated Power Management (Analog VLSI Design)***" was conducted by Department of Electronics and Communication Engineering, AJIET, Mangaluru on 28^{th} August, 2020 by Mr. Raghavendra Hebbar, Senior Analog Design Engineer at PALMA CIEA SEMI DESIGN, INC Texas USA.

- A webinar on "***AI Landscape***" was conducted by Department of Electronics and Communication Engineering, AJIET, Mangaluru on 1^{st} September, 2020 by Mr. Sridhar S R, Co-Founder & CTO at Saigeware Technologies Pvt. Ltd., Bengaluru.

- A webinar was organized on "***How to kick start your career in Cyber security domain***" by Mr. Ashok sharma, CTO QOS Tech Private limited on 2^{nd} September, 2020.



- A webinar was organized on "***Start up-Life in a start-Up***" by Mr. Sourabh Mathur, Esanosys on 18^{th} September,2020. The guest speaker focused on the opportunities and challenges faced in a start-up.

- A webinar was organized on the topic "***Career Opportunities for Engineering Students in Government Sectors***" by Mrs. Raksha S Shetty, Academic Director of Shlaghya Training Institute, Mangaluru on 25^{th} September, 2020.

Faculty Publications

- Gnane Swarnadh Satapathi, Prakash karambally Shetty, and Manjukiran Bagimane. "Slantlet Radar Waveform for Effective Side-Lobe Suppression." 2020 5th International Conference on Communication and Electronics Systems (ICCES). IEEE, 2020.
- VG Kiran Kumar, and C. Shantharama Rai. "Efficient Implementation of Cryptographic Arithmetic Primitives Using Reversible Logic and Vedic Mathematics." Journal of The Institution of Engineers (India): Series B 102.1 (2021): 59-74.
- Kiran Kumar V. G., and C. Shantharama Rai. "Design and Implementation of Efficient Cryptographic Arithmetic based on Reversible logic and Vedic Mathematics." International Journal of Advanced Trends in Computer Science and Engineering 9.2 (2020).
- Mrs. Pratheksha Rai N published paper entitled" A smart way of monitoring health using IOT-A Study" in International Journal of Innovative Science and Research Technology.
- Sahana K Adyanthaya has presented a paper on"Text Recognition from Images: A Study" in National Conference on Communication and Data Science, (NCCDS-2020 organised byGSSS Institute of Engineering and Technology for Women, 15th July 2020.

Student Accomplishments

- Adithya Kumar , Aishwarya N G and Medhini have secured second prize for the project titled "Voice Controlled Wheel Chair" in the TEQIP 1.3 sponsored ***AVISHKAR*** Project Exhibition /Competition held on 19^{th} August, 2020.
- Yashas Shetty has been a Runner-up in the Project competition for the ***National Level Online Technical Symposium Telekinesis 2020*** held from 27^{th} - 29^{th} October, 2020 by K. K. Wagh Institute of Engineering Education & Research, Nashik Organized by Department of Electronics & Telecommunication in collaboration with IETE .

Editorial Board

Program Educational Objectives(PEOs)	
PEO1	Exhibit a desire for lifelong learning through professional and societal activities.
PEO2	Exhibit and apply their technical skills and knowledge in Electronics and Communication Engineering for industry and societal needs
PEO3	Exhibit leadership qualities, professional skills, management skills and ethics needed for successful career.

Program Specific Outcomes (PSOs)	
PSO1	Embedded Systems: Ability to apply the fundamental knowledge of core Electronics and Communication Engineering subjects in the analysis, design, and development of integrated electronic systems.
PSO2	Communication Systems: Ability to apply the fundamental knowledge of signal processing in the analysis, design, and development of communication systems.
PSO3	Simulation: Ability to use modern electronic tools such as MATLAB, Xilinx and Multisim, to design and analyze the complex electronics and communication systems.

Program Outcomes (POs)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **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.
3. **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 consid-

erations.

4. **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.
5. **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.
6. **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.
7. **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.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **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.
11. **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.
12. **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.