



# Department of Electronics & communication Engineering

Kakatiya Institute of Technology & Science, Warangal - 15

( An Autonomous Institute under Kakatiya University, Warangal )



## Newsletter

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Volume 12, Issue 1

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### Chief Editor Message:

It gives me great pleasure to know that the next issue of newsletter is ready. I congratulate all those who have contributed in bringing out this issue. I take this opportunity to greet faculty, students, alumni and other stakeholders and hope the newsletter gives them a glimpse of activities the institute is venturing into. I congratulate the editorial board of the newsletter for their untiring efforts in collecting and compiling the data without which it would have not been possible to place this newsletter in your hands. In the present context where globalization has become a reality one needs to have autonomy with accountability. One need to develop the competence to make ethical and value based decisions. This demands two things (i) Quality of Teaching and (ii) Contribution towards generation of knowledge (Research). Let us take a resolution to fulfill this twin objective.

-Dr. K. Ashoka Reddy

### Editor 's Message:

I congratulate the team as the next issue of "News Letter" of department of ECE is rolling by. They have taken great pains in bringing a shape to this News Letter. It is a rich source of information regarding various activities of the department and I wish the students will get benefitted by participating in great numbers. I congratulate all the students who got placed and wish good luck to all who will be facing the interviews. This newsletter displays the contributions by faculty & students and activities conducted in the Department during July 2023 to Dec 2023 (Odd semester of AY 2023 - 24).

The experience of the faculty made it possible to conduct national and international FDPs with great support from industry experts and academic intellectuals from foreign Universities, IITs and NITs. I am also proud to inform that our students have made the ECEA activities more vibrant with hands-on sessions and training programs. I would like to offer a word of thanks to our readers, our contributors, and our editorial board for their support of the journal and its mission: to improve the quality of technical education to the students. This newsletter will provide a glimpse of faculty and student achievements in odd semester of academic year 2021-22.

-Dr. M. Raju

### **VISION OF THE DEPARTMENT**

- Develop the department into a full-pledged center of learning in various fields of Electronic and Communication Engineering in pursuit of excellence in Education, Research, Entrepreneurship and Technological services to the society.

### **MISSION OF THE DEPARTMENT**

- Imparting quality education to develop innovative and entrepreneurial professionals fit for the globally competitive environment .
- To nurture the students in the field of Electronics and Communication Engineering with an overall back-ground suitable for attaining a successful career in higher education, research and Industry.

### **Program Educational Objectives (PEOs) of the Department:**

The PEO's of the B.Tech (Electronics and Communication Engineering) program are focused on making our graduates technologically superior and ethically strong

**PEO-I:** Continue develop technical skills within and across disciplines in electronics and communication engineering for productive and successful career maintaining professional ethics

**PEO-II:** Develop and exercise their capabilities to demonstrate their creativity in engineering practice and team work with increasing responsibility and leadership





**"The purpose of education is not only to impart knowledge but to ignite ambition, empowering individuals to strive for greatness and leave a lasting impact on the world."**

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**PEO-III:** Graduates should refine their knowledge and skills to attain professional competence through lifelong learning such as higher education, advanced degrees and professional activities.

#### **Program Outcomes (POs) of the Department:**

**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 lifelong learning in the broadest context of technological change.

#### **PG - M.Tech. (Communication Engineering and Signal Processing):**

##### **Program Specific Outcomes (PSOs):**

**PSO1:** apply knowledge of signal processing, embedded systems, communication systems, artificial intelligence & machine learning and wireless technologies for development of effective and innovative solutions to engineering problems.

**PSO2:** apply appropriate methodology, contemporary hardware and software tools to solve complex engineering problems related to signal processing, embedded systems, communication systems, artificial intelligence & machine learning and wireless technologies.

#### **FACULTY PUBLICATIONS**

1. Kiran, Siripuri, Ganta Raghotham Reddy, S. P. Girija, S. Venkatramulu, and Kumar Dorthi. "A gradient boosted decision tree with binary spotted hyena optimizer for cardiovascular disease detection and classification." *Healthcare Analytics* 3 (2023): 100173.



"Education is the most powerful weapon which you can use to change the world."



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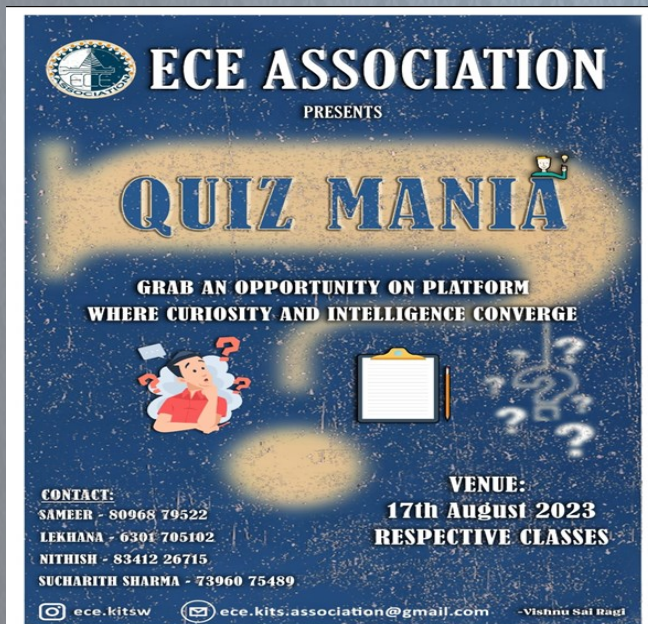
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2. Sree, G. Ramya, Suman Nelaturi, and V. Venkateswara Reddy. "A COMPACT  $1 \times 2$  MIMO ELLIPTICAL PATCH ANTENNA FOR 5G 3.5 GHz APPLICATIONS." Telecommunications and Radio Engineering 82, no. 12 (2023).
3. Rao, MV Ganeswara, N. Ramanjaneyulu, Balamurali Pydi, Umamaheshwar Soma, K. Rajesh Babu, and Satti Harichandra Prasad. "Enhancing performance of dual-gate FinFET with high-K gate dielectric materials in 5 nm technology: a simulation study." Transactions on Electrical and Electronic Materials 24, no. 6 (2023): 557-569.
4. Komuraiah, Bejjam, and M. S. Anuradha. "A new trust-based optimal stochastic data scheduling for wireless sensor networks." Peer-to-Peer Networking and Applications 17, no. 1 (2024): 176-199.
5. Yugander, P, Jagannath, M and Nathiya, N. "Analyzing Brain Tumor from Structural MR Images Using Kernel Support Vector Machine and Principal Component Analysis." SN Computer Science 4, no. 6 (2023): 726.

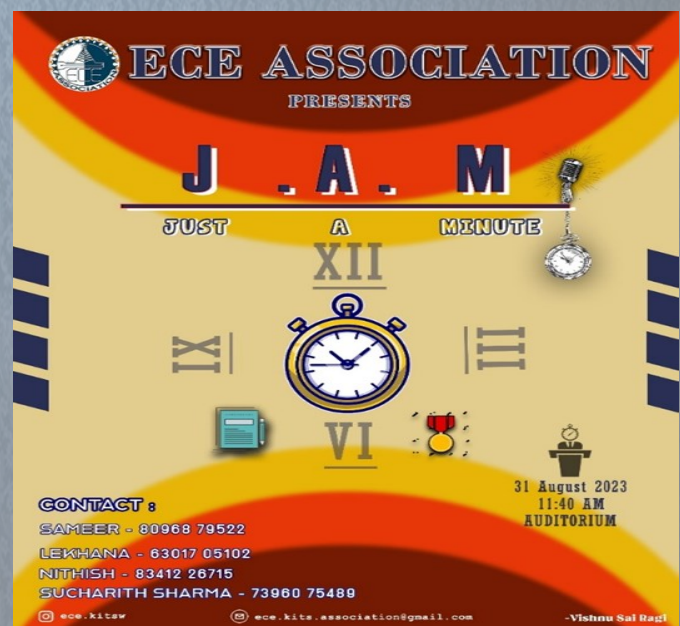


Another exhilarating event was taken up by the ECEA by the Fun Quest on August 24, 2023. The event was filled with laughter, friendly competition, and a great sense of camaraderie among all attendees.

### ECE ASSOCIATION DETAILS



The first blasting event in the ECEA was Quiz Mania, which was conducted on August 17, 2023. This event uplifted the enthusiasm of the audience while also fostering team building and mutual understanding among the students.



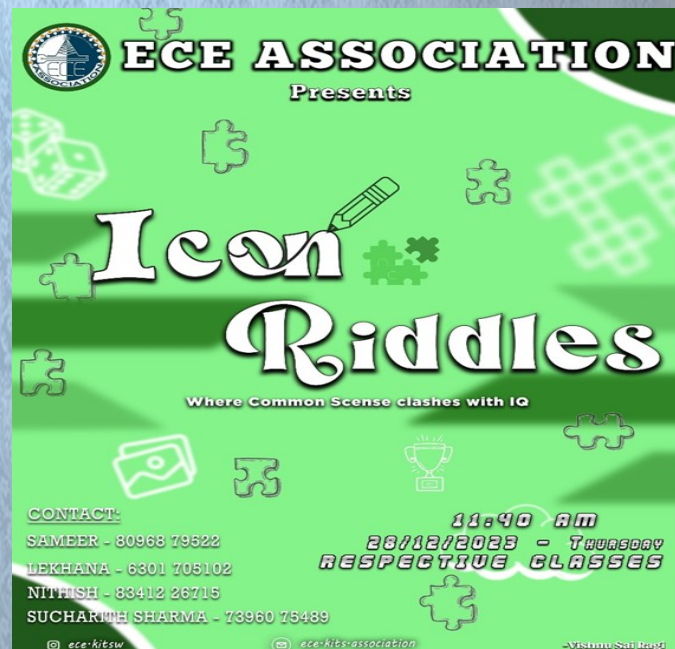
The Funky Fiesta was conducted on August 31, 2023, at 11:40 a.m. ECEA came up with an elegant idea for organizing this event. Participants could showcase their quick thinking and eloquence by speaking on various impromptu topics for one minute each. The event was filled with lively discussions, spontaneous humor.



"Learning gives creativity, creativity leads to thinking, thinking provides knowledge, and knowledge makes you great."



The executive committee of ECEA has decided to create an event on November 09, 2023. This unique competition challenged participants to decode messages encoded in various sound patterns and musical notes. Teams worked together to interpret the auditory clues and unravel the hidden messages, blending their skills in cryptography and music.



The executive committee of ECEA has decided to create an event on 28-12-2023. Participants delved into a world of visual puzzles, where iconic symbols and logos served as clues. Teams competed to decipher the identities of famous brands, landmarks, and cultural references depicted through cleverly crafted riddles.



Funky Fiesta was conducted on December 21, 2023. This event focused on resilience and overcoming challenges. The event provided valuable strategies for coping with setbacks and encouraged students to view obstacles as opportunities for growth.



Another exhilarating event was taken up by the ECEA by the Fun Quest on November 02, 2023. Fun Quest 2.0 brought together students for an afternoon of laughter, teamwork, and friendly competition, creating unforgettable memories for everyone involved. The Head of the Department (HOD) and faculty coordinators distributed prizes to the photography contest winners.