Department of Electronics & communication Engineering
Kakatiya Institute of Technology & Science, Warangal - 15
(An Autonomous Institute under Kakatiya University, Warangal)

Newsletter

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 July2021 to Dec 2021 (Odd semester of AY 2022-23). I am happy to share that this semester department has witnessed three of the faculty have been awarded with PhD.

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 programmes. 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 oddsemester 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: Building on fundamental knowledge, graduate should continue develop technical skills within and across disciplines in Electronics and Communication Engineering for productive and successful career maintaining professional ethics

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

"Have faith and believe in yourself and your abilities, with a boundless vision, determination, motivation and dedication anything is achievable."

Newsletter

Beagle Bone Black

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, andan engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineeringproblems 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 nd 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 societaland 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 diverseteams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineeringcommunity 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 andmanagement principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

FACULTY CONTRIBUTIONS

S.no	Category	Count
1.	PhDs	01
2.	Awards received in R & D Activities	01
3.	Patents granted	02
5	Faculty as reviewers of journals	01
6	Books authored by faculty	02
7	Faculty as research supervisors	02
8	Publications in national/ international conference proceedings	13
9	Publications in national/ international journals (SCI / SCOPUS)	8
11	Faculty as session chairs/ resource persons for conferences	03
12	STTPs/FDPs/Workshops conducted	04
13	STTPs/FDPs/Workshops attended by faculty	30

"Never say you don't have enough time. You have exactly the same number of hours that were given to the World's Greatest People. Make Best of it."

ECE ASSOCIATION DETAILS

A workshop was conducted on 14-09-2021 from 6:00 pm to 8:00 pm in Microsoft teams. The speaker of the event is Shaik Zubair Ahmed. He is a Validation engineer from Xilinx. The objective of the program was to inspire the students on the underlying technical aspects of embedded systems and VIVADO tool. There were 75 students partici-

A workshop was conducted on 07-09-2021 from 7:15 pm to 9:15 pm in Microsoft teams. The speaker of the event is Dr. G. Sanath Kumar Deputy Director, Ex-Scientist of ISRO. The objective of the program was to inspire the students on the growing trend towards automation and data exchange in technology and processes within the manufacturing industry, including: The internet of things (IoT),The industrial internet of things (IIoT), Cyber-physical systems (CPS), Smart manufacture, Smart

factories, Cloud computing, Cognitive computing, Artificial intelligence.160 students participated in the workshop.

pated in the workshop.

"A good teacher can inspire hope, ignite the imagination, and instill a love of learning"

A **Debate** event was conducted on 11-11-2021 at 12:10 in Civil Seminar Hall on the occasion of **NATIONAL EDUCATIONAL DAY –** Birth Anniversary of 1st Indian Educational Minister Bharat Ratna Maulana Abul Kalam Azad.

FACULTY PUBLICATIONS

Publications in national/international Journals:

1. Chitti S, Kumar JT, Kumar VS. EEG Signal Feature Selection Algorithm and Support Vector Machine Model in Patient's Fatigue Recognition. Arab J Sci Eng. 2021 Oct 5:1-7. doi: 10.1007/s13369-021-06206-1. Epub ahead of print. PMID: 34631359; PMCID: PMC8490845.
2. Soma, U. A Dual Gate Junctionless FinFET for Biosensing Applications. Silicon 14, 8881–8885, August

Publications in national/international Conferences:

1. T. K. Gannavaram V, U. M. Kandhikonda, P. Gade, S. Sunkaraneni and G. Raghotham Reddy, "Segmentation of Images using Automatic Fuzzy Clustering Framework," 2021 5th International Conference on Electronics, Communication and Aerospace Technology (ICECA), Coimbatore, India, 2021, pp. 775-779, doi: 10.1109/ICECA52323.2021.9676152.
2. Reddy, V. V., E. Navyasri, P. Shashidhar, and Syed Faize. "Minkowski Fractal Boundary Patch Antenna for GPS Application." In 2021 6th International Conference on Communication and Electronics Systems (ICCES), pp. 385-388. IEEE, 2021. ISBN:978-1-6654-3587-1,
3. Rangu Srikanth, Koppisetti Lakshmi Sowmya, Sika Anjana, Gajarajula Vamshi, Annem Ram Mohan Reddy , "Improved Image Enhancement of Natural Images with Median Mean Based Sub Image Clipped Histogram Equalization" International Conference on Soft Computing for Security Applications (ICSCS2021) organized by Dhirajlal Gandhi Collegeof Technology, Salem, India during 10-11, June2021, ISBN978-981-16-5301-8.
4. M. C. Sekhar, P. Gnaneshwari, M. Bhavani, B. Abhishek, A. S. Sankalp and K. K. Naik, "A Linearly Polarized Microstrip Antenna for 5G Applications," 2022 7th International Conference on Communication and Electronics Systems (ICCES), 2022, 22-24 June 2022.

CROSSWORD PUZZLE

The clue describes the Instruction, the number mentioned in the bracket indicate the number of letters in the instruction. Solve the Puzzle with mapping the number mentioned in puzzle and Clue mentioned either in the Horizontal or vertical clue.

1) The instruction which interchanges the contents of both source and destination (4)
3) Performs the multiplication between signed numbers (4)
4) which repeats the loop based on conditions (5)
6) The instruction performs AND operation to identify bit position (4)
8) The instruction replaces the contents of Al with the contents of Lookup table. (4)
11) it is prefix used along with another instruction. (3)
12) changes the result to ASCII after multiplication. (3)
14) moves the flag to stack (5)
17) Execute a subprogram (4)
20) which indicates the end of interrupt subroutine (4)
22) It changes the sequence of execution if the content of CX is ZERO. (4)
23) the instruction makes all the bits of AH with the MSB bit of AL (3)
24) the contents either a register or a register memory or memory location is reduced by 1(3)
25) The instruction only used in maximum mode as prefix to control the operations of system Bus.(4)

(1) X	(2) C	H	G	#	(4) L	(5) O	O	P	Z
(3) I	M	U	L	#	#	R	#	#	#
#	P	#	#	#	(6) T	E	(7) S	T	#
(8) X	(9) L	A	T	#	#	#	A	#	#
#	A	#	#	(10) S	#	#	(11) R	E	P
(26) P	H	#	#	(12) A	A	M	#	#	#
O	F	#	#	H	#	(13) O	U	T	#
(14) P	U	S	H	F	#	#	#	#	(15) S
#	#	(16) J	#	(17) C	A	A	(18) L	#	T
#	#	A	(19) S	#	#	#	E	#	I
(20) I	R	E	T	#	#	#	A	#	#
#	#	#	O	#	#	#	#	#	#
(21) C	#	#	S	#	(22) J	C	X	Z	#
L	#	(23) C	B	W	#	#	#	#	#
(24) D	E	C	#	#	#	(25) L	O	C	K