ISSUE 23

CIRCUIT CHRONICLES

ECE NEWS LETTER
K.S.R. COLLEGE OF ENGINEERING (Autonomous)
TIRUCHENGODE – 637 215

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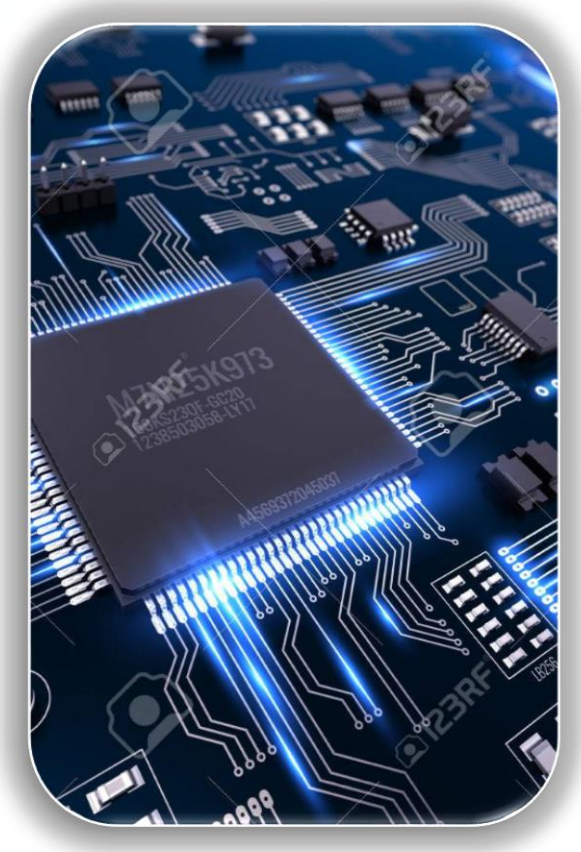

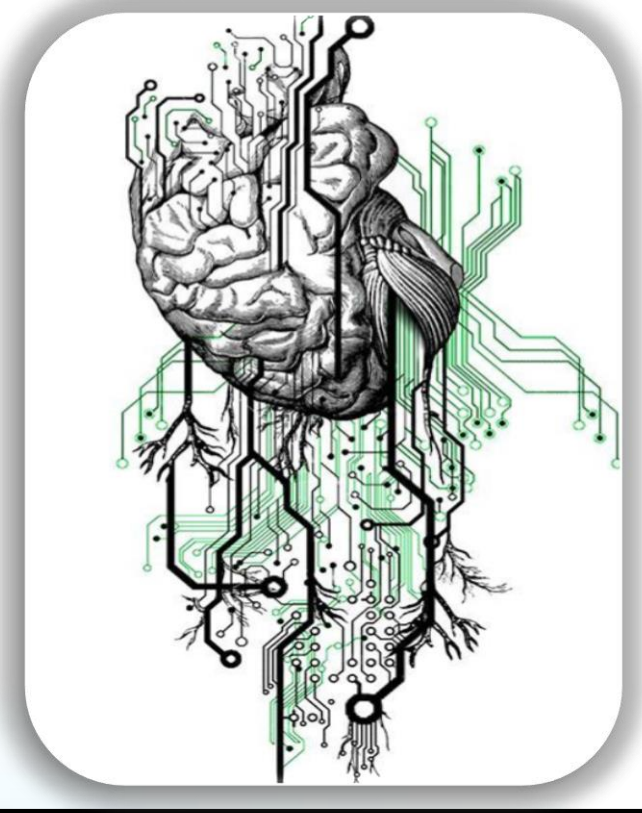

VISION OF THE INSTITUTION

IV We envision to achieve status as an excellent educational institution in the global knowledge hub, making self-learners, experts, ethical and responsible engineers, technologists, scientists, managers, administrators and entrepreneurs who will significantly contribute to research and environment friendly sustainable growth of the nation and the world

MISSION OF THE INSTITUTION

IM 1 To inculcate in the students self-learning abilities that enable them to become competitive and considerate engineers, technologists, scientists, managers, administrators and entrepreneurs by diligently imparting the best of education, nurturing environmental and social needs.

IM 2 To foster and maintain mutually beneficial partnership with global industries and Institutions through knowledge sharing, collaborative research and innovation.

VISION OF THE DEPARTMENT

DV We envision as a center of excellence in the field of Electronics and Communication Engineering to produce technically competent graduates with diverse teaching and research environments.

MISSION OF THE DEPARTMENT

DM 1 To educate the students with the state of art technologies to meet the growing challenges of the industries.

DM 2 To develop an innovate, competent and ethical Electronics and Communication Engineer with strong foundations to enable them for continuing education.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

The graduates of the programme will be able to:

PEO 1 **Employability and Higher Education:** Excel in Professional career and higher education by acquiring knowledge in mathematical, social, scientific & engineering principles.

PEO 2 **Core Competence:** Analyze, design and develop/implement core engineering problems in communication systems that are technically sound, economically feasible and socially acceptable.

PEO 3 **Interpersonal Skills and Team Work:** Exhibit professionalism, ethical communicating skills and team work by engaging in lifelong learning for sustainable development of the society.

PROGRAMME OUTCOMES (POS)

Program Outcomes (POs)

PO1 **Engineering Graduates will be able to:**

Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO 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.

PO 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 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.

PO 5 **Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling 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 **PEnvironment 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.

Program Specific Outcomes (PSOs)

PSO1 **Professional Skill:** Specify, design and test modern electronic systems that perform analog and digital processing functions.

PSO2 **Problem – Solving Skills:** Design essential elements (circuits and antennas) of modern RF/Wireless communication systems.

CONTENTS

- Faculty Achievements
- Department Activities
- Students Activities

FACULTY ACHIEVEMENTS

Publications:-

NAME OF THE AUTHORS	TITLE OF THE PAPER	TITLE OF THE JOURNAL	VOLUME	ISSN	YEAR
R.Satheeskumar, Bonamraghavaiah, S. Geerthik, T. Senthil kumar	An efficient VLSI architecture for fast motion estimation by hybridizing parallel spiral and adaptive threshold star diamond search algorithm-based search algorithm in HEVC	Concurrency and computation: practice and experience	36/1		2023
Ramasamy Periasamy Nivetha, Paapampalayam shanmugam Periasamy, Anitha periasamy	Binary firehawks optimizer with deep learning driven non invasive diabetes detection and classification.	Bratislava Medical Journal	Online		2023
Dr.S.Karthikeyan K.Pavithra	Secure confidential communication using Recttatron Technology	Journal of Emerging Technology and Innovative Research	Volume 11, issue 1		2024
Dr.R.Satheeskumar	Evolutionary Gravitational neocognitron Neural Network based Block Chain Technology for a secured Dynamic Optimal Routing in Wireless Sensor Networks.	Journal of Experimental & Theoretical Artificial Intelligence.	36/ 3,		2024

Patent Publication / Granted:-

TOPIC	INVENTORS	APPLICATION NO	DATE	STATUS
Floating wind powered aerator system for ponds and lakes (UK design)	Mr.Veeramani Rajumani	6309099	08/09/2023	Granted
Sensor based wearable medical monitoring device. (UK design)	Mr.Sivasankar Rajamani Periyasamy	6308755	08/09/2023	Granted
Solar power air pollution detecting bill board. (Design patent)	Dr.S.Karthikeyan	395642-001 CBR no:211860	21/09/2023	Granted
Wireless monitoring system for mine safety (Design patent)	Mrs.P.Thilagavathy	395318-001 CBR no:211673	17/09/2023	Granted
Portable device for bone cancer detection (UK design)	Mrs.Gowthami Deivasigamani	6318514	13/10/2023	Granted
AI and IOT based enhanced patient healthcare monitoring system	Dr.R.Eswaramoorthi	202321069307a	14/10/2023	Published
Face mask detector (Design patent)	Dr.R.Eswaramoorthi Dr.A.Velliangiri	363759-001	05/05/2022	Granted
Glucose level tracking device (UK design)	Dr.Yuvarajan K P	6316349	01/10/2023	Granted
Breast, lung and brain cancer detection and segmentation	K. S. R. College of engineering	202341071949 a	20/10/2023	Published
Smart home air quality monitoring device (UK design)	Dr Sathees kumar Rajagounder	6329033	27/11/2023	Granted
IOT based automated rail track inspection trolley (Design patent)	Mr.J.Rameshkumar	397634-001 CBR no: 212976	14/10/2023	Granted
Wind and solar power charging station for E vehicle. (Design patent)	Mr.M.Jothimani	397631-001 CBR no: 212976	14/10/2023	Granted
Interactive based smart board display (Design patent)	Mr.Sanjay L	400386-001 CBR no: 214711	21/11/2023	Granted
Wind solar hybrid power plant system (Design patent)	Mrs..Thilagavathi.P	400387-001 CBR no: 214711	21/11/2023	Granted
IOT based data wrangler (Design patent)	Dr.R.Eswaramoorthi	399111-001 CBR no: 213909	03/11/2023	Filed
Smart wearable device for real time health monitoring (design patent)	Mrs.P.Usha Dr.R.Eswaramoorthi	402106-001 CBR no: 215837	14/12/2023	Granted
Solar charging station (Design patent)	Dr.K.P.Uvarajan Dr.T.M.Sathish kumar	364440-001 CBR no: 201750	19/05/2022	Granted
USB device to shutdown PC when not in use (Design patent)	Dr.C.Gowri shankar	399891-001	14/11/2023	Granted
Sensor based smart pillow for healthcare system	Mr. Karuppanasamy krishnamurthi,	6331000	04/12/ 2023	Granted
Health check up device for pet animals	Dr.R.Poornima	400160-001 Cbr no:214552	18/11/2023	Granted

Skin diseases detection using deep learning	S.Suruthi	202441029329a	11/04/2024	Published
Stress detection based on emotion using a convolutional neural network in deep learning	S.Suruthi	202441029330 a	11/04/2024	Published
Vehicle-to vehicle communication using light fidelity(li-fi) technology	Dr.T.M sathish kumar	202441029331 a	11/04/2024	Published
Integration IOT for seamless energy management and theft protection	M.Jothimani	202441029332 a	11/04/2024	Published
IOT based smart warehouse management using machine learning	Dr.A.Velliangiri	202441029333 a	11/04/2024	Published
Exposing facial expressions through neural networks and landmark detection.	J.Ramesh kumar	202441029334 a	11/04/2024	Published
Vehicle theft identification and detection of road accident through CCTV surveillance	Dr.C.Gowri shankar	202441029335 a	11/04/2024	Published
Wireless charging system for electric vehicle	Dr.R.Satheeskumar	202441029336 a	11/04/2024	Published
Designing of insert feed broadband microstrip patch antenna with defected ground structure	R .Veeramani	202441029337 a	11/04/2024	Published
IOT based smart healthcare monitoring system for the paralyses and mute person	K.Karuppanasamy	202441029338 a	11/04/2024	Published
Smart agriculture system using machine learning	Dr.P.Mahendran	202441029339 a	11/104/2024	Published
Electricity consumption prediction and control using machine learning in smart home	S.Sridevi	202441029340 a	11/04/2024	Published
Enhancing MIMO-NOMA system performance: deep learning-enabled optimization of sum data rate and energy efficiency	Dr.R.Poornima	202441029341 a	11/04/2024	Published
Automatic fare collection in public transport	P.Sivasankar Rajamani	202441029342 a	Application no: & filed on 11/04/2024	Published
Emergency tele-surgery operation for military people during wartime through IOT	S.Krishnakumar	202441029343 a	Application no& filed on 11/04/2024	Published
Experimental evaluation of diabetic retinopathy and related eye disease identification using intelligent deep learning principles	S.Sridevi	202441029344 a	Application no& filed on 11/04/2024	Published
Design and implementation of high-accuracy fir-based approximate multiplier	P.ThilagavathI	202441029345 a	Application no:& filed on 11/04/2024	Published
Predictive analysis of BIG mart sales using machine learning algorithm	P.Usha	202441029346 a	Application no: & filed on 11/04/2024	Published
Drainage blockage detection and control system using IOT	D.Gowthami	202441029347 a	Application no: & filed on 11/04/2024	Published
An AI based real-time road analysis system using MEMS data with IOT application.	Dr.K.P.Uvarajan	202441029348 a	Application no: & filed on 11/04/2024	Published
Motor cycle helmet and triple riding compliance detections using deep learning	Dr.S.Karthikeyan	202441029349 a	Application no: & filed on 11/04/2024	Published

Participants in Various Programmes:-

NAME THE FACULTY(S)	TITLE OF THE PROGRAMME	CONDUCTED BY	DATE(S) AND YEAR
P.Thilagavathi	System design through Verilog	NPTEL	(Jul-Sep 2023)
Dr.R.Poornima	One day workshop on women in artificial intelligence – with one API	K.S.R. College of Engineering	13.10.2023
	Pre-conference workshop on MATLAB & its applications in engineering	Department of EEE, K.S.R. College of Engineering, Tiruchengode – 637215	18.10.2023
	Faculty development programme on electromagnetic theory	NPTEL –AICTE	July to oct 2023
	AICTE training and learning (ATAL) academy faculty development program on CRAFTING AND ADVANCING ELECTRONIC PRODUCT CREATIONS at	K.S.Rangasamy College of Technology, Tiruchengode – 637215	20/11/2023 to 25/11/2023
	One week workshop on “internet of things”	K.S.R. College of Engineering, Tiruchengode – 637215	14/11/2023 to 21/11/2023
	One week workshop on “advance internet of things”	K.S.R. College of Engineering, Tiruchengode – 637215	18/12/2023 to 22/12/2023
Dr.R.Eswaramoorthi	Two week national level virtual workshop on advanced research methodology	SRM Institute of Science and Technology, Ramapuram campus, Chennai	03-07-2023 to 18.07.2023
	Guest lecture on digital electronics	At K S Rangasamy Institute of Technology, Tiruchengode	18.10.2023
	ATAL FDP on the futuristic view of semiconductor devices in healthcare applications using AI & ML: research issues and challenges	Mahendra Engineering College	16.10.2023 to 21.10.2023
	ATAL FDP on cognitive intelligence in data science	Muthayammal Engineering College	20.11.2023 to 25.11.2023
	Design challenges and realization of wearable antennas from an Antenna engineer perspective	Vellalar College of Engineering and Technology	18/12/2023 to 23/12/2023
Dr. R satheeskumar	Design challenges and realization of wearable antennas from an antenna engineer perspective at Velalar college of engineering and technology	AICTE Training and Learning (ATAL) academy	18/12/2023 to 23/12/2023
Dr T M sathish kumar	Faculty development programme on VLSI and chip design	PSNA College of Engineering and Technology	14.08.23 to 19.08.23
	First international conference on advances in electrical, electronics And computational intelligence (ICAEECI 2023) session chair	K.S.R. College of Engineering	19.10.23 & 20.10.23
Dr A velliangiri	FDP on advanced research methodology	SRM Institute of Science and Technology	03.07.2023 to 18.07.2023
P.Sivasankarrajamani	Inculcating universal human values in technical education	AICTE, Newdelhi	3.7.2023 to 7.7.2023
	Faculty development program on VLSI and chip design (EC3552)	Anna university sponsored PSG Institute of Technology and Applied Research Coimbatore	24.07. 2023 to 29.07.2023
Dr.P.Mahendran	The futuristic view of semiconductor devices in healthcare applications using AI & ML: research issues and challenges	Mahendra Engineering College	Oct 16, 2023 to oct 21, 2023
J.Rameshkumar	STTP on recent advancement in VLSI modullingand IC design	SRM Institute of Science and Technology	24.07.2023-30.07.2023
	Guest lecture on “research funding opportunities in India & Abroad" organised by research and development division	K S R Institute for Engineering and Technology	15.11.2023
	Webinar titled “the next frontier in wireless communication opportunities and challenges with reconfigurable intelligent surface	QIS College of Engineering and Technology	3rd October 2023
	Pre-conference workshop on MATLAB & its applications in Engineering	Department of EEE, K.S.R. College of Engineering	18.10.2023
M .Jothimani	Webinar titled “the next frontier in wireless communication opportunities and challenges with reconfigurable intelligent surface	Q is college of Engineering and Technology	3rd October 2023
	Faculty program on changeless and opportunity in electric vehicle	K.S.R. College of Engineering	09.10.2023-14.10.2023
	FDP on VLSI AND chip design	PSNA college of Engineering and Technology	14.07.2023-19.07.2023
	STTP on recent advancement in VLSI modullingand IC design	SRM Institute of Science and Technology	24.07.2023-30.07.2023

D.Gowthami	VLSI chip design	PSNA college of engineering and technology	14.08.2023 16.08.2023 to 19.08.2023	D.Gowthami	VLSI chip design
	Introduction to industry 4.0 and industrial internet of things	NPTEL-AICTE	July to October 2023		Introduction to industry 4.0 and industrial internet of things
S.Suruthi	Emerging technologies and real-world applications	Pals	22 .11.2023 to 24.11.2023	S.Suruthi	Emerging technologies and real-world applications
	Cloud computing	NPTEL			Cloud computing
R.Veeramani	Webinar titled “the next frontier in wireless communication opportunities and challenges with reconfigurable intelligent surface	Qis college of engineering and technology	3rd October 2023	R.Veeramani	Webinar titled “the next frontier in wireless communication opportunities and challenges with reconfigurable intelligent surface
	Workshop on advanced research metrology	SRM institute of science and technology	03.07.2023-18.07.2023		Workshop on advanced research metrology

DEPARTMENT ACTIVITIES

Events Organized:-

DEPT.	DATE / DURATION	EVENT	NO. OF FACULTY / STUDENT ATTENDED
ECE	7.08.2023	Innovations in data analytics By Mr.P.K.Dhanesh (director) I-Bacus tech Coimbatore Mr.Balaji Bheemarajan (regional manager) I-Bacus tech Coimbatore	89 students
ECE	26.08.2023	Alumni talk by Ms Bhuvaneshwari , project manager Wipro limited, chennai	90 students
ECE	25.09.2023	Alumni talk by Mr C Dinesh kumar, Technical consultant, Bosch global software technology	91 students 4 faculty
ECE	26.09.2023	Next gen wireless: exploring the transition from 4G to 5G" by Dr.Sampooranam K P, Professor department of ECE, Bannari Amman Institute of Technology, Sathyamangalam.	82 students 6 faculty
ECE	21.09.2023	Seminar on "applications of digital signal processing“ by Dr. T. Balakumaran assistant professor(sr.Gr.), Department of ECE Coimbatore institute of technology, Coimbatore -641014	93 students
ECE	9.10.2023 to 14.10.23	Value added Course on “Advanced Power BI”	97 students 6 staffs
ECE	14.10.2023	Hands on training on “Built and enhance android applications development using scratch”	90 students

ECE	7.12.2023	Seminar on Essentials of PCB Design By Mr Ramesh Duraisamy from Chip crafts Coimbatore	90 students
ECE	21.02.2024-22.022024	International conference on Emerging Materials and Technology(Auto, Mech, ECE, Fire and safety)	86 students
ECE	10.02.2024	Alumini talk Series by Mr .G. Anandmohan, Application DBA,IBM, Chennai.	98 students
ECE	7.3.2024 to 12.3.2024	Value Added Course on Crafting Elegant in PCBs By Chip Crafts Coimbatore	93 Students
ECE	22.03.2024	Seminar on Artificial Intelligence Project Formulation for Beginners by Mr.G.Vadivel Proprietor BY V-Tek Industries, Dharmapuri	89 Students

STUDENT ACTIVITIES

AWARDS RECEIVED BY STUDENTS:-

S.No.	Name of students	Name of the Activity	Date	Organized by	Prize/ Award Won
1	Ranjith kumar B S	Paper presentation	24.2.24	Sona College of Technology, Salem.	Second prize
2	Prabhu M	Paper presentation	07.03.24	Kongu Engineering College, Perundurai.	First prize
3.	Prabhu M	Quiz	22.12.23	KSR College of Engineering, Tiruchengode	Second prize

EVENTS PARTICIPATED BY STUDENTS IN OTHER STATES:-

S.No.	Name of students	Events	Date	orgnaized by
1.	Dharaneshwaran S	Placement preparation program	16.12.23 & 17.12.23	Indian Institute Technology, Bombay
2.	Sri Renukadevi V	Shivaji trail trek & SGT	21.11.23 to 27.11.23	Maharashtra.
3.	Janani R S	Online quiz-password security	23.09.23	ISEA project phase-II
4.	Kamini P	Online quiz-password security	23.09.23	ISEA project phase-II
5.	Mahaa shuruthy G	Engineers Day Professional Talk	15.09.23	ASCE

1.	Mahaa shuruthy G	Financial empowerment through wealth creation	30.01.24	MRS AVN College, Visakhapatnam
2.	Srinivasan V	ElSI: Basics of embedded systems and robotics	20.07.23	Eyantra lab setup Initiative, Mumbai
3.	Srinivasan V	Electric vehicle design using MATLAB	29.05.24 to 20.06.24	Pantech E learning, Bangalore
4.	Pravin D	ElSI: Basics of embedded systems and robotics	20.07.23	Eyantra lab setup Initiative, Mumbai
5.	Kabilan R	Electric vehicle design using MATLAB	29.05.24 to 20.06.24	Pantech E learning, Bangalore

EDITORIAL COMMITTEE

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