KPR Institute of Engineering and Technology
(Autonomous)
Avinashi Road, Arasur, Coimbatore - 641 407

LEARN BEYOND

Department of Electronics and Communication Engineering
(Accredited by NBA)

NEWSLETTER- FEBRUARY 2024 ISSUE

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Vision

To be a center of excellence for education, research and development in the field of Electronics and Communication engineering to meet the growing needs of the society.

Mission

➢ Develop competencies in emerging technologies through skill based education collaborating with industries of repute

➢ Provide conducive environment for research and innovation to cater to the needs of the society

➢ Inculcate professionalism, ethical values and lifelong learning

Programme Educational Objectives

● PEO1: Apply principles of Electronics and Communication Engineering to provide solutions to the emerging problems in the society.

● PEO2: Embrace technological challenges through skill upgradation or higher education or research.

● PEO3: Exhibit leadership qualities with professional and ethical values

EVENT ORGANIZED

FDP ON "RECENT TRENDS IN SEMICONDUCTOR SYSTEM DESIGN AND TESTING TECHNIQUES"

➤ The ATAL FDP, scheduled from February 5th, 2024, to February 10th, 2024, was inaugurated by our beloved Principal, Dr. D. Saravanan, in the presence of Dr. M. Kathirvelu, HoD of ECE, along with faculty members and participants. The first session was conducted by Dr. A. Senthilkumar, Dean (Academic and Autonomous), Senior Professor in the Department of EEE at Dr. Mahalingam College of Engineering & Technology, Pollachi, on the topic of Reconfigurable Hardware Architectures. The afternoon session was led by Dr. Sakthivel R, Associate Professor Grade 2 in the Department of Micro and Nanoelectronics at the School of Electronics Engineering, Vellore Institute of Technology, Vellore, discussing VLSI Architecture.

➤ Day 2 featured sessions by Dr. M. Senthil Sivakumar & Dr. D. Suresh, Assistant Professors in the Department of ECE at the Indian Institute of Information Technology, Tiruchirappalli, covering VLSI System Design Testing and Validation & VLSI Phase Change Memory Devices, respectively. Dr. Suresh Balanethiram, Assistant Professor in the Department of ECE at the National Institute of Technology, Puducherry, led discussions on Compact Modeling on Day 3, followed by Dr. Mamidi Nagaraju, Technical Manager at Entuple Technologies, Bengaluru, who covered UART Design and Prospects. Day 4 included sessions on Low Power VLSI Circuit Design by Dr. Bhaskar M, Professor in the Department of ECE at the National Institute of Technology, Trichy, and ASIC Design Flow by Mr. B. K. Shivaprasad, Sr. Field Application Engineer at Entuple Technologies, Bengaluru.

➤ An industrial visit to VVDN Technologies, Arutchelvar Advanced Technology Center, was planned for participants on Day 5, followed by an afternoon session on LEON Processor Architecture and Design by Mr. V. Navaneethakrishnan, Sr. Field Application Engineer at Entuple Technologies, Bengaluru. The final day of the FDP commenced with a session on Stress Management by Mr. S. Satheesh Kumar, Assistant Professor (Sr.G.) in the Department of ECE at KPR Institute of Engineering and Technology, Coimbatore. The FDP then continued with Reflection Journal sessions, Assessments (MCQ), Feedback collection, interactions with the participants, and concluded with a Valedictory function. Article discussions were conducted from Day 1 to Day 4, while hands-on training sessions were provided to participants from Day 1 to Day5.

EXPERT TALK ON "ASIC DESIGN FLOW AND METHODOLOGY IN VLSI ENGINEERING"

The Department of Electronics and Communication Engineering students' association **SPARTRANZ** organizes an expert talk on "**ASIC design flow and methodologies in VLSI engineering**" on **February 8, 2024**, in D-105. **Mr. Shivprasad**, **Sr. Field Engineer** from **Entuple Technologies** Banglore, was the industry expert. This expert talk is organized for third-year ECE students to enhance their knowledge in the VLSI domain, in which they are studying the VLSI design course in the current semester. The session started with a welcome, the gathering, and an introduction about the industry expert, then the session handover to the expert. The expert starts his presentation with an overview of Entuple Technologies and their service to society. The following topics are covered during his presentation: VLSI: An Overview List of semiconductor materials used in integrated circuit fabrication Semiconductor material growth in the market What is ASIC

and its roles in VLSI Engineering? List of companies that offer VLSI jobs After his presentation was over, the students actively interacted with the expert through a question-and-answer session. The faculty member in charge of the event, Dr.J. Prasad, AP (Sl.G.)/ECE, read the vote of thanks.

EXPERT TALK ON "OPPORTUNITIES IN VLSI INDUSTRIES"

➢ The Department of Electronics and Communication Engineering students' association SPARTRANZ organizes an expert talk on "Opportunities in VLSI Industries" on February 9, 2024 in D-106.

Mr. V. Navaneethakrishnan, Sr. Field Applications Engineer from Entuple Technologies Banglore, was the industry expert. This expert talk is organized for third-year ECE students to enhance their knowledge in the VLSI domain, in which they are studying the VLSI design course in the current semester. The session started with a welcome to the gathering and an introduction about the industry expert, then the session handed over to the expert. The expert starts his presentation with an overview of Entuple Technologies and their service to society. The following topics are covered during his presentation: ASIC design flow and its types.Evaluation of VLSI Technologies.ApplicationsofVLSIandASICinMedical/HealthcareDefenseConsumerElectronicsAutomotiveIndustryTelecommunicationCareer opportunities in VLSI industries. Front-end design, Back-end design Future scope of VLSI technologies. After his presentation was over, the students actively interacted with the expert through a question-and-answer session. The faculty member in charge of the event, Dr.J. Prasad, AP (Sl.G.)/ECE, read the vote of thanks.

GUEST LECTURE ON "BUILDING BLOCKS OF STARTUP, ENTREPRENEURSHIP AND INNOVATION"

➤ The Department of ECE in association with CIIED at KPR Institute of Engineering and Technology, Coimbatore has jointly organized a Workshop on **Guest Lecture on, "Building blocks of Startup, Entrepreneurship and Innovation"** on **10.02.2024** at ECE Block. The Session started around 9.00 am on 10.02.2024. In the inaugural speech, Prof.S.Satheesh Kumar thanked and welcomed all the dignitaries, experts, chief guest, faculty members and students. More than 80 participants were present at this event. Prof.S.Satheesh Kumar - Event Coordinator invited the guest and introduced him to the audience. Mr.S.Shameer interacted with the students and got to know their various ideas in starting up a new business. In his interaction, Mr.S.Shameer spoke about the skills required by a successful Entrepreneur and the desire to improve their world, ability to raise money, relieve stress, to be reproductive, to make entrepreneur friends, ability to spot new trends and to deal with failure. He also mentioned about the various things a person can do to become an Entrepreneur. He further encouraged the students to follow their passion according to their skills. The students were really inspired and took part in the activities organized by Mr.S.Shameer in which they had to come up with their own start up ideas and present it in front of everyone. Chief guest clarified the doubts raised by the students and got feedback from the students. The session got over by 05.00 pm.

➢ The Electronics and Communication Engineering department students' association, **SPARTRANZ**, organizes a **Group Discussion** event for the students on **February 24, 2024**, in D-108. Group discussions hold an esteemed place in the educational and professional spheres due to the wealth of benefits they offer. They are much more than a simple exchange of ideas; they serve as a platform to showcase one's communication skills, leadership abilities, and team spirit. The primary objective of this event is to improve the leadership qualities and communication skills of the students. The total number of participants was divided into six teams. Each team consists of six members. The topics are assigned to each team, and each member of the team shared their views on the topics that were assigned to them. During the session, the following six topics are assigned: Impact of 'Internet of Things (IoT)' on our lives. Is technology headed in the right direction? Ethical considerations in AI technology. The importance of emotional intelligence in business Leadership vs. management: which is more important? Is cryptocurrency the future of finance?

FACULTY PUBLICATIONS

- Arul, A., **Kathirvelu M** "Dragonfly-inspired lazy task scheduling algorithm for efficient energy consumption control in IoT applications" Journal of Intelligent & Fuzzy Systems 46(3):6729 -6746, 2024.

- **Ramesh S M**, Vaideesh N, Selvam R, Vasanth V, & Thayanithi S. (2023). Real-time parking monitoring and automatic billing system. 2023 International Conference on Recent Advances in Science and Engineering Technology (ICRASET). https://doi.org/10.1109/icraset59632.2023.10419991

- Balakiruba J., Sukanya Singh J, **S. M.Ramesh**, T. Kannan, V.M. Thiliban, & S.Manisha Banu. (2023). The construction of smart tourism based on holographic optics and AR technology in the 5G ERA: Computer World in smart tourism. 2023 International Conference on Communication, Security and Artificial Intelligence (ICCSAI). https://doi.org/10.1109/iccsai59793.2023.10420887.

- Maheswar, R.; **Kathirvelu, M**. Mohanasundaram, K. Energy Efficiency in Wireless Networks. Energies 2024, 17, 417. https://doi.org/10.3390/en17020417.

- **Suganyadevi Sellappan**, Shiny Pershiya Anand, Finney Daniel Shadrach, Balasamy Krishnasamy, Renu Karra, & Umaamaheshvari Annamalai. (2024). A survey of alzheimer's disease diagnosis using Deep Learning approaches. Journal of Autonomous Intelligence, 7(3). https://doi.org/10.32629/jai.v7i3.660 .

➢ **Singaram Manokaran**, Ramprabhu Sivasamy, V. Harish Muthukaruppan, & E.Kaushik Roshan. (2024). Design of polycarbonate-based dual-band conformal frequency-selective surface for 4G/5G shielding applications. Microwave and Optical Technology Letters, 66(2). https://doi.org/10.1002/mop.34075.

➢ G. Saranya, N.M. Sivamangai, J. Ajayan, S. Sreejith, & **S. Nithya**. (2024). Semi-classical physics based model in Algan/BGAN based ultraviolet led with P-Algan layer sandwiched around electron-blocking layer for droop-free efficiency. Micro and Nanostructures, 188, 207772. https://doi.org/10.1016/j.micrna.2024.207772.

FACULTY AS A RESOURCE PERSON

➢ Dr.M.Kalamani, Professor Department of ECE, KPR Institute of Engineering and Technology as a Resource person for Two weeks Internship Programme at IoT Centre organized by KPR Institute of Engineering and Technology on 22-01-2024 to 03-02-2024.

➢ Mr.S.Satheesh kumar, Assistant Professor(Sr.G) Department of ECE, KPR Institute of Engineering and Technology as a Resource person for the FDP on "Recent trends in Semiconductor System Design and Testing Techniques" organized by KPR Institute of Engineering and Technology on 10.02.2024.

FACULTY PARTICIPATION

Name of the Faculty	Title of FDP/STTP/OFDP/ Conference/Online Course	Organization Name	Start Date	End Date
Dr.K.S.Tamilselvan	Embedded system	M/s.Wizaard Systems	25-01-2024	31-01-2024
Dr.R.Jaikumar	EV Vehicle	Hybrid and EV Laboratory, KPRIET	19-02-2024	01-03-2024
Dr.J.Indra , Dr.B.Jaishankar, Dr.J.Muralidharan, Dr.J.Prasad, Dr.T.Venkatesh, Mr. S. Balamurali, Ms.MD.Saranya	Recent Trends in Semiconductor System Design and Testing Techniques	KPR Institute of Engineering and Technology	05-02-2024	10-02-2024
Mr.G.Pradeepkumar	NEP2020 QUIZ CONTEST	KPR Institute of Engineering and Technology	24-02-2024	24-02-2024
Dr.J.Indra, Dr.K.S.Tamilselvan , Dr.B.Jaishankar, Dr.T.Venkatesh, Mr. S. Balamurali,	Machine Learning, Data Science and Gen AI	KPR Institute of Engineering and Technology	05-02-2024	16-02-2024

Mr.G.K.Jakir Hussain	Deep Learning and Robot Simulation in NVIDIA Jetson Nano	Madras Institute of Technology Campus, Anna University, Chennai	07-02-2024	09-02-2024
Mr.M.Singaram	Networking and Marketing Strategies	ENCORE	16-02-2024	16-02-2024
Dr.J.Prasad	Networking and Marketing Strategies	ENCORE	16-02-2024	16-02-2024
Ms.MD.Saranya	Innovation Ambassdor	MHRD	10-02-2024	11-02-2024
Dr.M.Kalamani	AI Evolution: From foundation to Generative AI	Microsoft, SAP & AICTE, TechSaksham	29-01-2024	02-02-2024
Dr.K.S.Tamilselvan	Global Conversation in Mechanical Engineering	MITS	19-02-2024	23-02-2024
Dr.K.Kalirajan	Malaviya National Mission- Teacher Training Programme	Coimbatore Institute of Technology	12-02-2024	21-02-2024
Dr.S.Nithya	Parameter Analysis Review on Multiple Quantum Well based InGaN/GaN Light Emitting Diode	Rajalakshmi Engineering College	16-02-2024	16-02-2024
Dr.J.Indra	Use of Gyroscope in Multiple finger moving Myoelectric hand	Orthotics and Prosthetics Association of India	11-02-2024	11-02-2024
Dr.K.Murugan	Analysis of Visual Expression of Light and Color in Movies based on Wavelet Neural Network	Galgotias University	23-11-2023	23-11-2023
Ms.M.Supriya	Research on Traditional Art Image Reconstruction Method Based on Computer Vision Analysis	Galgotias University	23-11-2023	23-11-2023
Mr.G.K.Jakir Hussain	Fundamentals of Deep Learning	NVIDIA DLI	07-02-2024	07-02-2024
Mr.G.K.Jakir Hussain	Getting Started with AI on Jetson Nano	NVIDIA DLI	08-02-2024	08-02-2024

STUDENT PARTICIPATION

S.No	Event Name	No of students participated
1	Online course	18
2	workshop	01
3	Contest (Quiz, Coding Contest, club events, etc.)	43
4	Paper presentation	06
5	Internship	Nil

6	Project Presentation	02
7	NSS, YRC activities	Nil

STUDENT ACHIEVEMENT

S. No	Name of the Student	Year	Title of the Event	Organized by (Name of College and Club)	Prize - Merit Position
1.	GOKHUL S	III A	DEBUGGING	Hindustan College Of Arts And Science	Second
2.	SHREEHARINI A	II B	SCIENSEA2K24	KONGU ENGINEERING COLLEGE,ERODE	First
3.	OVIYA A	II B	SCIENSEA2K24	KONGU ENGINEERING COLLEGE,ERODE	First
4.	VARUN P R	III C	DRONE RACING	Sri Ramakrishna College Of Engineering	First
5.	AKIL KRISHNA T G	II A	ASIMOV 24	Sri Ramakrishna Engineering College	Second
6.	GIRIPRASAATH D	III A	5TH NATIONAL LEVEL TECHNICAL SYMPOSIUM	Hindusthan College Of Arts And Science	Second
7.	DIVAKAR A	III A	PAPER PRESENTATION	Hindustan College Of Arts And Science	Second
8.	NARESH R	III B	RINGUTSAV	KSR INSTITUTE OF ENGINEERING AND TECHNOLOGY	First
9.	SRIRAM V	II B	ELECTTRICCO 2K24	KARPAGAM ACADEMY OF HIGHER EDUCATION	First
10.	SOWIGA SRI M	II B	NATIONAL LEVEL TECHNICAL FEST - ELECTTRICCO 2K24	KARPAGAM ACADEMY OF HIGHER EDUCATION	First
11.	RAAGUL S	III B	RANGUTSAV 24	KSRIET	Second
12.	PAVIN PRANAAV N	III B	RANGUTSAV 24	KSRIET	First
13.	RAGHUPATHI R	III B	RANGUTSAV 24 (LINE FOLLOWER)	KSRIET	Second

14.	JAYA DHARSHINI ND	II A	13TH CENTIES CHAMPIOMSHIP 2024 - VOLLEYBALL	SNS COLLGE OF TECHNOLOGY	Third
15.	JAYA DHARSHINI ND	II A	VOLLEYBALL TOURNAMENT	ANNA UNIVERSITY SPORTS BOARD	Second

IIPC ACTIVITIES

INDUSTRY VISITS

➢ Dr.K.S.Tamilselvan   and Dr.S.M.Ramesh visited **M/s. Xpert Automatix** on 03.02.2024 and discussed about student internship and consultancy activities

➢ Dr.K.S.Tamilselvan   and Mr.M.Ramesh visited M/s. **Lumen Systems and M/s. Eagle and Technologies**, Ondiputhur on 24.02.2024 and discussed about student training and consultancy works in PCB assembling and testing.

OTHER ACTIVITIES

➢ One field visit was arranged at VVDN Technologies Pvt ltd, Pollachi on 09.02.2024. Totally 9 faculty members and 25 students were visited the industry.