# 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- APRIL 2023 ISSUE

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## ➢ Vision

To be a centre of excellence in the emerging areas of Electronics and Communication Engineering through research, innovation and value based education

## ➢ Mission

- ➢ To develop competency in emerging technologies through knowledge and skill based education
- ➢ To provide conducive environment for research and innovation to cater the societal needs
- ➢ To inculcate moral and ethical values to become socially responsible engineers

## ➢ Programme Educational Objectives

- **PEO 1:** Apply Electronics and Communication Engineering principles to develop socially and environmentally acceptable engineering solutions.
- **PEO 2:** Embrace technological challenges through skill upgradation or higher education or research.
- **PEO 3:** Exhibit leadership qualities with professional and ethical values.

➢ The inaugural function of the AICTE Sponsored national conference on Recent Trends In Artificial Intelligence Advanced Communication And Smart Systems Conference (RTAACS) was held on 31st March 2023, Friday and 01st April 2023. The Welcome address was given by Dr. J Indra, Professor and Head, Department of Electronics and Communication Engineering. She welcomed the guests Dr.A.Shobha Rekh, Professor, Vellore Institute of Technology and Dr.S.Ramprabhu, Associate Professor, SSN college of Engineering, Chairpersons, Resource Persons, Paper presenters and delegates who arrived to the conference. The Inaugural address was given by Dr.M.Kathirvelu, Director- Planning and Development. The two-day conference saw a total of 98 papers being presented by students from across India. The conference was held with the aim of providing a platform for students to showcase their research and innovation in various fields. The papers covered a wide range of topics, including technology, science and engineering.The conference was graced by the presence of two eminent personalities - Dr. Shobha Rekh and Dr. Ram, who delivered their key note addresses. Dr. Shobha Rekh spoke about the importance of research and how it can shape the future of our country. She stressed on the need for more investment in research and development, especially in the field of science and technology.

➢ The training started with the introduction to Electronics, Micro processors, Micro controllers, Internet, Embedded systems, Internet of Things and its applications, continued the training with Micro controllers operation, Node MCU operation, sensor operation, transducer operation and programming. The experts handled hands-on training with the sensors and transducers of IR sensor, ultrasonic sensor, temperature sensor, humidity sensor, Soil moisture sensor, Photodetector sensor, Potentiometer, DTH11 sensor, DTH22 sensor, servo motors. The need of relays, its connection and operation and its usage, Arduino programming IDE, Arduino interfacing and configuration of sensors with Arduino software IDE was also handled. An overview of the real time implementation of IoT based projects was given. The 4th industrial revolution (Industry 4.0) – Enhancing automation and connectivity with CPS. He also delved into industrial revolution 5.0, highlighting the emergence of human-robot collaboration, cognitive systems, and customization. Moreover, Mr. Pavithran discussed the cutting-edge technologies in industry 4.0, such as big data which is primarily refers to data sets that are too large or complex to be dealt with by traditional data-processing application software. Data with many entries (rows) offer greater statistical power, while data with higher complexity, autonomous robot is a robot that acts without recourse to human . Then he spoke about simulator which is used to create an application for a physical robot without depending on the physical machine, thus saving cost and time. In some case, such applications can be transferred onto a physical robot (or rebuilt) without modification. Integration, IoT, then cybersecurity is protecting an organization and its employees and assets against cyber threats.

> The Department of Electronics and Communication Engineering in connection with office of alumni relation organises alumni lecture series on Skillset for IT sector on 20.04.2023. The resource person is Mr. N. Abdur rahman (2018-2022), Junior Software Technologist, CESIT Pvt. Ltd, Chennai. Dr.B.Jaishankar Professor/ ECE, welcomed the resource person and gathering. He started the session with the technical skills needed to work within IT Sector. 50 students from II year ECE attended the alumni lecture series on skillset for IT sector. He discussed the trending technical skills which can offer successful career. He also discussed about Data science, Artificial Intelligence and cloud computing. He also discussed digital technologies and the ICT sector have become the backbone of our economies. He discussed about the online courses needed to improve them to get placed in IT sector. He also created an awareness about placement and jobs available in the IT sector. The main objective of this webinar was to expose the participants to the recent technologies. Also he has shared the experience of his studies and placement training in our institute. He also discussed the future scope in IT sector and tools needed. Also he has shown willingness to guide the students those who are interested to get placement in IT sector. Dr.B.Jaishankar, Professor/ECE delivered vote of thanks. Overall the students were satisfied with the lecture and gave their feedback as to conduct more events of such kind to enrich their knowledge on the various opportunities to pursue their studies abroad. He also clarified the doubts asked by the students.

➤ The Department of Electronics and Communication Engineering in association with Continuing Education Program (CEP) of KPR Institute of Engineering and Technology is organized "a one-day hands-on workshop on "Network Modeling and Simulation using OPNET Modeler" on 28.04.2023 for outside participants. There are 74 participants attended the event. The event started by addressing the gathering by Dr. M.Vasimbabu Head / CEP. After the inaugural address, the session is handover to the resource person Dr.K.B.Gurumoorthy AsP/ECE, KPR Institute of Engineering and Technology.



➤ On 15th April 2023, an online webinar on the latest tech trends in the automation industries was conducted, featuring Mr. R. Pavithran, a technical specialist at Bosch Global Software Technologies Coimbatore as the resource person. During the session, he spoke about the evolution of technology from industrial revolution 1.0 in 1800 to industrial revolution 2.0, which brought about mass production and assembly lines. In industrial 3.0 IT and computer technology are used to automate processes4th industrial revolution (Industry 4.0) – Enhancing automation and connectivity with CPS. He also delved into industrial revolution 5.0, highlighting the emergence of human-robot collaboration, cognitive systems, and customization. Moreover, Mr. Pavithran discussed the cutting-edge technologies in industry 4.0, such as big data, a simulator which is used to create an application

for a physical robot, cyber attacks and then at last Cloud computing is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user.



> Farewell is a word used to express goodbye or a parting sentiment. In academic settings, farewell is often used to mark the end of a graduation ceremony. It is a time when students and teachers gather together to celebrate the accomplishments of the past and look forward to the future. Farewell can be a time of reflection, gratitude, and anticipation for what lies ahead. The student farewell event started addressing the gathering and the faculty members had an interactive session with the gathered students. A total of approximately 100 students attended the event, along with few faculty members and staff. The students also shared their experience in the stay of KPR institute of Engineering and Technology in terms of innovative education, mentoring, placements, green campus etc., Several faculty members and student representatives delivered speeches that praised the accomplishments of the graduating students and provided words of wisdom for their future endeavors. The speeches were heartfelt and inspiring, and the audience responded with enthusiasm. The event included the distribution of awards to the outstanding students in various academic and extracurricular categories. The award winners were recognized for their hard work and dedication, and their achievements were celebrated by the audience. The students thanked the management, faculty members and staff members for their support during the study time period and felt so happy to be a part of KPR family.

## FACULTY PUBLICATIONS

1. **J.Muralidharan,** R Valarmathi, Mohammed abdul matheen, P.T.Kalaivani "Digital Filters Optimisation using Residual Learning Model," ICTACT Journal on Microelectronics,V No : 9, issue no: 1 ,PP no: 1508-1512,ISSN Number : 2395-1680.**(UGC CARE Indexed)**

## FACULTY AS RESOURCE SPEAKER

➢ Mr.G.Pradeepkumar, Assistant Professor (Sr.G), Department of ECE, KPR Institute of Engineering and Technology as resource person for "Annual Big Data Event" organised by Nandha Engineering College on 28.04.2023.

➤ Dr.K.S.Tamilselvan, Professor Department of ECE, KPR Institute of Engineering and Technology as resource person for "Innovation Ideas Towards Product Development and Commeralization " organised by KGiSL on 17.04.2023.

➢ Dr.R.Jaikumar, Associate Professor Department of ECE, KPR Institute of Engineering and Technology as resource person for IETE technical seminar " Modern Trends in VLSI Design" organised by Nandha College of Technology on 21.04.2023.



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➢ Dr.M.Vasim babu, Professor , Dr.K.B.Gurumoorthy, Associate Professor  Department of ECE, KPR Institute of Engineering and Technology as resource person for workshop " Network Modeling and simulation using OPNET Modeler" organised by KPR Institute of Engineering and Technolgy 28.04.2023.

- Dr.D.Venugopal, Professor , Department of ECE, KPR Institute of Engineering and Technology as resource person for Guest lecture " Advances in communication systems" organised by KGiSL Institute of Technolgy 18.04.2023



## FACULTY PARTICIPATION

| Name of the Faculty | Title of FDP/STTP/OFDP/ Conference/Online Course | Organization Name | Start Date | End Date |
|---|---|---|---|---|
| Mr.S.Satheesh kumar | Innovative Teaching and Learning Pedagogy | Paul University, Gujarat | 4/24/2023 | 4/28/2023 |
| Dr.J.Muralidharan | Cybersecurity in Internet of Things Networks using Deep Learning Models | Shree Venkateshwara Hi-Tech Engineering College | 25.03.2023 | 25.03.2023 |

| Dr.S.M.Ramesh | Low power and high speed level translator using Widlar topology | K. Ramakrishnan College of Engineering | 05.04.2023 | 05.04.2023 |
|---|---|---|---|---|
| Dr.B.Jaishankar | Smart Water Grid Management using LoRaWAN IoT | KKIT | 06.04.2023 | 06.04.2023 |
| Mr.M.Singaram | IoT based Smoke and Fire detection with mitigation system | Solamalai College of Engineering | 21.04.2023 | 21.04.2023 |
| Mr. S. Balamurali | Building Alert System using IOT | Jeppiar Engg College | 06.04.2023 | 06.04.2023 |
| Dr.M.Kalamani | Approximate Compressors with Balanced Error Accumulation in MAC | Akshaya College of Engineering and Technology | 14.04.2023 | 14.04.2023 |
| Dr.M.Kalamani | A random Forest View of Bankruptcy Prediction using Financial Ratios | KPR Institute of Engineering and Technology | 01.04.2023 | 01.04.2023 |
| Dr.M.Kalamani | Financial Distress Prediction using machine Learning | KPR Institute of Engineering and Technology | 01.04.2023 | 01.04.2023 |
| Dr.R.Arun Sekar | Design of arithmetic circuits using an Approximation computing | Sri Eshwar College of Engineering | 18.03.2023 | 18.03.2023 |
| Ms.S.Suganyadevi | A finger vein image-based person recognition system using BCH codes to access medical records | Tribhuvan University | 26.04.2023 | 26.04.2023 |
| Dr.S.M.Ramesh | Internet of Things based Innovative Irrigation System for the evaluation of Sand Quality with Security measures for Agriculture Land using Wireless Sensor Network | K. Ramakrishnan College of Engineering | 07.04.2023 | 07.04.2023 |
| Dr.K.S.Tamilselvan | Connecting Low-Cost Hardware Platforms to MATLAB and Simulink | KPR Institute of Engineering and Technology | 29.04.2023 | 29.04.2023 |

| Dr.M.Kalamani | Workshop on Connecting Low-Cost Hardware Platforms to MATLAB and Simulink | KPR Institute of Engineering and Technology | 29.04.2023 | 29.04.2023 |
|---|---|---|---|---|
| Dr.J.Muralidharan | Introduction to Data Analysis using Microsoft Excel | Coursera | 4/14/2023 | 4/14/2023 |

## STUDENT PARTICIPATION

| S.No | Event Name | No of students participated |
|---|---|---|
| 1 | Online course | 1 |
| 2 | workshop | Nil |
| 3 | Contest (Quiz, Coding Contest, club events, etc.) | 2 |
| 4 | Paper presentation | 81 |
| 5 | Internship | Nil |
| 6 | Project Presentation | Nil |
| 7 | NSS, YRC activities | 2 |

## STUDENT ACHIEVEMENT

| S.No | Name of the Student | Year | Title of the Event | Organized by (Name of College and Club) | Prize - Merit Position |
|---|---|---|---|---|---|
| 1. | Arthi R | II Year A | IGC Shooting Camp 2023 | Kovai Group | 3rd Best Fire |
| 2. | Elamathi T | II Year A | Academic Rank Holder | KPR Institute of Engineering and Technology | Second |

| | | | | | |
|---|---|---|---|---|---|
| 3. | Anuprabha.B | II Year A | Academic Rank Holder | KPR Institute of Engineering and Technology | First |
| 4. | Arthi.R | II Year A | Junior Women Open Sight Prone | TN,P&AN Directorate | First |
| 5. | Amudan.R.T | III Year A | E-YANTRA ROBOTICS COMPETITION | IIT BOMBAY | FIRST |
| 6. | Anandhan G, | III Year A | E-YANTRA ROBOTICS COMPETITION | IIT BOMBAY | FIRST |
| 7. | Rakshay Kanna AG | III Year C | Sports-Cricket | KPR Institute of Engineering and Technology | First |
| 8. | Rakshay Kanna AG | III Year C | Sports-Cricket | KPR Institute of Engineering and Technology | First |
| 9. | Sharmila | III ECE C | Sports-Throwball | KPR Institute of Engineering and Technology | Second |
| 10 | Sharmila | III ECE C | Sports-Relay | KPR Institute of Engineering and Technology | First |
| 11 | Harshan T | III ECE C | Innovsense 2023 | KPR Institute of Engineering and Technology | Third |
| 12 | Dharaneesh AP | III ECE C | Innovsense 2023 | KPR Institute of Engineering and Technology | Third |
| 13 | Vinayakrishna S | III ECE C | Innovsense 2023 | KPR Institute of Engineering and Technology | Third |
| 14 | Vignesh MJ | III ECE C | Innovsense 2023 | KPR Institute of Engineering and Technology | Third |

## PLACEMENT DETAILS 01.04.2023 to 30.04.2023

| S.No | Name of the Student | Name of the Company |
|------|---------------------|---------------------|
| 1. | INBARAJ M | Adecco |
| 2. | KARTHICK | Adecco |
| 3. | RUBANKUMAR J | Incadea |
| 4. | THIRUMOORTHI. G | WISEAIR (Systel) |
| 5. | GOKUL PRASATH S | Adecco |
| 6. | LINGAMOORTHY L | Adecco |
| 7. | SANTHOSH S M | Adecco |
| 8. | SHANKARMAHESH A | WISEAIR (Systel) |

## IIPC ACTIVITIES

**INDUSTRY VISITS**

➢ Mr.T.Jagadesh visited Effica Automation on 26/04/2023 and discussed about student internship and scope for consultancy activities in app development.

➢ Mr.T. Jagadesh and Dr.B. Jaishanakar visited Pramura Software Private Limited on 10/04/2023 and discussed about consultancy activities.

➢ Dr.M. Kalamani, Dr.R. Jaikumar, Ms.S. Priyadharsini visited V-Guard Industries on 12/04/2023 and discussed about various consultancy projects.

**CONSULTANCY ACTIVITIES**

➢ Dr.K.B. Gurumoorthy and Dr.S.Nithya started consultancy project on "Software-Defined Radio Module with frequency range upto 3.5 GHz" from Mighty Electronics Equipments Corporation, Coimbatore.

**PLACEMENTS**

➢ 13 students from III ECE attended internship cum placement drive in ABB, Bengaluru on 29/04/2023.

**FIELD VISIT**

➢ II ECE –B students visited Signal and Telecommunication workshop on 27/04/2023 along with Mr.S.Satheeshkumar and Ms.M.Supriya.

GPS Map Camera

Podanur, Tamil Nadu, India

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