



**KPR** Institute of Engineering  
and Technology

(Autonomous)

Avinashi Road, Arasur, Coimbatore - 641 407

DEPARTMENT OF ELECTRICAL AND  
ELECTRONICS ENGINEERING

**NEWSLETTER**



**ELECTROBLITZ**

**VOLUME 6, ISSUE 6**

**November 2020**

# EDITORIAL BOARD

## PATRONS

**Dr.A.M.Natarajan**

*Chief Executive*

**Dr.M.Akila**

*Principal*

**KPR Institute of Engineering and Technology**

## CHIEF EDITOR

**Dr.V.Kumar Chinnaiyan**

*Professor and Head/EEE*

## EDITORS

**Ms.B.Lalitha**

*Assistant Professor (Sr.G)/EEE*

**Dr.C.Pazhanimuthu**

*Assistant Professor (Sr.G)/EEE*

## STUDENT EDITORS

**Mr.Abishek.S.Kumar, IV EEE-A**

**Mr.M.Gokul, III EEE-A**

**Ms.G.Vinothini, III EEE-B**

**Mr.A.Manikandan, II EEE-B**



# KPR Institute of Engineering and Technology

(Autonomous)

Avinashi Road, Arasur, Coimbatore - 641 407

## INDEX

S. No.	Contents	Page No.
1	Vision and Mission	1
2	PEOs Pos and PSOs	2
3	Faculty Details	3
4	Association Activities	5
5	Journal Publications	8
6	List of Eminent Academicians/Scientists Visited	9
7	Faculty Participation in FDP/Seminar/Workshop/Orientation Program	9
8	Students Participation in Online Courses/ Workshop/Seminar/ Quiz/Paper Presentation	10
9	Product Development	11
10	Photo and Art Gallery	12

# VISION AND MISSION OF THE DEPARTMENT

## Vision:

To be the **centre of higher learning** in the field of Electrical and Electronics Engineering by educating the students to meet the **global challenges** with **professional ethics and social consciousness**.

## Mission:

- Providing **technical, intellectual and ethical** environment to the students through **knowledge centric education and research**.
- Collaborating with industries in the vicinity, nationally and internationally for exposure and **innovation**.
- Enabling the students to **serve the society** through **prolific ideas**.

## Programme Educational Objectives (PEOs)

The Graduates of Electrical and Electronics Engineering will

- **PEO1** Possess an adequate knowledge to meet the needs of the stakeholders and excel in their chosen profession with good communication and managerial skills.
- **PEO2** Adapt to emerging technologies and practice their profession confirming to ethical and human values.
- **PEO3** Continuously improve the habit of self-study through professional development activities.

## Programme Outcomes (POs)

Graduates of Electrical and Electronics Engineering will be able to:

- **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 life-long learning in the broadest context of technological change

## Programme Specific Outcomes (PSOs)

Graduates of Electrical and Electronics Engineering will able to:

- **PSO1** Develop skills to the expectations of the dynamic industrial practices in Electrical Engineering and allied areas.
- **PSO2** Analyze, design and integrate various renewable energy sources to meet the energy demand.

# FACULTY DETAILS

S.NO	NAME OF THE FACULTY	DESIGNATION
1.	Dr.V.Kumar Chinnaiyan	Professor & Head
2.	Dr.J.Karpagam	Professor
3.	Dr.K.Mohanasundaram	Professor
4.	Dr.R .Uthirasamy	Associate Professor
5.	Dr.V.S.Chandrika	Associate Professor
6.	Dr.P.Pandiyam	Associate Professor
7.	Mr.S.Vivekanandan	Assistant Professor (Sl.G)
8.	Mr.G.Sarvanan	Assistant Professor (Sl.G)
9.	Dr.A.Karthick	Assistant Professor (Sl.G)
10.	Mr.R.Sampath Kumar	Assistant Professor (Sl.G)
11.	Mr.A.Gowri Shankar	Assistant Professor (Sr.G)
12.	Mr.D.Sathish Kumar	Assistant Professor (Sr.G)
13.	Ms.B.Lalitha	Assistant Professor (Sr.G)
14.	Ms.V.J .Vijayalakshmi	Assistant Professor (Sr.G)
15.	Ms.R .Revathi	Assistant Professor (Sr.G)
16.	Mr.A.Mohamed Ibrahim	Assistant Professor (Sr.G)
17.	Mr.P.Ravikumar	Assistant Professor (Sr.G)
18.	Dr.C.Pazhanimuthu	Assistant Professor (Sr.G)

19.	Dr.S.Ravindran	Assistant Professor (Sr.G)
20.	Mr.V.Kamal Kumar	Assistant Professor
21.	Mr.K.Balamurugan	Assistant Professor
22.	Mr.C.J.Vignesh	Assistant Professor
23.	Ms.S.Divya	Assistant Professor
24.	Ms.P.Praveena	Assistant Professor
25.	Dr.I.Baranilingesan	Assistant Professor
26.	Mr.C.Dinesh	Assistant Professor
27.	Mr.M.Mohanasundaram	Assistant Professor

### SUPPORTING STAFF

S.NO	NAME OF THE STAFF	DESIGNATION
1.	Mr.M.Vinothkumar	Lab Technician
2.	Mr.C.Gopalakrishnan	Lab Technician
3.	Mr.R.Vinothkumar	Lab Technician
4.	Mr.K.S.M.Manoj Kumar	Lab Technician
5.	Mr.C.Karuppusamy	Lab Technician
6.	Mr.A.Nandhakumar	Office Assistant

## ASSOCIATION ACTIVITIES

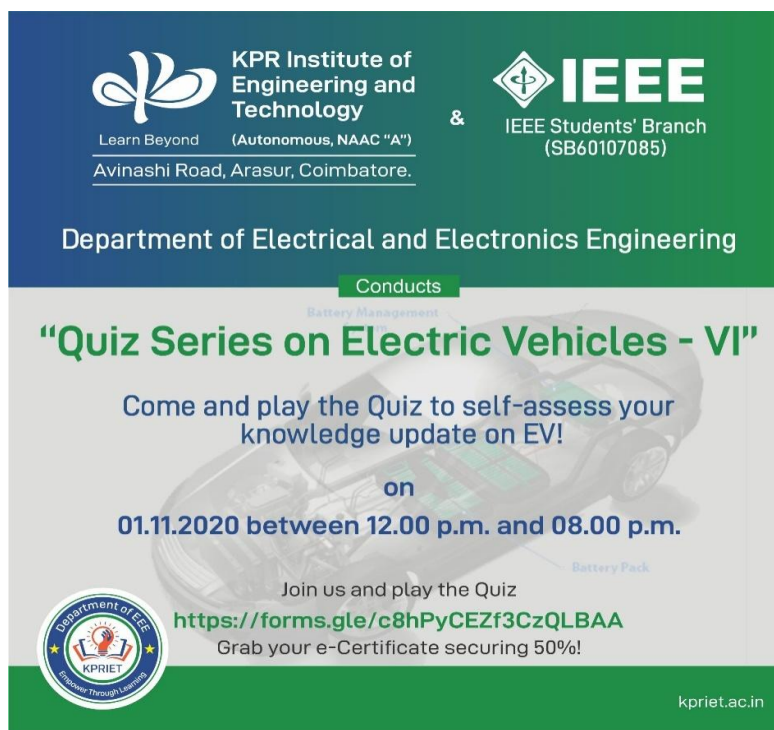
### Quiz Series on Electric Vehicles - VI

The department of Electrical and Electronics Engineering organized a “Quiz Series on Electric Vehicles – VI” on 01.11.2020 open to all, who are keen on emerging EV technologies. The poster is circulated to various Institutions and in social media digitally. The quiz started by 12.00 pm and closed at 08.00 pm. Participants from various colleges, Universities and Industries across India have participated in this quiz.

- This Quiz had 10 questions covering Electric Vehicle Technologies
- Each question carries 10 marks.
- The participants who scored 50% and above were issued with Certificate of Appreciation.

The details of the Program Participants are given below:

Total Participants	:	412
Participants cleared the quiz and received Certificate	:	379
Participants from other Nations, Institutions and Universities	:	370
Participants from KPRIET	:	42



The poster is a promotional graphic for a quiz series. It features a dark blue and green color scheme. At the top left, the KPR Institute of Engineering and Technology logo is displayed with the tagline 'Learn Beyond (Autonomous, NAAC "A")' and the address 'Avinashi Road, Arasur, Coimbatore.'. To the right is the IEEE logo and 'IEEE Students' Branch (SB60107085)'. Below these is the text 'Department of Electrical and Electronics Engineering' and 'Conducts'. The main title of the quiz is 'Quiz Series on Electric Vehicles - VI' in large green font. Below the title, it says 'Come and play the Quiz to self-assess your knowledge update on EV!' and 'on 01.11.2020 between 12.00 p.m. and 08.00 p.m.'. A background image of an electric vehicle battery pack is visible. At the bottom, it says 'Join us and play the Quiz' followed by the URL 'https://forms.gle/c8hPyCEZf3CzQLBAA' and 'Grab your e-Certificate securing 50%!'. The KPRIET logo is in the bottom left corner, and the website 'kpriet.ac.in' is in the bottom right corner.

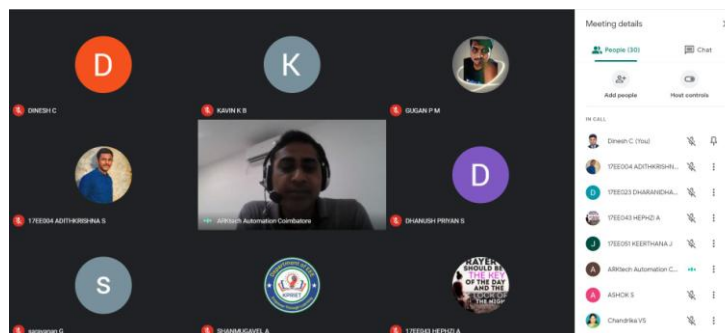
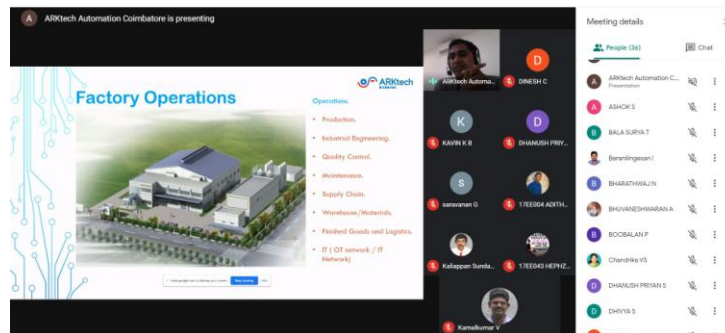


## Webinar on Next Generation Automation in Manufacturing Industry

The department of Electrical and Electronics Engineering organized a webinar on “Next Generation Automation in Manufacturing Industry” on 20.11.2020. A heart-warming welcome remark was delivered by Prof.C.Dinesh, Assistant Professor, Department of EEE. Er.S.Karthikeyan, Director, ARK Tech Automation Solution Pvt Ltd, Coimbatore presented the following deliberations

- Benefits of IoT in our daily needs
- Industrial IoT
- Industrial Revolution & Technology Revolution
- Quality and SPC architecture

Students expressed their gratitude towards the resource person for knowledge which he shared. This webinar is interesting for the students, faculty members and industry person. 42 Participants from EEE department and various industries attended the webinar.



## Quiz Series on Electric Vehicles - VII

The department of Electrical and Electronics Engineering organized a “Quiz Series on Electric Vehicles – VII” on 28.11.2020 open to all, who are keen on emerging EV technologies. The poster is circulated to various Institutions and in social media digitally. The quiz started by 12.00 pm and closed at 08.00 pm. Participants from various colleges, Universities and Industries across India have participated in this quiz.

- This Quiz had 10 questions covering Electric Vehicle Technologies
- Each question carries 10 marks.
- The participants who scored 50% and above were issued with Certificate of Appreciation.

The details of the Program Participants are given below:

Total Participants	:	349
Participants cleared the quiz and received Certificate	:	324
Participants from other Nations, Institutions and Universities	:	301
Participants from KPRIET	:	48

The poster features a blue and green color scheme. At the top left is the KPR Institute of Engineering and Technology logo with the tagline 'Learn Beyond (Autonomous, NAAC "A")' and address 'Avinashi Road, Arasur, Coimbatore.'. To the right is the IEEE logo and 'IEEE Students' Branch (SB60107085)'. Below these is the text 'Department of Electrical and Electronics Engineering'. A green banner reads 'Conducts Battery Management'. The main title is 'Quiz Series on Electric Vehicles - VII' in green. Below it, the text says 'Come and play the Quiz to self-assess your knowledge update on EV!' followed by 'on 28.11.2020 between 12.00 p.m. and 08.00 p.m.'. A background image of an electric car is visible. At the bottom, it says 'Join us and play the Quiz' with the URL 'https://forms.gle/zubPUWTCWY9t4iLA' and 'Grab your e-Certificate securing 50%!'. The KPRIET logo is in the bottom left corner and 'kpriet.ac.in' is in the bottom right corner.

## Faculty Members Journal Publications

1. Parimalasundar E, Kumar NMG, **Chandrika V S**, Selvarasu Ranganathan, Kumar Reddy Cheepati, “Performance Analysis of CHB and CSD Multilevel Inverter for PV and Fuel Cell Integration with Reduced THD”, International Journal of Electrical Engineering and Technology, Vol. 11 (9), November 2020.
2. **Sampathkumar R, Sathish Kumar D, Lalitha B, Revathi R, Gowrishankar A**, “Performance Analysis of Power Quality Improvement for Hybrid Renewable Energy Source using Multilevel Inverter”, International Journal of Future Generation Communication and Networking, Vol. 13 (4), November 2020.
3. **Uthirasamy R, Karpagam J, Umashankar Subramaniam, Vijayalakshmi V J**, “Extended Boost DC-DC-AC Converter for Electric Vehicle Applications”, IOP Conference Series: Materials Science and Engineering, IOP Publishing, Vol. 1 (937), October, 2020.
4. **Saravanan G, Dinesh C, Mohamed Ibrahim A, Kumar Chinnaiyan V**, “Investigation of Controller Design for EV System with Manta Ray Foraging Optimization Approaches”, Solid State Technology, Vol. 63 (6), November 2020.
5. **Revathi R**, Senthilnathan N, **Kumar Chinnaiyan V**, Sevugan Rajesh J, “A Review of Demand Response Opportunities and Challenges for Residential Applications in Smart Grid”, International Journal of Future Generation Communication and Networking, Vol. 13 (4), November 2020.

## List of Eminent Academicians/Scientists Visited

S.No.	Name and Designation	Organization
1	Er.S.Karthikeyan, Director	ARK Tech Automation Solution Pvt Ltd, Coimbatore

## Faculty Participation in Online Courses/ FDP/Seminar/Workshop/Orientation Program


S.No	Faculty Name	Type of the Event	Event Name	Venue	Duration of the Event
1	Ms.R.Revathi	ATAL-FDP	Electric Vehicles	Hindustan Institute of Technology and Science, Chennai	02/11/2020 - 06/11/2020
2	Dr.I.Baranilingesan	FDP	Internet of Things and Artificial Intelligence in Smart Communication and Networking	QIS College of Engineering and Technology, Andhra Pradesh	02/11/2020 - 07/11/2020
3	Mr. C. Dinesh	FDP	Internet of Things and Artificial Intelligence in Smart Communication and Networking	QIS College of Engineering and Technology, Andhra Pradesh	02/11/2020 - 07/11/2020
4	Mr.G.Saravanan	STTP	Integration of Renewable Energy and Big Data Analytics of Smart Grid	P.A. College of Engineering and Technology, Pollachi	16/11/2020 - 21/11/2020
5	Dr. S. Ravindran	STTP	Integration of Renewable Energy and Big Data Analytics of Smart Grid	P.A. College of Engineering and Technology, Pollachi,	16/11/2020 - 21/11/2020
6	Mr.D.Sathish Kumar	ATAL-FDP	Energy Engineering	Government College of Technology, Coimbatore	23/11/2020 - 27/11/2020
7	Mr.M.Mohana Sundaram	ATAL-FDP	“Micro-electomechanical Systems	Sardar Patel College of Engineering, Maharashtra	23/11/2020 - 27/11/2020
8	Mr.S.Vivekanandan	STTP	Unleashing the latest Innovations in Hybrid Electric Vehicle and Solar powered Charging Station Techniques	Sri Sakthi Institute of Engineering and Technology, Coimbatore	23/11/2020 - 28/11/2020

9	Dr.I.Baranilingesan	Quiz	Electrical Vehicles	KPR Institute of Engineering and Technology, Coimbatore	01/11/2020
10	Ms.R.Revathi	Webinar	Role of Electronics in Modern World	Sahakarmaharshi Shankarrao Mohite Patil Institute of Technology and Research, Akluj, Maharashtra	03/11/2020
11	Ms.R.Revathi	Webinar	Roles and Scope of Engineers in Solar Power Plant	Nehru Institute of Engineering and Technology, Coimbatore	06/11/2020
12	Mr.P.Ravikumar	Webinar	IEEE Student Branch Officer's Meet	IEEE Madras Section, Chennai	07/11/2020
13	Ms. B. Lalitha	Webinar	Differential Evolution on Algorithm and its Application for Controller Design	Kalinga University, Naya Raipur	25/11/2020
14	Dr.C.Pazhanimuthu	Webinar	Differential Algorithm and its Application for Controller Design	Kalinga University, Naya Raipur	25/11/2020

## Students Participation in Workshop/Seminar/Quiz/Paper Presentation

S.No	Student Name	Year	Event Name	Venue	Duration of the Event
1	SakthiShivani A.	II	Quiz	SVS College of Engineering, Coimbatore	03/11/2020
2	Kiruthic P.	III	Quiz	Jai Shri Ram Engineering College, Tirupur	04/11/2020

# Product Development

<b>Product Title</b>	<b>SMART WHEEL-CHAIR FOR DISABLED PERSON</b>
<b>Name of the Supervisor</b>	Prof. D.Sathish Kumar, Assistant Professor(Sr.G.)/EEE Prof.R.Revathi, Assistant Professor (Sr.G)/EEE
<b>Name of the Batch Members</b>	Sasidharan S.- IV EEE B, Kumaran G.- IV EEE B Nivedhitha A. – IV EEE B, Kowsalya P. – IV EEE B
<b>Product Description</b>	<p>Freedom of mobility is a dream for every person with physical disability especially in the case of paralysis, quadriplegics. With increasing demand for efficiency in the healthcare sector, and a growing focus on patient needs, it is better to neglect the needs of the caregiver. This project model helps the health professional to avoid heavy lifting situations that put track at risk of injury and allow the caregiver more energy at the end of the workday. The proposed concept works both on mechatronics control principle which is friendly assisting device for the physically challenged patients who can pee without the help of health professional. The proposed wheel chair has the provision for disabled patients to release the human waste by opening and closing the lead screw which is mounted at the bottom of the seat. In addition to the above mentioned facility, motion sensor controlling mechanism, bio-metric features which is more suitable for critical patients can also be implemented. If the patient is in hostile condition, the wheel chair will produce an alert by raising the alarm. The aim of our product is to design, and improvement of a modern low-cost android controlled smart wheel chair for disabled people with higher flexibility and better assistance.</p>
<b>Photograph of the Product</b>	
<b>Project Application</b>	To help the disabled and old age person for their mobility

# Student's Corner



## ART GALLERY



# Student's Corner



## ART GALLERY



G.Vinothini / III-EEE-B

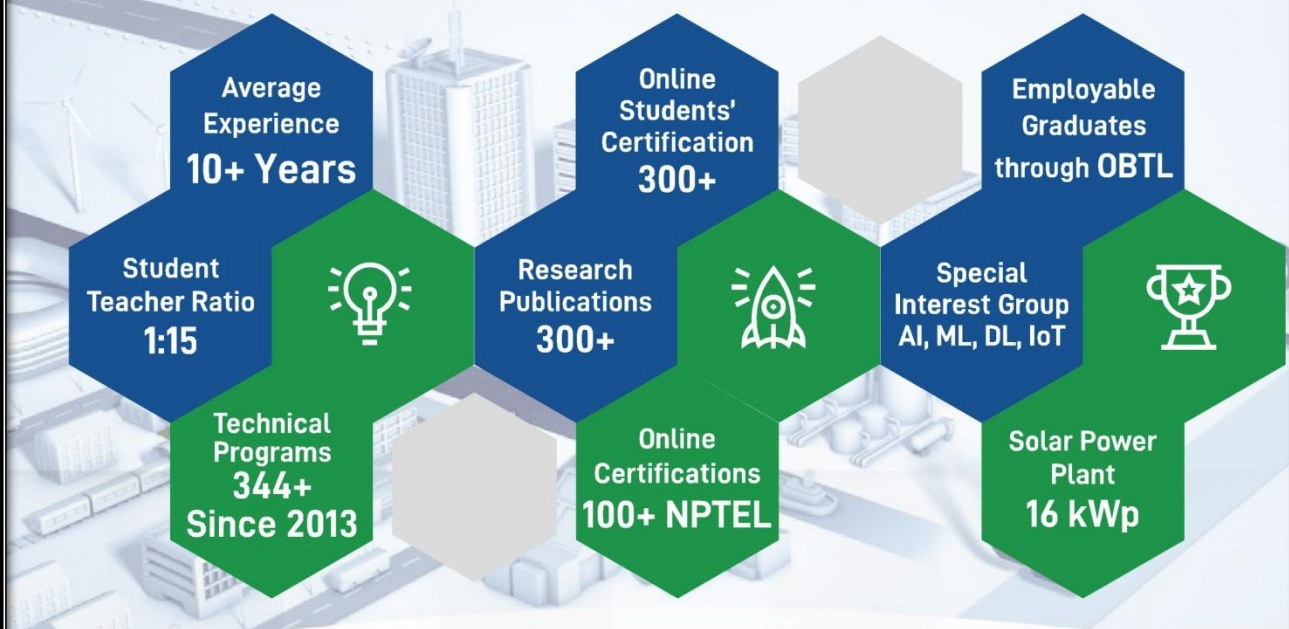




# Department of Electrical and Electronics Engineering



## Highlights of the Department



### CONTACT

The Head of the Department  
Department of Electrical and Electronics Engineering  
KPR Institute of Engineering and Technology  
Arasur, Coimbatore – 641 407.

Ph: 0422 2635600, Email: [hod\\_eee@kpriet.ac.in](mailto:hod_eee@kpriet.ac.in)



KPRIET\_EEE



EEKPRIENT