

ELECTRICAL AND ELECTRONICS ENGINEERING

Kakatiya Institute of Technology & Science :: Warangal



(An Autonomous Institute under Kakatiya University, Warangal)

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CHIEF EDITORIAL MESSAGE



With great pleasure and honour I write this foreword. Indeed, this newsletter has a lot to look forward. I am happy that our department started in the year 1994 with B.Tech-EEE programme has

completed 25 years and is now celebrating Silver Jubilee year. During these 25 years EEE department has crossed several milestones and contributed to society in the form of education to engineering students. Started with B.Tech-EEE in 1994 with an intake of 60 later enhanced to an intake of 120 in the year 2012. PG programme of M.Tech-Power Electronics was started in the year 2013. B.Tech-EEE program has been accredited by NBA two times under Tier-II from 2011-14 and 2016-19. I am glad to inform that now B.Tech-EEE program has been accredited by NBA under Tier-I for three years from 1st July 2019.

The Department has also witnessed the strong force of faculty. At present the Department has faculty strength of 34 with diversity of specialization, out of which 18 of them have Doctorates, 10 are pursuing PhD and 6 are with M.Tech. Alumni are the main pillars for the growth of the Department. I would like to offer my sincere thanks to all the Alumni for their support in guiding the students through invited lectures, supporting for internships and industry visits. Suggestions from stakeholders have added value during the reforms taken time to time.

This newsletter displays the contributions by faculty & students and activities conducted in the Department during January 2022 to June 2022 (Even 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 EEEA 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 even semester of academic year 2022-23

> -Prof. C. Venkatesh HOD, EEED



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VISION & MISSION OF THE DEPARTMENT

VISION: To fulfil the needs of the industry & society through excellence in education & research in electrical engineering.

MISSION:

- To produce globally competent engineers in Electrical & Electronics Engineering.
- To promote scientific inclination and cultivate professional ethics.
- To serve organization and society as adaptable engineers, entrepreneurs or leaders.

BTECH - ELECTRICAL & ELECTRONICS ENGINEERING

Program Educational Objectives (PEOs):

Within first few years after graduation, the ELECTRICAL AND ELECTRONICS ENGINEERING graduates will be able to:

- **PEO1 Technical Expertise:** Apply the knowledge of electrical and electronics engineering to develop solutions for complex problems of electrical power industry and allied engineering areas.
- PEO2 Successful Career: Demonstrate innovation & creativity in their professional practice, work effectively as an individual and in a team in multidisciplinary areas towards sustainable development.
- **PEO3** Lifelong learning: Adapt to a constantly changing field through higher education, professional development and self-study for contributing to well-being of society.

Program Outcomes (POs):

Engineering Graduates 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 analyse 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 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 Environment and sustainability:
 Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the



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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.

- **Communication:** communicate effectively PO10 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, effective make 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 Lifelong learning: recognise the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Program Specific Outcomes (PSOs):

- PSO1 Apply the fundamental knowledge of electrical and electronics engineering in providing solutions for modern power industry and multi-disciplinary areas.
- PSO2 Analyse, design and simulate systems to generate, transmit, distribute, utilize and control electrical energy to meet societal and environmental needs using electrical and electronic systems.

MTECH-POWER ELECTRONICS

Program Educational Objectives (PEOs):

The Postgraduates of POWER ELECTRONICS will be able to:

- PEO1 Research and Innovation: Engage in research, innovation and teaching in the fields related to power electronics and Drives.
- PEO2 Technical expertise and Successful career: Excel in professional practice relevant to industry and engage in entrepreneurship with latest technologies in the areas of power converters, renewable energy, smart electric grid, industrial drives and electric vehicles.
- PEO3 Soft skills and Lifelong learning: Exhibit professional ethics, communication skills and spirit of teamwork by carrying out research for a sustainable environment.

Program Outcomes (POs):

At the time of graduation, the postgraduates of POWER ELECTRONICS will be able to:

- **PO1** Independently carry out research/ investigation and development work to solve practical problems.
- PO2 Write and present effective technical report/document.
- PO3 Demonstrate competence in the area of Power Electronics.

Program Specific Outcomes (PSOs):

- PSO1 Apply knowledge of power electronics for the development of effective innovation solutions to problems pertaining to the renewable energy sources, smart electric grids and electric vehicles.
- PSO₂ Analyse complex engineering problems related to power electronics industry related to power industry and develop solutions with the latest hardware and software tools.

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FACULTY CONTRIBUTIONS

Details of the Journal Paper Publications of the Faculty Published, during July'2022- December'2022:

	dubinshed, during July 2022- December 2022.				
S.	Name of the Title		Journal		
no.	Faculty	Title	Journal		
1	Prof. V.	Optimized Controller Gains Using Grey Wolf Algorithm for Grid Tied Solar Power Generation with Improved Dynamics and Power Quality in <i>Chinese Journal of Electrical Engineering</i> , vol. 8, no. 2, pp. 75-85, June 2022, doi: 10.23919/CJEE.2022.000016.	Chinese Journal of		
2	Dr. B. Jagadish Kumar	Certain Investigations On Current Ripple Free In A Single Phase Isolated Converter For Fuel Cell Applications <i>Positif</i> <i>Journal</i> , ISSN NO: 0048-4911, vol. 22, no. 7, July. 2022, pp. https://doi.org/10.37896/psj30.7 /1240	Positif Journal		
3	Prof. V.	Multilevel Inverter with Self-Balanced Switched Capacitor for Vehicle Application in <i>Positif Journal</i> , vol. 22, issue 9, pp. 1-10, Sept. 2022, doi: https://doi.org/10.37896/psj30.9/1400.			
4		Fault tolerant nine-level inverter topology for solar water pumping applications, International Journal of Electrical and Computer Engineering (IJECE), vol.12, no.4, August 2022, http://doi.org/10.11591/ijece.v1 2i4.pp3485-3493.	Journal of Electrical and Computer		
5	Dr. M. Santhosh	A novel dynamic selection approach using on-policy SARSA algorithm for accurate wind speed prediction. Electric Power Systems Research (Elsevier journal). 2022 Nov 1; Vol. 212: p.108174. (https://doi.org/10.1016/j.epsr.2 022.108174)	Elsevier		

Details of the Conference Paper Publications of the Faculty published during: July'2022- December'2022:

S. no.	Name of the Faculty	Title	Name of the Conferen ce	Dates	Venue
1	Dr. D. Rakesh Chandra	Short-Term Load Forecasting in DSO Substation Networks with Dimensionality Reduction Techniques, IEEE international Conference on Environment and Electrical Engineering (CPS Europe), pp.1-6, July 2022.	IEEE internatio nal Conferenc e on Environm ent and Electrical Engineeri		
2	Dr. G. Rajender	Design and development of Mini electric bike, <i>AIP Conference</i> Proceedings, October 2022.	AIP Conference		





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EEE ASSOCIATION DETAILS

STUDENT ACTIVITIES

PRESIDENT	
K. Sujeeth Kumar	(IV/IV, B.Tech)
VICE-PRESIDENT	
K. Sujith Kumar	(IV/IV, B.Tech)
GENERAL SECRETARIES	
B. Sruthi	(IV/IV, B.Tech)
Ch. Sheetal	(IV/IV, B.Tech)
TREASURER	
G. Santhosh Kumar	(IV/IV, B.Tech)
RAPPORTEUR	
J. Sai Chandhu	(IV/IV, B.Tech)
EVENT MANAGERS	
T. Eshwar Naik	(IV/IV, B.Tech)
SPOKESPERSONS	
Nishath Tabassum	(IV/IV, B.Tech)
Ch. Sri Vaishnavi	(IV/IV, B.Tech)
EXECUTIVE MEMBERS	
V. Rahul	(IV/IV, B.Tech)

S. no.	Activity	Date	
	Introduction to Association, Rules, and	22 Aug' 22	
	Regulations of EEEA		
	EEEA INAUGURAL CEREMONY	29 Aug' 22	
3	Awareness of Research Paper and ppt presentation (Technical) by Dr. V. Rajagopal, Professor, EEED & Teacher's Day Celebrations	5 Sept' 22	
4	Mock Group discussion/ Debate (Non-Technical)	12 Sept' 22	
5	MATLAB & Simulink Hands-on session (Technical) by Sri K. Ajith, Assistant Professor, EEED	19 Sept' 22	
6	Awareness and Preparation of GATE and other Central Exams (Technical)	26 Sept' 22	
7	Workshop or seminar on Smart Automation Systems (Technical)	17 October' 22	
8	Idea Presentation (Technical)	24 October' 22	
9	Social Media for Self-learning (non- Technical)	31 October' 22	
10	Drama and Plays (Non-Technical)	7 November '22	
11	Essay / Article Writing (Non-Technical)	7 November '22	
12	Sumshodhini Technical fest'22 I. Workshop on "Smart Home Automation Using IOT". II. Paper Presentation III. Poster Presentation IV. Technoconnect V. Enigma Chase Resume Preparation (Technical)	18,19 November '22	
10	resume reparation (recimical)	12 December 22	





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Activity – Introduction to Association, Rules, and Regulations of EEEA

In the view of new EEEA body formation, beloved HOD sir and Faculty Coordinators, EEEA have put their regards on the rules and regulations of Association. They have included Mission and Objectives, Application process, Ethics and Body Structure, Previous body exercises, and the events conducted by the committee over the past few years have been summarized to the students. At last, by adhering to these guidelines, members could contribute to the association's success.

EVENT PHOTOGRAPHS







Activity – EEEA INAUGURAL CEREMONY

The Inaugural Ceremony of EEEA marked a momentous occasion as members, distinguished guests, and supporters gathered to celebrate the official establishment of the association. The event was filled with enthusiasm, excitement. and a shared vision for the future of the organization. The ceremony commenced with a warm welcome address by the association's founding members our beloved Faculty Coordinator Dr. G. Sunil kumar and Sri. T. Praveen Kumar, expressing their heartfelt gratitude to all attendees for joining them on this significant day. They emphasized the association's mission and objectives, underlining its commitment to making a positive impact in its respective field. Beloved HOD sir, Dr. C. Ventakesh garu and respected dignitaries has shown their regards on the newly elected body by congratulating them and launched an official EEEA (2022-23) poster.

EVENT PHOTOGRAPHS







Activity – Awareness of Research Paper and PPT presentation by Dr. V. Rajagopal, Professor, EEED & Teacher's Day Celebrations

The "Awareness of Research Paper and PPT Presentation" session was organized to equip attendees with essential knowledge and skills related to creating and presenting research papers and PowerPoint (PPT) presentations effectively. The event aimed to enhance participants' academic and professional capabilities, enabling them to communicate their ideas and findings with confidence and impact. Overall, the "Awareness of Research Paper and PPT Presentation" session left participants feeling more equipped and confident in their ability to undertake research projects and deliver compelling presentations, enhancing their academic and professional growth.

On the special occasion of Teachers' Day, the students have expressed their gratitude and respect for the valuable contributions made by teachers who play a pivotal role in shaping the lives of students and society as a whole, and also EEEA has presented them with mementos as tokens of honour and appreciation.

At last, the badges were released to the body members. The Association Badge Release event is a momentous occasion that celebrates the association's identity, achievements, and the shared commitment of its members. The badge serves as a visual representation of the association's values and mission, instilling pride, unity, and engagement among its members.

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EVENT PHOTOGRAPHS





PRESENTING THE MEMENTOS TO ALL THE DEPT. FACULTY







EEEA BADGE RELEASED BY HOD SIR



Activity – Mock Group discussion/ Debate (Non-Technical)

As a part of EEEA event, a debate has been conducted. The primary goal of the debate was to enrich the negotiation skills and critical thinking. Few topics were given to choose by both the teams. Overall, the association contributed to the personal and professional development of the students.

EVENT PHOTOGRAPHS



Activity – MATLAB & Simulink Hands-on session by

The MATLAB & Simulink Hands-on session led by the sir was an enlightening and practical workshop designed to introduce participants to the powerful tools of MATLAB and Simulink. The session outcomes were, introduction to MATLAB, basic MATLAB functions and commands, Visualization and Plotting, Simulink modelling and Simulation, Real Life Applications, followed by a Q&A and interaction.

EVENT PHOTOGRAPHS

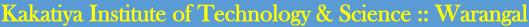








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Activity - Sumshodhini Technical fest'21

The exciting events include:

- 1. Workshop event
- 2. Paper Presentation
- 3. Poster Presentation
- 4. Technoconnect
- 5. Enigma Chase

I. Workshop event

The workshop on "Smart Home Automation Using IoT" was a hands-on comprehensive and interactive learning experience focused on educating participants about the principles and practical applications of IoT-based smart home automation. The workshop covered various aspects of building and controlling smart home systems, providing students with the knowledge and skills needed to create their own smart home projects, making their living spaces more efficient, comfortable, and secure. With this knowledge, they are wellequipped to explore further innovations and advancements in the rapidly evolving field of IoT-based smart home automation. The participants were divided into groups and were given a kit to enable the hands-on experience on IoT projects led by the resource person, then followed by a Q&A session.

WORKSHOP POSTER



EVENT PHOTOGRAPHS



II. Paper Presentation

Paper Presentation is all about how effectively an idea is conveyed to the audience. Paper Presentation not only judges the knowledge but also the creativity in that individual. Participants were been asked to prepare a soft copy of their presentation in PPT format and they have to forwarded Abstract & PPT to the mail id provided by the organisers. Participants have included acknowledgement of sources of their presentation at the end in their respective slides.

Soon after the presentations, participants have been assessed in various criteria like presentation style, communication skills and how promptly and effectively he/she was able to answer the questions. The best performances were given merit certificate along with cash price to encourage them to participate in further events.

PAPER PRESENTATION POSTER



EVENT PHOTOGRAPHS







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III. Poster Presentation

Poster Presentation is one such form, which enhances the technical creativity in the participants by enabling them to summarize their idea in the form of a PowerPoint Presentation, poster, art, etc. This event, on the whole, assessed the participant in the terms of creativity used in conveying their idea. The participants have created posters by visualizing the data available and gave presentation related to their project. They have rectified and improved their weaker areas in communication skills, and learnt to effectively present the poster for the future. The participants have shown their interest in the event and best performance has achieved the Merit certificate along with Cash Prize.

POSTER PRESENTATION POSTER



EVENT PHOTOGRAPHS



IV. Technoconnect

Technoconnect had an intend to explore the participant's knowledge in the Electrical Engineer stream. Since, an electrical engineer must have a grip on the fundamentals of the electrical course. It is believed that with a good understanding of the basics, the candidate can get to solve the problems of the advanced level or real-time problems. And also, whatever a candidate learns, it must be learned not only with utmost focus and dedication but also with a fun-loving attitude. There are three rounds named Pictoquest, Inquizative, Electricster, and the participants have shown their interest in the event and best performance has achieved the Merit certificate along with Cash Prize. By the end of the event, participants were able to improve their logical and critical thinking skills in a very unique and interesting way.

TECHNOCONNECT POSTER



EVENT PHOTOGRAPHS















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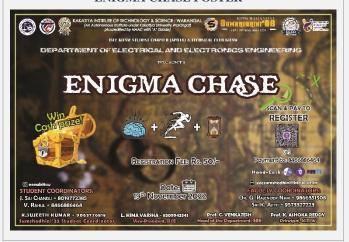


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V. Enigma Chase

Enigma chase is a techie-fun event that helps the students to improve their logical thinking, relieves the stress, sharpen the brain and explore the KITSW campus. This event held physically at the college campus that allowed the participants to plunge into the race of mystery chase. Probably, it was the best event that took every participant's boredom and opened the gateway of the techie-fun kingdom by brain lighting their thinking ability to the riddles asked. In this event, 20 clues were provided to each of the participant's and which were completely related to the college campus premises only, participants were been asked to chase the mystery place and take a picture of that place in less time that can be used for evaluation. The participants have shown their interest in the event and best performance has achieved the Merit certificate along with Cash Prize.

ENIGMA CHASE POSTER



EVENT PHOTOGRAPHS



STUDENT ACHIEVEMENTS

On-going Placements for the Academic year 2022-2023

S. No.	Roll No.	Student Name	Name of Employer
1	B19EE004	NARAHARI JHANSI	MIND TREE
2	B19EE008	SRI VAISHNAVI	MIND TREE
3	B19EE010	CHAKRAVARTULA V MANASA	MU SIGMA, MIND
4	B19EE014	T VAISHNAVI	TREE, JSW MU SIGMA
	B19EE014 B19EE016	CH ROSHAN	MU SIGMA, ZF
5			TECHNOLOGIES
6	B19EE018	S SRIKANTH	HEXAWARE
7	B19EE024 B19EE026	K CHANDANA C SRINIDHI	COGNIZANT GENC ACCENTURE
8		SANTOSH	
9	B19EE029	A KOUSHIK	MU SIGMA
10	B19EE035	G PALLAVI	JSW
11	B19EE037	R ADARSH KUMAR	HBL POWER SYSTEMS LTD.
12	B19EE039	J NAGARAJU	TCS
13	B19EE041	D AKSHITHA	COGNIZANT GENC, ACCENTURE, JSW
14	B19EE048	K HARISH KUMAR	COGNIZANT GENC
15	B19EE049	SAMALA SRINIJA	MIND TREE
16	B19EE054	R VAMSHI KRISHNA	TCS
17	B19EE062	MADHARAPU SHIVANI	MIND TREE
18	B19EE063	RAHUL TEJAVATH	MU SIGMA, MIND TREE
19	B19EE064	KODEPAKA SUJEETH KUMAR	MIND TREE
20	B19EE065	J SATHWIKA	COGNIZANT GENC
21	B19EE067	NISHASHVI YALAMAKONDA	MIND TREE, JSW
22	B19EE068	DEEPAK MEDISETTI	MIND TREE, JSW
23	B19EE074	GOVINDU SANTHOSH KUMAR BALAJI	MIND TREE
24	B19EE080	NISHANTH TABASSUM	COGNIZANT GENC, INNOVA SOLUTIONS
25	B19EE082	RAHUL VAIDYA	MIND TREE
26	B19EE084	T SHIVA	MEDHA SERVO DRIVES
27	B19EE085	AKHIL DASARI	COGNIZANT GENC, MIND TREE, JSW
28	B19EE087	P GAYATRI	MU SIGMA, ZF TECHNOLOGIES
29	B19EE090	S SRUTHI	ACCENTURE
30	B19EE091	THIRUPATHI	MIND TREE, TCS,
31	B19EE092	BASHAVENI C CHAITANYA	JSW HEXAWARE
32	B19EE094	REDDY L THARUN NAYAK	INNOVA SOLUTIONS
33	B19EE094 B19EE098	B. PRANITHA	MU SIGMA
34	B19EE098 B19EE105	C AKASH	HEXAWARE, HYUNDAI MOBIS
35	B19EE108	PAKA ANUSHA	COGNIZANT GENC, MIND TREE
36	B19EE108 B19EE109	S SINDHU	POLY CAB
37	B19EE109	G KAVYA SRI	ZF TECHNOLOGIES
38	B19EE1112	B SHRAVAN	TCS
39	B19EE115	B SRUTHI	HEXAWARE, ACCENTURE





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40	B19EE116	K SUJITH KUMAR	HEXAWARE, MIND TREE
41	B19EE119	P ROHITH	ACCENTURE, MIND TREE, TCS
42	B20EE121L	P. SPANDANA	ROAMONIX TECHNOLOGIES
43	B20EE123L	N SAI RATHAN	HYUNDAI MOBIS
44	B20EE123L	N SAI RATHAN	HBL POWER SYSTEMS LTD.
45	B20EE125L	MANOJ KUMAR DARA	HBL POWER SYSTEMS LTD.
46	B20EE126L	MAMIDALA PAVAN KALYAN	HBL POWER SYSTEMS LTD.
47	B20EE129L	GORANTALA NIHARIKA	MIND TREE
48	B20EE131L	A RACHANA	HBL POWER SYSTEMS LTD.
49	B20EE134L	R NIKITHA	ADMIRE GLOBAL ORGANISATION