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Dr. M. SANTHOSH, Assistant Professor

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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 pillar 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 June 2020 to December 2020 (Odd semester of AY 2020-21). 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 2019-2020.

-Prof. C. VENKATESH
HoD, EEE

VISION AND MISSION OF THE DEPARTMENT**VISION**

To fulfil the needs of the industry and society through excellence in education and 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

B.Tech – Electrical & Electronics Engineering**Program Educational Objectives (PEOs):**

Within first few years after graduation, the **ELECTRICAL & 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. |
| PEO 2 | Successful Career | Demonstrate innovation & creativity in their professional practice, work effectively as an individual and in a team in multidisciplinary areas towards sustainable development. |
| PEO 3 | 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 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** **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

M.Tech – Power Electronics

Program Educational Objectives(PEOs) of M.Tech.- 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 & Drives.
PEO2 (Technical expertise and Successful career)	excel in professional practices 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, effective communication skills and spirit of teamwork by carrying out research for a sustainable development.

Program Outcomes(POs) of M.Tech. - Power Electronics

Program Outcomes	Engineering Post Graduates will be able to
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 an effective technical report/document
PO3	Demonstrate competence in the area of Power Electronics

PROGRAM SPECIFIC OUTCOMES (PSOs) of M.Tech. Power Electronics

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

Department Events:

Details of New equipment added during January'2021 – June'2021:

S.No	Name of the New laboratory	B.Tech/ M.Tech	Details of the equipment added	Make & specifications	Cost (Rs.. in lakhs)
1	Power Electronics Simulation Laboratory	B.Tech & M.Tech	MATLAB Software 2021b	Make: Mathworks Inc. Supplier: Capricot Software	1,10,136/-
2	Control Systems Laboratory	B.Tech	DC Motor Control Kit	Carimo Technologies, Mumbai	14,750/-

Faculty Contributions:

Details of the Journal Paper Publications of the Faculty Published, during January'2021 – June'2021

S.No	Name of the Faculty	Title	Name of the Journal
1	V. Rajagopal	Optimization of controller gains to enhance power quality of standalone wind energy conversion system	International Journal of Emerging Electric Power Systems, May, 2021
4	B. Jagadeesh kumar	Investigations on Changing the Electrical Safety Culture	Journal of Information and Computational Science
5	B. Jagadeesh kumar	Numerical Analysis On Angle Of Attack On Bow Shock Formation In Aerodynamic Flows	Journal of Information and Computational Science
6	B. Jagadeesh kumar	Investigations on performance of Flyback and Buck-Boost converters in PV energy conversion system	Journal of Information and Computational Science
7	B. Jagadeesh kumar	Investigations on Recharge Boost Converter	Journal of Information and Computational Science
8	B. Jagadeesh kumar	Transparent Solar Cell	Journal of Information and Computational Science
9	B. Jagadeesh kumar	Certain Investigations on Two input Integrated Buck-Buck boost Converter	International Journal of Science and Technology
10	B. Jagadeesh kumar	Investigations on Multi input Integrated Buck-Sepic Converter	International Journal of Science and Technology
11	Dr. Y. Manjusree	Performance Analysis of grid Connected Hybrid Solar Photovoltaic-Wind Energy System	IJAST
12	Dr. Y. Manjusree	Model of Autonomous open loop Dual -Axis Solar Tracker	NCETE-2020
13	Dr. D. Rakesh Chandra	Short-term electric power load forecasting using factor analysis and long short-term memory for smart cities	International journal of Circuit theory and Applications (Wiley)
14	Dr. A. Madhukar Rao	A multi-string fault-tolerant multilevel inverter configuration for off-grid photovoltaic applications	International Transactions on Electrical Energy Systems
15	Dr. V. Prakash	Overview of Restructured Power System	Springer - Innovations in Electrical and Electronics Engineering

16	Dr. V. Prakash	Single-Phase PV System with Continuous H-Bridge Inverter	Springer - Innovations in Electrical and Electronics Engineering
17	Dr. V. Ashok	Fault Location Scheme for Cross-Country Faults in Dual-Circuit Line Using Optimized Regression Tree	Electric Power Components and Systems, 2021, (SCI Indexed)
18	Dr. V. Ashok	Fault Diagnosis Scheme for Cross-Country Faults with Emphasis on High-Impedance Fault Syndrome”,	IEEE Systems Journal, Date of Publication: 25 May 2020
19	Dr. V. Ashok	Optimized Ensemble of Regression Trees-Based Location of Evolving Faults in Dual-Circuit Line”,	Neural Computing and Applications, 2021
20	Dr. B. Pradeep Kumar	Identification of Pre-existing/Undetected Line-to-Line Faults in PV Array Based on Pre-turn ON/OFF Condition of the PV Inverter	IEEE Transactions on Power Electronics, vol. 35, no. 11, pp. 11865-11878, Nov. 2020
21	Dr. B. Pradeep Kumar	Identification and Localization of Array Faults with Optimized Placement of Voltage Sensors in a PV System	IEEE Transactions on Industrial Electronics
22	Dr. B. Pradeep Kumar	Estimation of PV Module Degradation Through Extraction of I-V curve at Inverter Pre-start up Condition	IET Renewable Power Generation, Vol 14, Issue no. 17, page no. s 3479-3486
23	Dr. V. Srikanth	A simple approach to modeling and control of DFIG-based WECS in network reference frame	International Journal of Ambient Energy
24	Dr. Srikanth Velpula	Power Systems Automation, Communication, and Information Technologies for Smart Grid: A Technical Aspects Review	TELKOMNIKA Telecommunication, Computing, Electronics and Control

Details of STTPs/ FDPs/ Workshops/Webinars attended by the faculty during January'2021 – June'2021

S. No	Name of the Faculty	STTP/FDP/workshop # /others	Details	Venue	Duration & Dates
1	Dr. A. Madhukar Rao	DST Sponsored Six Week Entrepreneurship training program	Technology Based Entrepreneurship Development Programme (Artificial Intelligence & Machine Learning)	SR Engineering College	Six Week 18th January to 27th February 2021
2	Dr. V. Ashok	One week FDP	AI, Machine Learning, Deep Learning and Automation Applications in Electrical Datasets: Theory to Hands on Practice	Dept. of EEE, Sasi Institute of Technology & Engineering, Tadepalligudem, West Godavari district, Andhra Pradesh, India.	05-07-2021 to 10-07-2021
3	Dr. V. Ashok	One week STTP	Sustainable Power System	NITT In Association with The Hong Kong Polytechnic University	7 th to 11 th June 2021
4	Dr. V. Ashok	One week FDP	Data Science and its Applications	Department of CSE, S.R.K.R. Engineering College	10 th to 15 th June, 2021.
5	Dr. V. Ashok	webinar	Integration Large scale renewable energy into the bulk power system: Good International Practices	Engineering Staff College of India(ESCI), Hyderabad	2 nd June 2021
6	Dr. V. Ashok	webinar	Energy storage is the next big thing in the power sector	Engineering Staff College of India (ESCI), Hyderabad	20 th May 2021
7	Dr. V. Ashok	One week workshop	Cloud Computing and Big Data	IEEE Student Branch, NITT	17 th – 21 st May 2021
8	Dr. V. Ashok	One week (e-workshop)	Recent Trends in Operation and Planning of Distribution System and Microgrid	Dept. of EEE, National Institute of Technology Tiruchirappalli	4th to 8th January 2021

9	Dr. V. Ashok	Webinar	Distribution Automation	M/S. Tata Power Delhi Distribution Limited (TPDDL), New Delhi	May 21 st , 2021
10	Dr. V. Ashok	Webinar	Big Data Analytics in Power Sector	M/S. Tata Power Delhi Distribution Limited (TPDDL), New Delhi	March 27 th , 2021
11	Dr. V. Ashok	Webinar	Renewable Energy and its Integration with the Grid	M/S. Tata Power Delhi Distribution Limited (TPDDL), New Delhi	March 20 th , 2021
12	Dr. V. Ashok	Webinar	Smart Grid in India and its Future	M/S. Tata Power Delhi Distribution Limited (TPDDL), New Delhi	29 th January 2021
13	Dr. V. Ashok	Webinar	Testing Requirements of MV Switchgear for Renewable Energy Applications	High Power Laboratory, Central Power Research Institute, Bangalore	8th March 2021
14	Dr. Srikanth Velpula	STTP	Design and Technology aspects of Off-grid & grid connected roof top solar and Bio-Energy(Operation & Maintenance)	St. PETER'S ENGINEERING COLLEGE, Hyderabad	ONE WEEK 15th to 21st - 04-2021
15	Dr. Srikanth Velpula	Webinar	Big Data Analytics in Power Sector	Tata Power Delhi Distribution Limited, New Delhi	ONE DAY 27-03-2021
16	Dr. Srikanth Velpula	STTP	An Overview of Smart Grid Infrastructure for Demand Side management (Phase-III)	Department of EEE, New Horizon College of Engineering, Bangalore	ONE WEEK 01st to 06th -02-2021
17	Dr. B. Pradeep Kumar	One week FDP	Simulation Techniques for Power Electronics Converters (Electrical & Computer Engineering)	Department of electrical Engineering, National Institute	ONE WEEK 08-02-2021 to 12-02-2021

				of Technology Patna	
18	Dr. B. Pradeep Kumar	One week FDP	Artificial Intelligence, machine Learning and Deep Learning	Computer science and Engineering, GIET University, Gunupur, Odisha	ONE WEEK 22-02-2021 to 26-02-2021
19	Dr. B. Pradeep Kumar	Webinar	Smart Grid Using Smart Meters and Smart Phone	Committee for advancement of technology and Engineering, The Institute of Engineers (India)	18-04-21
20	Dr. B. Pradeep Kumar	One week FDP	Software tools for the Power Converter Design	Department of EEE, National Institute of Technology Tiruchirappalli	26-04-21 to 30-04-21
21	Dr. B. Pradeep Kumar	Training Programme	Internship on EV Design Using MATLAB	Pantech Solutions, Chennai	4 Weeks Training Programme 03-05-21 to 02-06-21
22	Sri. K. Ajith	AICTE sponsored One week STTP	Digital signal controllers for Control of Power Electronic Converters and Applications	Electrical Engineering Department, Sarvajanic College of Engineering and Technology, Surat	01-03-2021 to 06-03-2021
23	Dr. V Ashok	46 hours online course	“EVOLVING ENERGY SECTOR AND MARKETS”	Organized by MNIT, Jaipur (INDIA) in association with Cardiff University (U.K)	46 hours online course, organized from 20 th March to 13 th June, 2021

Conferences attended by the faculty for presenting research papers, during January'2021 – June'2021

S. No	Name of the Faculty	Title with page nos.	Name of the Conference	Conference Dates	Venue
1	Dr. C. Venkatesh	NLC and SFO Control Technique Based Multilevel Inverter fed 3- ϕ Induction Motor Drive	IEEE International Conference on Sustainable Energy and Future Electric Transportation (SEFET-2021)	Jan.21 st to 23 rd 2021	GRIET, Hyderabad
2	Dr. B. Jagadeesh kumar	Transparent Solar Cells	International conference on Recent Innovations in Science ,Engineering, Humanities and Management	16th-17th January,2021	Institution of Engineers, India,Chandigarh
2	Dr. B. Jagadeesh kumar	Investigations on Recharge boost Converter",	International conference on Recent Innovations in Science ,Engineering, Humanities and Management	16th-17th January,2021	Institution of Engineers, India,Chandigarh
4	Dr. B. Jagadeesh kumar	Investigations on changing the electrical safety culture""	International conference on Recent Innovations in Science ,Engineering, Humanities and Management,	16th-17th January,2021	Institution of Engineers, India ,Chandigarh
5	Dr. B. Jagadeesh kumar	Investigations on Plug in Hybrid Electric vehicle",	5th International Multidisciplinary Research Conference,	26th December,2020	Conference world, Osmania University Centre for International 7Program, OU, Hyderabad
6	Dr. B. Jagadeesh kumar	Numerical Analysis on angle of attack on Bow shock formation in Aerodynamic flow	5th International Multidisciplinary Research Conference,	26th December,2020	Conference world, Osmania University Centre for International Program, OU, Hyderabad
7	Dr. B. Jagadeesh kumar	Parametric Studies on Bow shock formed in Aerodynamic flow	6th International Conference Shaastrath-2020	19th-20th December 2020	
8	Dr. B. Jagadeesh kumar	Design and Fabrication of Plug In Hybrid Electric	6th International Conference Shaastrath-2020	19th-20th December 2020	
9	Dr. B. Jagadeesh kumar	Investigations on performance of Flyback and Buck-Boost converter in PV Energy Conversion System	Smart modernistic in electronics and Communication	29th-30th ,June, 2020	St. Martin's Enggg.College,Hyderabad, 978-93-80831-43-5,

10	Dr. B. Jagadeesh kumar	investigations on Multi input Integrated Buck- Sepic Converter	Second International online and Multidisciplinary Conference	15th-16th ,June,2020	International Association Research and Developed organization, Gaziabad, 978-93-90103-04-1
11	Dr. P. Nagarjuna Reddy	Hacking wireless network credentials by performing phishing attack using python scripting	5 th International Conference on Intelligent Computing and Control Systems (ICICCS 2021)	6-8 May 2021	--
12	Dr. P. Nagarjuna Reddy	Comparative Study of Conventional Inverter Topologies for Stand-Alone PV System	2nd International Conference of Emerging Technology (INCET 2021)	21st – 23rd May 2021	Jain College of Engineering Belagavi, India
13	Dr. M. Santhosh	Ensemble Deep Learning Model for Wind Speed Prediction	National Power System Conferance-2020	Dec 17-19 th , 2020	IIT, Gandhinagar-
14	Dr. M. Santhosh	Wind speed prediction using hybrid long short-term memory neural network based approach,	International Conference on Sustainable Energy and Future Electric transportation (SEFET) 2021.	Jan.21 st to 23 rd 2021	GRIET, Hyderabad

Details of expert lectures delivered by the faculty inside & outside the institution during January'2021 – June'2021:

S. No.	Name of the faculty	Expert lecture delivered	Dates	Venue
1.	Dr.A.Madhukar Rao	National Workshop on Recent trends and Advancements in HEV: Fault tolerance and Battery Energy Balancing of DC-AC converter for Electric Vehicles	16 th April 2021	M.Kumaraswamy college of engineering, Karur, Thalavapalayam, Tamil Nadu
2.	Dr. B. Pradeep Kumar	Solar Photovoltaic Fundamentals and Power Converters for Photovoltaic Systems” during June 2021 to July 2021 “Modelling of PV Module in Matlab/Simulink”	09-06-21	National Institute of Technology Tiruchirappalli


3.	Dr. B. Pradeep Kumar	Recent Trend in Electrical Engineering, 12-07-21 to 17-07-21 "Introduction to Solar PV Systems"	15-07-21	Oxford College of Engineering, Bangalore
4.	Dr. B. Pradeep Kumar	Modelling of PV Module in Matlab/Simulink	29-07-21	Madanapalle Institute of Technology and Science, Madanapalle

EEE ASSOCIATION DETAILS:



- 1. President: D. Sravan Kumar (IV/IV, B. Tech)**
- 2. Vice president: Md Arshad (IV/IV, B. Tech)**
- 3. Vice president: K. Varenya (IV/IV, B. Tech)**
- 4. Chief Secretary: Sd Abeeunisa (IV/IV, B. Tech)**
- 5. Chief Secretary: P. Nikhil (IV/IV, B. Tech)**
- 6. Joint Secretary: M. Rumitha (III/IV, B. Tech)**
- 7. Joint Secretary: D. Nikhil (III/IV, B. Tech)**
- 8. Event Managers: L Nithin, T. Santhoshy, A. Sai Kiran and N. Kushal**

Student Activities Conducted during January'2021 – June'2021:

S No.	NAME of The ACTIVITY	DATE
1.	Interaction with Seniors-1	13th Feb 2021
2.	Placement Talk	13 th Feb 2021
3.	Interaction with Seniors-2	20 th Feb 2021
4.	Introduction to Nano Technology and Its Application	21 st Feb 2021
5.	Drawing Contest	27 th Feb-2 nd Mar 2021
6.	Women's Day Contest	7 th -10 th Mar 2021
7.	Pre-Placement Drive-1	13 th - 15 th Mar 2021
8.	Pre-Placement Drive-2	4 th Mar 2021
9.	Body Meeting	15 th Mar 2021
10.	Valedictory Session	16 th April 2021
11.	Faculty Interaction with Final year outgoing students	24 th April 2021



ELECTRICAL AND ELECTRONICS ENGINEERING ASSOCIATION (EEEA)
(Academic year 2020-21)
Department of Electrical & Electronics Engineering
Kakatiya Institute of Technology & Science:Warangal
(An AUTONOMOUS Institute under Kakatiya University-Warangal)

EEEA PRESENTS
AN EXPERT TALK ON

INTRODUCTION TO NANOTECHNOLOGY AND ITS APPLICATIONS

DATE & TIME

21 FEB

@ 6:00 PM

Resource person
Dr. G. Sudheer Kumar
Associate Professor,
Dept of EEE

*Session will be held in microsoft teams.
*Register using the g-form attached with this poster.

Event Coordinators

P. KRISHNA VARDHAN
AYESHA NOUSHEEN,
N. SRI KUSHAL REDDY

Faculty Coordinators


Dr. M. SANTHOSH
Sri K. SRINIVAS

Head of the Department

PROF. C. VENKATESH

Name of the Event	AN EXPERT TALK ON INTRODUCTION TO NANOTECHNOLOGY AND ITS APPLICATIONS.
Date	21/02/2021
Description	This activity is organised in order to understand importance of Nano particles and their applications in the society like applications of Nano particles of different frequency loads, implementation of Electromagnetic interference (EMI) shielding phenomenon and the percentage of incident signal blocked by the shielding medium for different EMI SE values.
Response	The response from the Students was too impressive and total number of 48 members of which 25 Students from EEE-1 & 23 Students from EEE-2 have attended the expert talk and took active participation. The main objective of organizing the activity is to make students understand about Nanotechnology and its research development areas.
Organizing team	<ol style="list-style-type: none">1. N. SRI KUSHAL REDDY (EVENT MANAGER)2. AYESHA NOUSHEEN (EXECUTIVE MEMBER)3. P. KRISHNA VARDHAN (EXECUTIVE MEMBER)

Introduction to Nanotechnology and its applications



by
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Introduction

- Polymer-Carbon nanotube (CNT) composites have been the focus of extensive research due to their excellent electrical, mechanical and unique pyroelectric/piezoelectric properties.
- These composites are expected to find various applications in electronics, defence, aerospace and automotive systems.



Ref: V. Eswaralash, V. Santkararayanam, S. Ramaprabhu, *Nanoscale Res. Lett.* 2011, 6, 137

Applications of different frequency bands

- L-band (1 – 2GHz): Satellite communications
- S-band (2 – 4GHz): Microwave applications and multimedia applications like mobile TV and satellite radio etc
- C-band (4 – 8.2GHz): Long-distance radio telecommunications, some Wi-Fi devices etc
- X-band (8.2 – 12.4GHz): Civil, military and government institutions for weather monitoring, air traffic control etc.
- K_a-band (12.4 – 18GHz): K_a-Band is most commonly used for satellite TV and is used for most VSAT (very small aperture terminal) systems on yachts and ships today.

Percentage of incident signal blocked by the shielding medium for different EMI SE values

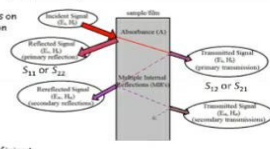
EMI SE (dB)	% of Incident signal blocked by the shielding medium and their application
10dB	90%
20dB	99% (commercial applications)
30dB	99.9% (fulfill 50% of requirements in the application of automotive and computer industries)
40dB	99.99% (fulfill 95% of the requirements)

(Ref: Below, L. A.; Smolskiy, S. M.; Kochemasov, V. N. *Handbook of RF, Microwave, and Millimeter-wave Components*; Artech House: USA, 2012.)

EMI shielding phenomenon

➤ Electromagnetic interference (EMI) is an undesirable phenomenon.
 ➤ Leads to signal loss and/or undue disturbances in electronic devices and also poses health hazards
 ➤ Metals are used traditionally, but polymer composites offer several advantages.

➤ Shielding effectiveness (SE) depends on attenuation of EM waves by reflection (SE_r), absorption (SE_a) and multiple reflection (SE_m) by



$$SE_T = SE_A + SE_R + SE_M$$

$$SE_T = 10 \log(1 - |S_{11}|^2)$$

$$SE_A = 10 \log \frac{(1 - |S_{11}|^2)}{|S_{21}|^2}$$

Where S₁₁ or S₂₂ = reflectance coefficient
 S₂₁ or S₁₂ = Transmittance coefficient

$$SE_T = -10 \log_{10} \left(\frac{\sigma}{16 \cos \theta} \right) \quad SE_A = -8.686 \left(\sqrt{\frac{\sigma \mu}{2}} \right)$$

Where σ is the electrical conductivity, ϵ is the dielectric permittivity, ω is the angular frequency, μ is the magnetic permeability and t is the thickness of the shielding material.

Our R & D lab, DRDO Pune







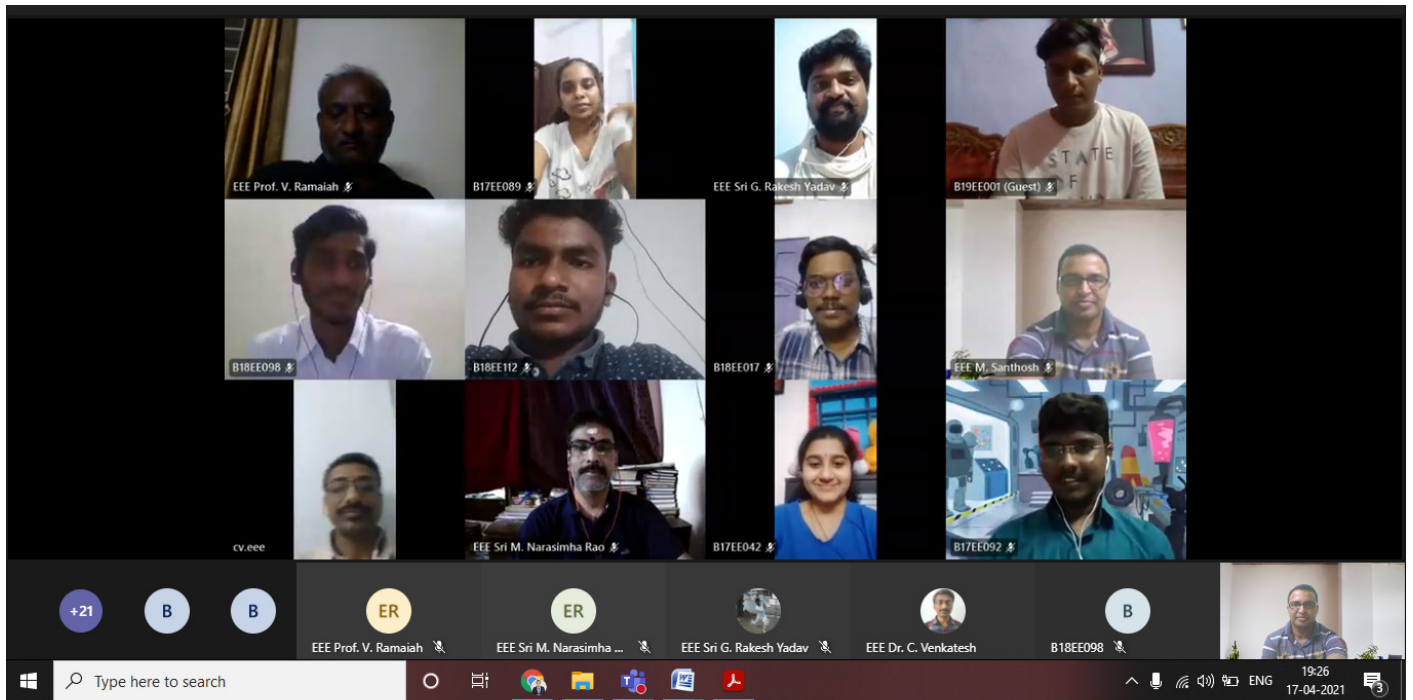
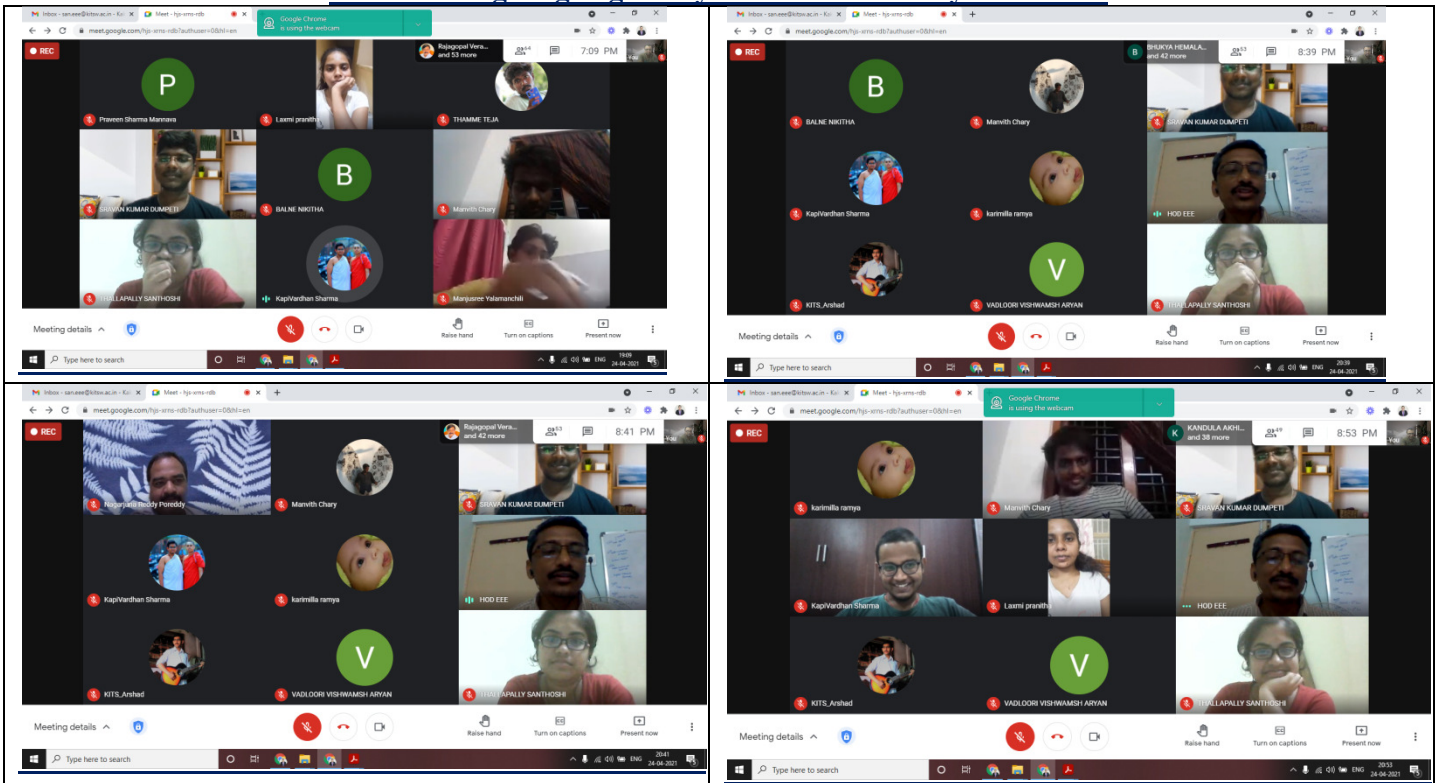
Strain-sensing Phenomenon

A strain sensor is a sensor whose electrical resistance varies with applied force.

For resistance strain sensor: $R = \rho L/A$
 Where R = resistance (Ω)
 ρ = electrical resistivity (Ω.m)
 L = length of the sensing material (m)
 A = cross-sectional area of the material (m²).

Applications: health-monitoring in aircraft structures and bridges etc.

Photos during outgoing final year students Faculty interaction



Student Achievements: Placements ongoing for 2017-21 batch:

S.No.	Roll Number	Name of the student	Company
1	B17EE114	M Praveen Chandra	DXC
2	B17EE001	Pullabotla Shashank Bharadwaj	DXC
3	B17EE094	Manthena Akhila	DXC
4	B17EE053	G. Manideep	DXC
5	B17EE016	Md. Arshad Ahmed	DXC
6	B17EE078	N. Neha	DXC
7	B17EE034	Damaraju Harika	DXC
8	B17EE070	V Muralikrishna	DXC
9	B18EE138L	K Praveen Kumar	DXC
10	B17EE092	D Sravan Kumar	DXC
11	B17EE039	Konda Chandana	DXC
12	B17EE068	S Srinith	DXC
13	B17EE002	Kothagattu Meghana	DXC
14	B17EE037	Gujjeti Mrunalika	DXC
15	B17EE117	Sasya Thangallapally	CTS
16	B17EE034	Damaraju Harika	CTS
17	B17EE003	Sai Shankar Kusuma	CTS
18	B17EE068	Sriramula Srinith	CTS
19	B 18EE132L	Akuthota Yashwanth	CTS
20	B17EE026	Ch.Vamshi Krishna	TCS-NQT
21	B17EE082	P Chandra Sri	TCS-NQT
22	B17EE089	Laxmi Pranitha	TCS-NQT
23	B17EE071	Nikhil Ponaganti	TCS-NQT
24	B17EE108	Akhila Sripathi	TCS-NQT
25	B17EE002	K. Meghana	TCS-NQT
26	B17EE057	Valusa Manideep	TCS-NQT
27	B17EE068	S Srinith	TCS-NQT
28	B17EE081	Prudhvi Teja	TCS-NQT
29	B17EE003	Sai Shankar	TCS-NQT
30	18EE122L	Vijay Sai Gopiseti	MIND TREE
31	B17EE013	Saba Tanveer	MIND TREE
32	B17EE019	Sanjudha Kandunuri	MIND TREE
33	B17EE087	Rayarakula Vishnu	MIND TREE
34	B17EE003	Kusuma Sai Shankar	Wipro Talent Next
35	B18EE126L	Pravalika S	Trimind Technologies
M.Tech Placements:			
1	M19PE006	Pachika Sravya	GE
2	M19PE003	Jukanti Rishith	GE
3	M19PE004	G.Sai Sowjanya	TCS-NQT

Section wise Semester Toppers list:**Toppers of exams of odd semester A.Y. 2020-21**

S. No.	Name of the Student	Roll No	Semester	SGPA
1.	SABA TANVEER	B17EE013	VII	9.71
2.	KOTHAGATTU MEGHANA	B17EE002	VII	9.71
3.	DAMARAJU HARIKA	B17EE034	VII	9.71
4.	DUMPETI SRAVAN KUMAR	B17EE092	VII	9.71
5.	ALUGURI AKHIL	B19EE122L	V	9.84
6.	POSHALA KRISHNA VARDHAN	B18EE057	V	9.84
7.	SATHVIKA MAMIDI	B18EE002	V	9.84
8.	KUSUMA RASAGNA	B18EE085	V	9.84
9.	VEMUNURI SUMANTH	B19EE124L	V	9.84
10.	DEVULAPELLY VISHAL	B20EE127L	III	9.81
11.	MACHERLA RISHIKA	B20EE002	I	9.62

Roll of honor of A.Y. 2019-2020:

S.No.	Name of the Student	Roll No	CGPA
1.	KOTHAGATTU MEGHANA	B17EE002	10.00
2.	THOOTIKA SANTHOSH KUMAR	B17EE010	10.00
