

Department of Electrical and Electronics Engineering
IEEE Power Electronics Society NHCE Student Branch Chapter
Geo-Code is SBC66131

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Jointly organised

Title	Faculty Development Programme on “Research Potential in Advanced Power Electronics & Renewable Energy ”	
Department	Electrical and Electronics Engineering	
Date	From: 23.05.2022	To: 31.05.2022
Time	From: 09:30 AM	To: 04:45 PM
Brief Description (4-5 Lines Max)	<p>The IEEE PELS NHCE Student Branch Chapter from Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru is organized the Faculty Development Programme on “Research Potential in Advanced Power Electronics & Renewable Energy” from 23rd May, 2022 – 31st May, 2022, between 09:00 AM to 05:00 PM in association with National Institute of Technology, Warangal and IEEE Power Electronics Society Bangalore Chapter through online mode. This programme is Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI. This FDP is designed to address research advancements in Power conversion topologies and applications in the industry and to encourage various zonal professionals’/students/academicians towards research and for their Academic Quality Improvement too. This course will offer a unique opportunity to all the participants in the relevant topics in Real Time Power Electronic systems and its applications through theoretical sessions and simulation plus laboratory-based experiments and demonstrations. It is due to development of switching devices, magnetic components, control techniques, computational methods, DSP/FPGA controllers, etc. Applications of power electronics can be found in several areas like Renewable Energy, industry, transportation, medical, telecommunication, residential energy systems, electric vehicles etc. Certain low and high power switching converters are developed in these areas. Also, this FDP aims at giving scope for future research. The entire session is very informative and enthusiastic manner in the area of power electronics industry. The eminent experts from the IIT, NIT, VIT, BITS Pilani and Industry delivered the lecture and his talk has been very well received by the 60 participants. Congratulations to Event Coordinator Dr. Vinoth Kumar K, Associate Professor, Department of EEE, NHCE & IEEE PELS NHCE SBC Advisor successfully organized this event.</p>	

Images

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Anitha.A Hitesh Mathur (Cohost) Babita Nanda Rakesh A Vijaya Kumar Reddy Layout

Viewing Hitesh Mathur's application(s) - 43% +

DSM Strategies

	Aim	Impact on peak demand	Impact on energy demand
Strategic conservation	Reduce the overall energy demand (energy conservation)	↓	↓
Peak Clipping	'Clip' demand at peak load periods (load levelling)	↓	↓
Load Shifting	Shifting to off peak hours (load levelling)	↓	No change
Flexible load shape	Induce change in load as per supply (load controlling) also known as flexible load shape	↓	may reduce
Strategic load-growth	Promotion of applications requiring electricity – electric vehicles	may increase	↑
Valley filling	Increasing load during off peak hours (load levelling)	No change	Increases

Legend: ■ = Strategic Load growth ■ = Demand Response ■ = Energy Efficiency

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Participants (39)

- Dr. Vinoth Kumar K
- Hitesh Mathur (Cohost)
- A Vijaya Kumar Reddy
- Akshaya
- Anitha.A
- Ankara Mogili
- aparajita chatterjee
- azra Zaineb
- Babita Nanda

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Dr. V. Karthikeyan (Cohost) A Vijaya Kumar Reddy Akshaya Ankara Mogili aparajita chatterjee Layout

Viewing Dr. V. Karthikeyan's application... - 61% +

Eight day online FDP on Research Potential in Advanced Power Electronics & Renewable Energy

Advancement in Power Converters for Solar PV fed Energy Storage System

Presented by

Dr. V. Karthikeyan
Assistant Professor
Dept. of Electrical Engineering
National Institute of Technology Calicut
Kozhikode, Kerala

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Participants (20)

- azra Zaineb
- Babita Nanda
- Chandra Sekhar S
- D Mohan
- Dr C S Ravichandran
- Dr. J Satheesh Kumar
- Dr.R.Meenal
- JEBARANI EVANGELINE S
- K Sureshkumar

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A Vijaya Kumar Reddy Dr. V. Karthikeyan (Cohost) Akshaya Ankara Mogili azra Zaineb Layout

Viewing Dr. V. Karthikeyan's application... - 61% +

Integration of Battery Storage system with Solar PV System

Generalized block diagram of proposed standalone system

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Participants (27)

- Dr. Vinoth Kumar K
- Dr. V. Karthikeyan (Cohost)
- A Vijaya Kumar Reddy
- Akshaya
- Ankara Mogili
- aparajita chatterjee
- azra Zaineb
- Babita Nanda
- Chandra Sekhar S
- D Mohan



ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) ON

Research Potential in Advanced Power Electronics & Renewable Energy



(23rd May, 2022 – 31st May, 2022)



Date/Day	Forenoon Session			12:15 - 2:00	Afternoon Session		
	9.30 – 10:45	10.45 – 11:00	11:00 – 12:15		2:00 – 3:15	3:15 – 3:30	3:30 – 4:45
23.05.2022 Monday	Inaugural Function BLN / MM	BREAK	PV based system proson and con (BVP)	LUNCH BREAK	Energy management strategies in hybrid electric vehicle (HOB)	BREAK	Energy management strategies in hybrid electric vehicle (HOB)
24.05.2022 Tuesday	Hands on Matlab based simulations of Single Stage Power Converters for Smart Mobility (DR)		Power converters for renewable energy Interface (VAAG)		High-Gain Bidirectional Converters for Battery charge/discharge applications (BLN)		High-Gain Bidirectional Converters for Battery charge/discharge applications (BLN)
25.05.2022 Wednesday	Power Electronic Controllers for wind energy conversion system (SSK)		Industrial Application of Electrical Drive Systems (ASVK)		Condition Monitoring of Electrical Drives using Signal based techniques (VKK)		Bi-directional LED drivers for Solar PV powered Automotive Lighting systems (VVS)
26.05.2022 Thursday	Super capacitor as an alternate storage unit for EV for fast charging (SMP)		Demand Side Management Case Studies (HDM)		Power Electronics Applications in Renewable Energy and Electric Vehicles (PP)		Power Electronics Applications in Renewable Energy and Electric Vehicles (PP)
27.05.2022 Friday	Advancement in Power Converters for Solar PV fed Energy Storage System (VK)		Advancement in Power Converters for Solar PV fed Energy Storage System (VK)		Computational Intelligence model for renewable energy applications (SND)		Computational Intelligence model for renewable energy applications (SND)
28.05.2022 Saturday	Wireless charging infrastructure for transportation electrification (RD)		Integration of Renewable energy sources to Grid using modern techniques (JJ)		Impact of renewable energy in distribution system (SM)		Impact of renewable energy in distribution system (SM)
29.05.2022 Sunday	Holiday Break: No Lectures						
30.05.2022 Monday	Hybrid Energy Storage Systems (KM)		Energy Savings in Industrial Electric drives (ASVK)		Advanced Power Converters Topology for Electric Drives Applications (MV)		Emotional Growth and Mental Stability (VU)
31.05.2022 Tuesday	Smart Electric Vehicles: Research Challenges and opportunities in battery management and charging system (DK)		Fault Diagnosis of industrial drives using model based techniques (VKK)		Quiz-Test & Feedback (BLNR)		Valedictory (BLNR/MM)

Resource Persons:

BLN	: Dr. B L Narasimharaju, NIT Warangal	BVP	: Dr. B Venkatesa Perumal, NIT Suratkal	HO B	: Dr. Hari Om Bansal, BITS Pilani
DR	: Dr. Dogga Raveendhra, GRIET, Hyderabad	VAA G	: Mr. Vishal Anand A G, Bloom Energy Bengaluru	VK K	: Dr. Vinoth Kumar K, NHCE Bengaluru
SSK	: Dr. S. Senthil Kumar, NIT Tiruchirappalli	ASV K	: Mr. Arun Shankar V K, Danfoss Chennai	HD M	: Dr. Hitesh Dutt Mathur, BITS Pilani
MM	: Dr. Mahesh M, NHCE Bengaluru	PP	: Dr. Prajof P, NIT Suratkal	VK	: Dr. V. Karthikeyan, NIT Calicut
SND	: Dr. S. N. Deepa, NIT Arunachal Pradesh	RD	: Dr. Deepak Ronanki, IIT Roorkee	JJ	: Dr. Jayakumar J, KITS Coimbatore
SM	: Dr. Suman M, MNNIT, Allahabad	KM	: Dr. Kowsalya M, VIT Vellore	VU	: Shri. Varun Upadhayay, TAOL
MV	: Dr. Mariappan Vallikan, Valeo India Pvt Ltd, Chennai	DK	: Dr. Deepa K, Amrita Vishwa Vidyapeetham, BLR	VV S	: Dr. V V Satyakar, NIT Andhra Pradesh
SMP	: Dr. Shreelakshmi M P, NIT Calicut				