PROGRAM SCHEDULE

Date	Time	Description
21.12.2022 Wednesday	9.30 AM - 10.00 AM	Registration
	10.00 AM - 11.00 AM	Inaugural function **Chief Guest:** **Dr. Mahesh Kumar** Professor, Dept. of EE, IIT Madras Chair - IEEE PES Madras Chapter
	11.00 AM -11.15 AM	Tea break
	11.15 AM - 12.30 PM Session - 1	**Dr. Mahesh Kumar** Professor, Dept. of EE, IIT Madras Chair - IEEE PES Madras Chapter on "Inverter Topologies for Microgrid Systems
	2.00 PM - 4.00 PM Session - 2	**Dr. K. Vijayakumar** Asst. Prof., Dept. of ECE IIITDM, Kancheepuram on " Optimal Sizing of PV- Battery System for Smart Grid"
22.12.2022 Thursday	9.30 AM - 11.00 AM Session - 3	**Dr. M. Venkatesh Kumar** Asst. Prof., Dept of EEE, Amrita Vishwa vidyapeetham on "AI for Smart Grid"
	11.00 AM - 11.15 AM	Tea Break
	11.15 AM - 12.30 PM Session - 4	**Dr. S. Vinoth John Prakash** Asst. Prof., Dept. of EEE, Vel Tech on "Smart Grid design using HOMER Pro"
	2.00 PM - 3.15 PM Session - 5	**Dr. R. Rajasingh** Asso. Prof., Dept. of EEE, VIT Vellore on "Towards the future of smart electric vehicles: Digital twin technology"
	3.15 PM - 4.00 PM	Valedictory function **Chief Guest:** **Dr. Venkatesh Sarangan** Distinguished Chief Scientist, TCS Research, Chennai.

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Dr. S. Vinoth John Prakash
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School of Electrical and Communication
Department of Electrical and Electronics Engineering

in association with
IEEE Madras Section
&
IEEE Power and Energy Society, Madras Chapter
IEEE Student Branch, Vel Tech
IEEE Power and Energy Society Student Branch Chapter, Vel Tech

IEEE Sponsored
Faculty Development Program (FDP) on

"SMART GRID SIMULATION"

21.12.2022 & 22.12.2022

Physical Mode:
Engineering Hive (Room No. 8300)
Vel Tech (Deemed to be University)
Avadi, Chennai - 600 062

ABOUT VEL TECH

Vel Tech offers programmes in Engineering, Management, Media, Arts, Science and Law. The Institution has made distinctive progress since the founding in 1997, by adopting the unique and trending educational methodologies. All the programmes offered are approved by AICTE and UGC.

- The FIRST member from India to adopt Conceive-Design-Implement-Operate (CDIO), CDIO is a worldwide framework which aims to produce the next generation engineers.
- Accredited with 'A' Grade by National Assessment and Accreditation Council (NAAC)
- Recognized as the Best Engineering Institution and ranked 5th among privately funded institutions for Innovation and entrepreneurship development by MHRD, Government of India.
- Member of the University Industry Innovation Network (UIIN).
- Ranked in the band of 301 – 350 in the World as per Times Higher Education Emerging Economies University Rankings 2022.
- Ranked in the band of 601 – 650 in QS Asia University Rankings 2022.
- AAAAA rating in Tamil Nadu in Top Engineering Institutes Ranking 2021 and 12th rank in DL India Ranking 2021 by digital LEARNING.
- Categorized as 'Band A' Institution (ranked between 06 - 25) in the category of 'University and Deemed to be University (Private Self - Financed)' in India by "Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2021" an Initiative of Ministry of Education, Government of India.
- Vel Tech Institution's Innovation Council 4 Star Rating for Annual rating in the year 2020 – 2021.
- Received Diamond status under QS I-GAUGE rating for Indian college and university. Ranked 86th place in NIRF in engineering category for the year 2019 - 2022.
- India's First Technology Business Incubator (TBI) to have NVIDIA DGX-I AI Super Computer.

For more details visit: https://www.veltech.edu.in

ABOUT IEEE MADRAS SECTION

IEEE Madras Section is an association of technical professionals in Tamil Nadu who has volunteered themselves in providing technology enhancement in engineering disciplines in the locality through the conference, events, technical activities.
For more details visit: https://www.ieeemadras.org/

ABOUT IEEE POWER AND ENERGY SOCIETY

The Power & Energy Society (PES) provides the world's largest forum for sharing the latest in technological developments in the electric power industry, for developing standards that guide the development and construction of equipment and systems, and for educating members of the industry and the general public.
For more details visit: https://www.ieee-pes.org/about-pes

ABOUT SCHOOL

The School of Electrical and Communication comprises of Department of Electrical and Electronics Engineering, Department of Electronics and Communication Engineering, Department of Biomedical Engineering and Department of Biotechnology. This school motivates the students to actively participate in nationally reputed clubs such as Robotics Club and Small device programming club, to enthuse and bring out their design skills. Many of our faculty members in the school received Doctoral degrees from reputed Institutions from India and abroad. The students are also involved in nationally significant projects namely small satellite projects in collaboration with international industries in France, Germany etc. The Programes are well designed and developed in close interaction with industry partners like C-DAC, ARAI and NASSCOM etc.
For more details visit: https://www.veltech.edu.in/soec/

ABOUT DEPARTMENT

The department of Electrical and Electronics Engineering started in the year 1997. The department offers B.Tech - Electrical and Electronics Engineering, M.Tech. - Power Electronics and Ph.D. programes. New courses are introduced subsequently and the existing ones are restructured to reflect the recent trends. VTR UGE-2021 regulations offer B.Tech-EEE programme with Specialization in Computer Systems, Minors in Electric Vehicle Technology, Renewable Energy Sources, Honors in Smart Grid Technologies. The department has been strengthened by its passionate and research focused faculty members from reputed universities. The department has well equipped laboratories and state of the art facilities for research and development. The key areas of academic research are Smart Grid, Industrial Drives, Industrial Automation, Renewable Energy, Electric Vehicle and Battery Management System. The faculty members and students have won awards like Creative Technology KASA, Korea, L&T Techgium Best Innovator Award recently. The department is actively associated with organizations such as Fluid Control Research Institute (FCRI) and Kwality photonics Ltd.

For more details visit: https://www.veltech.edu.in/eee/

PREAMBLE

Smart Grid is an Electrical Grid with Automation, Communication and IT systems that can monitor power flows from points of generation to points of consumption and control the power flow or curtail the load to match generation in real time. This system allows for monitoring, analysis, control and communication within the supply chain to improve efficiency, reduce energy consumption and cost, and maximize the transparency and reliability of the energy supply chain.

OBJECTIVES

- To understand the basic concepts of smart grid.
- To overcome the weaknesses of conventional electrical grids by using smart net meters.
- To understand the optimal sizing of PV-Battery system for smart grid
- To analyze the performance of smart grid system
- To understand the future of smart grid technology

OUTCOMES

After attending this FDP, Participants will be able to:
- Analyze the performance of smart grid system
- Identify the latest trends in smart grid technology
- Establish optimal sizing of RES system for smart grid
- Simulate the integration of smart grid and electric vehicle

Registration Details

Registration Link: https://forms.gle/UzU6kCiJKh5VCXq47

Last Date for Registration : 18-12-2022
Intimation of Acceptance : 19-12-2022
Registration fee:
IEEE member : Rs.250/-
Non-member : Rs.500/-

Account Details:
Account Name : IEEE Madras Section
Bank : Bank of India
Account Number : 800210100014174
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