



The Indian Institute of Technology Jammu was inaugurated on 6th August 2016. In the initial phases, the establishment of IIT Jammu was done under the mentorship of IIT Delhi. The newly established breathtaking campus at Jagti village is presently spread over 25 acres, with more than 1300 students studying various disciplines from the bachelor's to the doctoral level.

Department of Electrical Engineering is one of the largest departments in the institute in terms of number of faculty members, students enrolled (including UG, PG and PhD) and research funding in the form of external funded projects, thereby making rapid strides during the last few years in all spheres of education and research. Our undergraduate program has a flavors of both electrical and electronics domain which runs full fledged Master of Technology Program here at IIT Jammu in the field of Communications and Signal Processing. We have research expertise in the area of Communications, Signal Processing, Machine Learning, RF/Microwave, Power Engineering, VLSI and Micro-electronics.

About NaMPET

National Mission on Power Electronics Technology (NaMPET) is a national mission program launched by the Ministry of Electronics and Information Technology (MeitY), Govt. of India, with a vision to provide the country with the capability to become a dominant player in Power Electronics Technology.

Through this National level R&D Program, Research, Development, Deployment and Commercialization of Power Electronics Technology is envisaged by enhancing the indigenous R&D expertise and infrastructure in the country with active participation from academic institutions and industries. Centre for Development of Advanced Computing (CDAC), Thiruvananthapuram, a premier R&D organization under MeitY, is the Nodal Centre coordinating the activities of NaMPET.

About CDAC

CDAC undertakes application-oriented research, design and development in electronics, so as to generate state-of-the art producible, marketable, field maintainable products and systems. The Power Electronics group has very close association with leading academic institutions like IISc, IITs, NITs etc. CDAC has contributed significantly to the growth of industry through indigenous development of commercially viable products and systems, foreign technology absorption, consultancy and training.

Learn, Engage, Invent, Create Impact



विद्याधन सर्वधनं प्रधानम्

भारतीय प्रौद्योगिकी
संस्थान जम्मू
INDIAN INSTITUTE OF
TECHNOLOGY JAMMU



सत्यमेव जयते
MINISTRY OF
ELECTRONICS &
INFORMATION TECHNOLOGY
GOVERNMENT OF INDIA

Short-Term Course on *Advanced Power Electronics for Electric Vehicles* Under



&



Date: 4th Mar. – 8th Mar. 2024

VENUE::

**Department of Electrical Engineering
Indian Institute of Technology, Jammu**

Jagti, Nagrota Bypass
J&K, India – 181221

www.iitjammu.ac.in

INTRODUCTION

Aim of the program is to strengthen knowledge and application-oriented training in different areas of power electronics. These are mostly beneficial to the power electronics development and manufacturing Industries, Professionals and students' community. This course initiates candidates into the emerging area of Electric Vehicles and helps learn the Basics of Battery driven Electric Vehicle and its Dynamics, Motors, Power Electronics, Batteries, power train etc. Program proceedings will include a brief discussion on charging infrastructure, types of chargers, its current topologies and limitations. The program consists of instructor led live lecture sessions and demonstrations.

BENEFITS OF THE WORKSHOP

- Awareness about the importance of EV in current Market trend.
- Control design of power converter modules
- Knowledge, development and researches for Electric motor and battery technologies in EV.
- Development in power electronic converters and charging infrastructure for EV.
- Future trends and Upcoming Technologies like Wireless power Transfer for Electric Vehicle.

CO-ORDINATORS

FACULTY Co-ORDINATOR

- Arun Kumar Verma
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- Anup Kumar Shukla
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- Ankit Dubey
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STUDENT Co-ORDINATOR

- Akash Deo [2023ree1028@iitjammu.ac.in]
- Vivek Bhardwaj [2023ree1045@iitjammu.ac.in]
- Hemant Gupta [2023ree1029@iitjammu.ac.in]
- Abhishek Verma [2023ree2016@iitjammu.ac.in]

ELIGIBILITY

Students pursuing Engineering, Professionals working on the Electronic /Electric Industry, Research students & Teaching professionals & faculties

REGISTRATION FEES

- U.G. & P.G. students – INR 590/- including GST
- PhD Students and Research Fellows – INR 1180/- including GST
- Professionals (Academic and Industry) – INR 1770/- including GST

Note: Travel will be reimbursed to outstation participants. Such participants are eligible for the 3rd AC Train and Bus journey to and from IIT Jammu through the shortest route. The maximum reimbursement amount is Rs. 2000 only. Travel reimbursement is for the first 25 candidates based on a first-come, first-serve basis. IIT Jammu will provide the food and lodging.

Commencement of Programme

04th Mar. 2024

Last date for registration & payment

26th Feb. 2024

Registration Link

<https://gforms.app/r/N8kJTOo>

Payment Link: <https://eazypay.icicibank.com/eazypayLink?P1=6ONIGdh3y/ujoaxpCyoWpQ==>

RESOURCE PERSONS



Dr. Arun Kumar Verma earned his master's and Ph.D. from I.I.T. Delhi, New Delhi, India. He was a Postdoctoral research fellow (PDF) at the energy research institute (ERI@N), Nanyang Technological University (NTU) Singapore, during 2015-2016. Before joining NTU Singapore, he worked as a visiting graduate researcher (VGR) at the smart grid energy research center (SMERC), University of California Los Angeles (UCLA), California, USA, during 2014-2015. He won the prestigious BASE fellowship for advanced solar energy research in 2014. He has been conferred with the prestigious POSOCO Power System Research Award 2016. He is an assistant editor of the smart grid journal and a member of the editorial board for EPE Journal. He has been invited by Defense University College Ethiopia and Metal Engineering Corporation Ethiopia as an instructor for MTech program in Renewable Energy Engineering from 7th May 2016 to 27th May 2016. To name a few. He is holding/completed DST research funding of 6 cr., including Mission Innovation (MI), SPARC, ECR, SERD, and CRG. He is also the mentor director for a startup Rishi Agastaya Technologies Pvt. Ltd. Dr. Verma has guided 5 Ph.D. and 11 MTech theses. 10 Ph.D. candidates are currently working under him.

Dr. Anup Shukla (Member IEEE, Power and Energy Society, Industry Applications Society, IEEE Young Professionals) received his BTech in Electrical and Electronics Engineering from SHUATS, Allahabad, U.P, India, in 2007. He received his M.E in Power System from PEC, University of Technology, Chandigarh, India, 2009 and PhD degree from Indian Institute of Technology Kanpur, India, in 2016. From June 2016 to Dec 2016, he was with the Department of Electrical Engineering, Indian Institute of Technology Kanpur as Senior project Engineer. From Jan 2017 to Aug. 2017, he was with the Department of Electrical Engineering and Computer Science Engineering, Howard University, USA as Post-Doctorate. He is currently an Assistant Professor with the Department of Electrical Engineering, Indian Institute of Technology Jammu, India. He was the recipient of POSOCO Power System Award, 2017 and Dr. P.S. Nigam Power Sector Award, 2013.



Dr. Ankit Dubey received the B.E. degree in Electronics and Telecommunication Engineering from the Chhattisgarh Swami Vivekanand Technical University (CSVTU), Bilhailai-India in 2009 and the Ph.D. degree in Electrical Engineering from the Indian Institute of Technology (IIT), Delhi-India in 2014. In 2012 and 2013, he was a visiting research scholar at the University of British Columbia, Vancouver, Canada. From July 2014 to December 2014 he has been a research associate with IIT Delhi. From Dec. 2014 to Dec. 2018, he has been with Department of Electronics and Communication Engineering, the faculty of the National Institute of Technology (NIT), Goa-India, where he was an Assistant Professor. Since January 2019, he has been with the faculty of the Department of Electrical Engineering, Indian Institute of Technology (IIT), Jammu-India, where he is currently an Assistant Professor and Head of the Department. He has published several journal and conference papers in the area of communications engineering. He has several govt. of India sponsored projects worth 15 Millions INR. He is also working on multidisciplinary research project on indigenous UAV systems funded by IIT Jammu with fund up to the tune of 40 Million INR. His research interests are in diversity combining, multi-hop transmission, and physical layer security, PLC, IoT, and wireless communications. He works in the application side for smart grid communications, automation, IoT, UAV detection using radar, etc.