An Initiative of



Ministry of Electronics and Information Technology (MeitY), Govt. Of India

Nodal Centre



Centre for Development of Advanced Training Trivendrum

Short term course on

Advances in Power Electronics and Renewable Energy Resources

APERER- 2017

July21-23, 2017



Organized by

Department of Electrical Engineering
Motilal Nehru National Institute of Technology Allahabad
Allahabad - 211004, INDIA

Under the aegis of



NaMPET Phase II

National Mission on Power Electronics Technology Towards Power Electronics Excellence

Organizing Committee

Patron

Prof. Rajeev Tripathi, Director, MNNIT

Chairman

Prof. Shubhi Purwar, Head, EED, MNNIT

Coordinators

Prof. R. K. Tripathi, MNNIT Allahabad Dr. Paulson Samuel, MNNIT Allahabad

Convener

Dr. Rajesh Gupta, MNNIT Allahabad

Secretary

Dr. M. Venkatesh Naik EED, MNNIT ALLAHABAD

Nodal Officer

Mr. V. S. Suresh Babu NaMPET- II, CDAC, Trivendrum

Contact Information

Dr. Rajesh Gupta Convener, APERER-2017, Associate Professor Department of Electrical Engineering MNNIT Allahabad, Teliarganj Allahabad-211004, U.P., India Phone: +91 532 2271410, +91 9415540587

Email id: rajeshgupta@mnnit.ac.in

To,

Letter of Invitation as Expert Speaker

Dear Sir/Madam

We are glad to inform you that Department of Electrical Engineering, Motilal Nehru National Institute of Technology Allahabad is organizing a short Term Course on "Advances in Power Electronics and Renewable energy Resources (APERER - 2017)", from 21-23 July, 2017, at MNNIT Allahabad, sponsored by, the National Mission on Power Electronics Technology (NaMPET Phase II), CDAC Trivendrum, under the initiative of Ministry of Electronics and Information Technology (MeitY), Govt. Of India.

The resourse persons for the short Term Course are academicians from IITs, NITs and CDAC and professionals from industries. The APERER-2017 is the premier forum for the presentation of new advances and research results in the fields of Power Electronics converters for grid connected systems, renewable energy sources like Solar PV, Wind and Fuel cells, MPPT techniques, application of digital control and instrumentation in power electronics, microgrids and Smart grids.

I request you to give publicity amongst faculty members and research scholars in your department/ institute and encourage them to attend the course. Please see the following link for regular updates.

http://www.mnnit.ac.in/index.php/short-term-courses

Selection will be made purely on first-come-first-serve basis for limited seats.

With sincere regards,

Rajesh Gupta

Short Term Course on

Advances in Power Electronics and Renewable Energy Resources (APERER-2017)

July 21-23, 2017

Registration Form

Please complete the details below and mail along with the registration fee to the Convener APERER-2017

1. Name(Mr./Ms.)
2. Category: Academic/Industry/Student
[For registration as student, please enclose a bonafide certificate/copy of I-card from parent institution]
3. Organization:
4. Address:
The state of the s
5. Tel. No. (Mob):
6. E-mail ID:
7. Highest Acad.Qualification:
8. Bank Draft No.:DtDt
9.Amount Rsdrawn on
10. Accommodation Required: Yes /No
Signature of the Candidate

Signature of the Head of the Department/Institution (If required)

Resource Persons:

Experts from IITs, NITs, IISc., CDAC and professionals

from industries

Course content:

Solar PV Systems: Overview and Challenges

Wind Energy Systems-State-of-the art

Fuel Cells: Latest development Maximum Power Point Tracking

Power Electronics Converters for Grid Connected Systems

Power Management in Standalone Systems

Digital Control in Power Electronics

Instrumentation in Power Electronics and Renewables

Power Electronics in Microgrid and Smart grids

Organizing Committee

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Director, MNNIT Allahabad

Prof. Shubhi Purwar, Chairman

Head, EED MNNIT Allahabad

Prof. R. K. Tripathi, Coordinator

EED MNNIT Allahabad

Dr. Paulson Samuel, Coordinator

FFD MNNIT Allahabad

Dr. Rajesh Gupta, Convener

EED MNNIT Allahabad

Dr. M. Venkatesh Naik, Secretary

Advisory Committee:

Prof. H.P. Khincha, Advisor IISc and former VC,VTU.

Prof. Bhim Singh, EE Deptt. IIT Delhi.

Mr. Tara Shanker, Director, MeitY, Delhi

Prof. Vineeta Agarwal, MNNIT

Prof. R. K. Singh, MNNIT

Prof. R. K. Pandey, Dir. Gen., NPTI

Prof. Shantanu Mishra, IIT Kanpur

Dr. Ranjan K. Behera, IIT Patna

Dr. Sriram Srinivas, IIT Madras

Dr. R. K. Singh, IIT BHU

Dr. Madhu Singh, NIT Jamshedpur

Dr. Ritesh Kumar Keshri, NIT Nagpur

Mr. R. Sudeep Kumar, HOD, PEG, CDAC

Mr. V.S.Suresh Babu, Nodal officer, NaMPET- II, CDAC

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Centre for Development of Advanced Training Trivandrum

Preamble: Recent developments in the field of power electronics have opened up broad areas of research in advanced power electronics converters. Increased use of renewable energy resources and static power conversion devices has lead tremendous growth of power electronics based energy conversion in recent times. Fossil fuels at present have adverse environmental impact and limited availability and have to give way to renewable sources of energy. The main advantage of electricity generation from renewable sources is the absence of harmful emissions and its renewable nature. Efficient conversion of renewable sources of energy is an emergent need in every aspect of our life. Among many, the Solar Photo Voltaic (PV), Wind energy, Fuel cells have seen a tremendous growth in the past decade. It ranges from few watts to mega watts. The devices involved for power conversions using advanced power electronics technology are voltage source converter (VSC) to convert DC into AC and AC into DC. The other important converter is DC to DC and AC to AC. Developments in the field of advanced power electronics encompasses areas of Power Quality issues, Distributed Generation, High/Low Power conversion, On & Off-shore wind turbines, DC Grids, Solar PV technologies, Fuel cells, MPPT, Power balance. Renewable sources of energy and its conversion into usable form is the major concern at present. Abundant, environment friendly and cost-efficient energy is a key resource for growth of any country. Important sources of energy, like wind, solar, fuel cells, have high potential to strengthen the energy pool. These emerging energy resources require efficient and economic power conversion devices and technology.

This short term course aims to enhance the awareness of the problems and solutions of Renewable Energy Resource using advanced power technologies among the participants.

About National Mission on Power Electronics Technology (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.

The first phase of the program was successfully completed in 2010 and the activities under NaMPET Phase-I focused on R&D, infrastructure and awareness creation. Considering the impact, MeitY initiated the second phase of NaMPET (NaMPET Phase-II) in January 2012 aiming further strengthening of power electronics technology base in the country.

About Centre for Development of Advancement Computing (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 wide experience of developing successful power electronics products/systems, and a very good industry interaction by way of transfer of technology, field implementation etc. It has very close association with reputed academic institutions like IISc, IITs, NITs and many central universities and private institutions. CDAC has contributed significantly to the growth of industry through indigenous development of commercially viable products and systems, foreign technology absorption, consultancy, training and turnkey implementation of contract projects.

About the Institute: Motilal Nehru National Institute of Technology, Allahabad was formerly known by Motilal Nehru Regional Engineering College, Allahabad. It is an institute with total commitment to quality and excellence in academic pursuits, is among one of the leading institutes in INDIA and was established in year 1961 as a joint enterprise of Govt. of India and Govt. of U.P. in accordance with the scheme of establishment of REC. However with effect from June 26th of 2002 the college became deemed university and is now known as Motilal Nehru National Institute of Technology. The foundation stone of the college was laid by the first Prime Minister of India, Pt. Jawahar Lal Nehru on the 3rd of may, 1961 on a site spreading over 222 acres on the banks of the river Ganga. The main building of college was inaugurated by another illustrious son of India, Prime Minister Sri Lal Bahadur Shastri on 18th of April, 1965. The students are extensively exposed to cross-cultural environment as candidates from various other countries such as Sri Lanka, Nepal, Bangladesh, Bhutan, Mauritius, Malaysia, Iran, Yemen, Iraq, Palestine and Thailand also join MNNIT for various undergraduate and post-graduate programs. MNNIT is fully residential institution with eight hostels for boys and two for girls.

About the Department: The Department of Electrical Engineering was started in 1961. The department has been consistently producing

quality Electrical Engineers since its inception and is also involved in research and development activities. In addition to the UG program the department runs PG programs in (i) Power Electronics & Drive, (ii) Power Systems, and (iii) Control & Instrumentation. It also runs Ph.D. program in different areas of specialization of Electrical Engineering.

Registration fee:

Professionals from Industry and R&D Units: Rs. 3000/-Faculty from universities/institutes/colleges: Rs. 2500/-Outside Students: Rs.1000/-, MNNIT Students Rs. 500/-

Registration:

Application in the prescribed format duly sponsored by the Head of the Institution along with the registration fee in the form of a Demand Draft favouring "APERER-2017" payable at Vijaya Bank or any nationalized bank at Allahabad. Please send a scanned copy of the Demand Draft to rajeshgupta@mnnit.ac.in on or before 10th July , 2017.

Important dates:

Last date for registration: 10 July, 2017 (Tentative) Selection intimation to the applicant: 12 July 2017

Boarding and Lodging:

Out station participant need to pay for boarding and lodging.

Program Convener

Associate Professor

Dr. Rajesh Gupta, Convener APERER-2017

Department of Electrical Engineering Motilal Nehru National Institute of Technology Allahabad Allahabad-211004, U. P. India

Telephone: +91 532-2271410 Mobile: +91 9415540587 Email: rajeshgupta@mnnit.ac.in

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National Mission on
Power Electronics Technology
Towards Power Electronics
Excellence

Bank Account Information for Direct Transfer of Registration fee for APERER-2017

Account Name: APERER-2017

Bank: Vijaya Bank

Branch: MNNIT Allahabad-211004, U.P., India

IFSC Code: VIJB0007184

MICR Code: 211029004

Account Number: 718400301000265

(Rajesh Gupta)

Convener APERER-2017