

## THE INSTITUTE

National Institute of Technology Durgapur (NITD) is a leading technical institute offering undergraduate, postgraduate and doctoral programmes in various disciplines of engineering, technology, science, social science and management. NITD was established as a Regional Engineering College (REC) in 1960 as a joint venture of the Government of India and Government of West Bengal. REC Durgapur was converted to NIT Durgapur under the full administrative and financial control of the Ministry of Human Resource Development of Government of India with a Deemed University status on 3rd July, 2003. Subsequently NITD has been given the status of a University by the UGC Act. The Institute was declared an **Institute of National Importance** by the Government of India on August 15, 2007.

The city of Durgapur is recognized as one of the fastest developing Tier-II cities in the national scenarios. Durgapur is situated at a distance of about 180 KMs from Kolkata. It is located right on the major railway and expressway (NH-2) connecting Kolkata to Delhi and Durgapur can be reached from Kolkata (and vice versa) in ~ 2 hrs. 30 minutes.

## THE DEPARTMENT

The Electrical Engineering course was initiated along with the Institution in 1960. Besides UG and PG courses, the Department also offers Ph.D. program. A good number of Ph.D. degrees have been awarded under the supervision of the faculty members of the Department and a number of students are perusing for their Ph.D. degrees. The Department, over the years, has successfully completed a number of sponsored and consultancy projects. Theoretical and experimental investigations are being carried out in the areas like power systems, control systems, power electronics & machine drives, high voltage, instrumentation etc. Since inception the department is continuously contributing novel and innovative ideas in Electrical Engineering to keep pace with the latest technological developments. The department regularly organizes invited lectures by experts from academic and R&D institutions as well as industries in various fields of Electrical Engineering. The Department is well equipped with highly sophisticated and modern laboratories.

## ABOUT THE SHORT TERM COURSE

Electricity is an essential part for our day to day life and the growth of power is steadily increasing to fulfill the demand of electricity of our nation. Hence, uninterrupted power supply is of prime importance, sudden outage of electrical equipment may cause high financial loss and social impact. For meeting the above demand, the power society needs various domains of HV test engineers, in order to practice with high degree of testing and measurement knowledge to meet above requirement. Globally, it is well known that high voltage applications can be made in various fields such as power sector, aerospace

technologies, Industrial purposes, medical and in R&D areas. In general, High-voltage (HV) testing examines the various phenomena in electrical insulation under the influence of the electric field for the definition of test procedures and acceptance criteria. The phenomena such as breakdown, conductivity, polarization and dielectric losses depend on the insulating material, on the electric field generated by the test voltages and shaped by the electrodes as well as on environmental influences. Now a days, nanodielectric is evolved as an alternative insulation, used in various HV power apparatus and plays a vital role in various field of applications. Since, the application of nanomaterials are came into practice in 19<sup>th</sup> century but the development of nanodielectric became an alternative insulation since 20<sup>th</sup> century only. In high voltage insulation studies, the nanodielectric which is mixture of nanomaterial with insulation such as solid, liquid and gas dielectric mediums impart majorly in various dielectric studies for enhancement in different domains. IoT (Connect Everything) is a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies (ICT). Basic idea is that IoT will connect objects around us (electronic, electrical, non-electrical) to provide seamless communication and contextual services provided by them. Hence, by using this IoT tools it can connect, control and predict (remote monitoring) in those HV application areas through online (24\*7) from anywhere globally.

## TOPICS TO BE COVERED

The main focus of the course will be on the following topics:

- Measurement and Instrumentation
- Sensor and Sensor Technology
- Biomedical Instrumentation
- Soft Computing
- Machine Learning
- Intelligent Systems

## CALL FOR PAPERS

In this programme, there will also be a scope of paper presentation (not mandatory) among the participants of ITTMHV 2017 covering the theme of the course. No extra fee will be charged for paper presentation. The last date of paper submission: FEB., 28. 2017

Prospective authors are invited to submit their original technical papers for publication in the course proceedings and for oral presentation. All submissions should be in standard IEEE format with a maximum paper length of four (4) printed pages. Authors should send PDF files only for review **by E-mail to [ittmhv@gmail.com](mailto:ittmhv@gmail.com)**

Research papers are invited on (but not limited to) the following topics:

- Electrical Power
- High Voltage Engineering
- Measurement & Instrumentation
- Energy Audit
- IoT enabled monitoring & testing
- Renewable Energy Systems

## RESOURCE PERSONS

The resource persons constitutes of experts/faculty members from NIT Durgapur and guest speakers from other reputed institutions and industries including IIT's, JU, CU, ITER Bhubaneswar, ISM, IEST SHIBPUR, CMERI, DVC, DSP, PGCIL etc.

## WHO CAN ATTEND ITMHV 2017

ITTMHV 2017 is aimed to attract and bring together Faculty Members, Scientists, Engineers, Technologists, Research Scholars and PG students from Academic and Research Institutions and Industries. The participants will get new insights and knowledge about the topic through close interactions/discussions with the Scientists and Experts of the respective field.

## BOARDING & LODGING

Boarding, lodging and travel expenses shall be borne by the participants. Limited shared accommodations may be available in the Institute Guest House on first come first served basis. Several good hotels are available in and around Durgapur. Participants may contact directly or through the coordinator(s) for accommodation in hotels. No TA/DA will be paid to the participants by NIT Durgapur.

## REGISTRATION FEES

Fees applicable for participants from

Industry: Rs. 5000.00

Academic & R& D Institution: Rs. 2000.00

Research Scholar: Rs. 1000.00

Post Graduate Student: Rs. 500.00

*Registration fee includes registration kit, study/lecture materials / proceedings, refreshment and lunch for 5 days during the course.* Payment may please be made only by **DEMAND DRAFT** in favour of **ITTMHV 2017**, Payable at Durgapur.

## REGISTRATION FORM

Short Term Course  
on

Recent Development in Insulation, Testing Technique and  
Monitoring of High Voltage Power Apparatus  
(ITTMHV 2017)

March 7-11, 2017

Dept. of Electrical Engineering,  
National Institute of Technology, Durgapur –713209,  
West Bengal, India

1. Name in Block Letters: \_\_\_\_\_
2. Designation & Affiliation: \_\_\_\_\_  
\_\_\_\_\_
3. Male/Female: \_\_\_\_\_
4. Mailing Address: \_\_\_\_\_  
\_\_\_\_\_
5. Mobile No. : \_\_\_\_\_
6. E-mail ID : \_\_\_\_\_
7. Registration fees: Demand Draft No. \_\_\_\_\_  
Date \_\_\_\_\_ Amount \_\_\_\_\_

(DD should be drawn in favour of "ITTMHV 2017", payable at Durgapur.)

8. Vegetarian / Non-Vegetarian: \_\_\_\_\_

*N.B.: Photocopy of this form may also be used for registration.*

*Signature of the Applicant with date*

The Applicant is hereby sponsored and will be permitted to attend  
the above short term course, if selected.

*Signature and Seal of the Sponsoring Authority/  
Head of the Department/Organization*

### ORGANIZING COMMITTEE

**Patron:** Prof. Asok De, Director, NIT Durgapur

#### Advisory Committee:

Prof. S. Ghosh, Dean (Academic)  
Prof. S. Chattopadhyay, Dean (R & C)  
Prof. A. Gangopadhyay, Dean (Faculty Welfare)  
Prof. P. P. Gupta, Dean (International Relations & Outreach)  
Prof. N. Banerjee, Dean (Student Welfare)  
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Prof. K. C. Ghanta, Coordinator, TEQIP- II  
Brig. A. S. Nijjar, Registrar

#### Chairman:

Prof. Subrata Banerjee, Head, EE Department, NIT Durgapur

#### Workshop Coordinators:

Prof. N.K. Roy, Dr. Partha Sarathee Bhowmik

#### Members:

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Dr. S. Halder, EE Department., NIT Durgapur  
Mr. R Dey, EE Department., NIT Durgapur

#### ADDRESS FOR CORRESPONDENCE

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*Coordinator, ITTMHV 2017*

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#### SPONSORSHIP

- Proceedings Back Cover : Rs. 2000.00
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- Proceedings Half Page : Rs 3000.00

TEQIP-II CoE Sponsored One Week  
Short Term Course  
On

Recent Development in Insulation,  
Testing Technique and Monitoring of  
High Voltage Power Apparatus

**(ITTMHV 2017)**

March 07-11, 2017

Organized by

Department of Electrical Engineering



Course Coordinators:

**N. K. Roy, P. S. Bhowmik**

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