

TARGET AUDIENCE

The workshop is open for Faculty/students of engineering/science colleges, practicing engineers from utility, industry and other organizations.

FACULTY

The faculty for the workshop will be drawn from various schools of IIT Mandi and other IITs and organizations. Some of the distinguished speakers are:

- Prof. Mahesh Kumar, IIT Madras
- Prof. Ramesh Oruganti, IIT Mandi
- Dr. S. Srinivas IIT Madras,
- Dr. Siva Kumar , IIT Hyderabad
- Dr. Koteswara Rao GE, Chennai

REGISTRATION FEE

The registration fee is Rs. 5000/- for scholars/students, Rs. 10000/- academic participants and Rs. 15000/- for participants from utilities, industries and other organizations.

Registration fees will cover workshop fee, workshop material, working lunches, and refreshments during the workshop period only. Accommodation in Guest House on payment basis (free shared basis at hostels) may be provided on request. Registration fee does not include the travel expenses of the participants.

All payments should be through DD/Cheque drawn in favor of “*The Registrar, IIT Mandi*” payable at Mandi, HP, India.

IMPORTANT DATES

Last date of receiving application	November 20 th , 2017
Notification and selection	November 25 th , 2017

Note: Selected candidates will be informed by fax / email.

MANDI AND ITS CLIMATE

Mandi is a small scenic beautiful town at the center of Himachal Pradesh. A few hours before the Himalayan

resorts Kullu and Manali in Himachal Pradesh, once considered "the end of the habitable world".

The town has both mythological and historical significance and boasts of unique temple architecture. It is also referred to as Chhota Kashi as there are many ancient temples in the city and on the banks of river Beas. The river Beas flows through the town and hills, which makes this town more scenic.

Weather at Mandi: The weather at Mandi in early June is expected to be pleasant.

How to reach:

Road: Mandi is well connected by road to other places. From Chandigarh (200 km) one can travel by road to Mandi via Bilaspur. This would take about 5-6 hours. Shimla, Pathankot, Delhi, Dharamsala and Manali are all connected to Mandi by road. Mandi is actually the heart of Himachal since all buses passing from north to south and from east to west of the state touch Mandi, making reaching Mandi a not so challenging option.

Train: The nearest railway stations are Joginder Nagar and Shimla by narrow gauge train, Chandigarh and Kalka by broad gauge train which are connected by regular bus services. From Pathankot the narrow gauge railway connects Joginder Nagar, which is 55-km from Mandi.

Information about the Institute as well as general information is available at institute website: <http://www.iitmandi.ac.in>

HOW TO APPLY

The duly filled registration form (available at website) along with the registration fee should be sent to:

Dr. Narsa Reddy Tummuru

Assistant professor,
School of computing and Electrical Engineering,
Indian Institute of Technology Mandi
Mandi-175051, HP, INDIA
Phone: 01905-267225(O)/ 7807119519 (M)
Office: A6-21, Email: tummuru@iitmandi.ac.in
Fax: 01905-260009

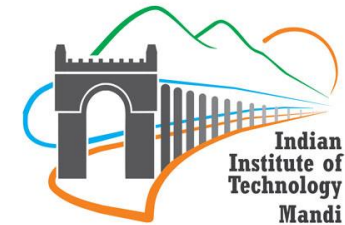
A

National Workshop

On

Reliability and Economic Performance of Multi-Functional Microgrids for Indian Scenario

December 21-23, 2017



Coordinator

Dr. Narsa Reddy Tummuru

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INTRODUCTION

The renewable energy generation is the one of an effective way to resolve the global energy crunch and reduce the carbon footprint. In recent years, advanced storage technologies along with fuel cells and micro turbines are emerging as eventual options that can be integrated as part of the electrical supply-demand system to enhance its availability, reliability and effectiveness. The temperamental characteristics of renewable energy sources (RES) give rise to many challenges on coordination and control of supply and demand.

The major impacts of renewable energy resources integration could be identified as voltage variations and unbalance, current and voltage harmonics, grid islanding protection, and other power quality issues, such as flicker and stress on distribution transformer. The severity of these issues depends on the penetration level of renewable energy resources, configuration of distribution system and the location of RES in distribution system. In such cases, high level of RES penetration can inject power to transmission network which can affect the voltage level and protection setting of the distribution system.

Microgrids can provide expertise for intensive care and efficient control of power distribution systems. Moreover, they can mitigate the stochastic nature of renewable energy resources and can provide the effective energy balance between supply and demand and also tackles the power quality related issues using intelligent demand response management, multi-functional power conditioner and advanced storage technologies.

Development of reliable and economic microgrid technology is one of challenging issue in our Indian continent due to many reasons. Few of these challenges for smart grid implementation need a focused discussion.

SCOPE OF THE WORKSHOP

This national level event aims to provide a premier platform for electrical engineers, scientists, researchers and industry professional to share experiences and ideas in the areas of smart microgrids.

The workshop will provide a platform to an in-depth discussion on the various challenges and their possible remedies which will benefit participants from academic and R&D institutions, engineers of utilities and policy makers.

The participants are able to understand current research and development activities, and also, the key challenges in operation and effective control of multi-functional microgrids.

This national level event explores the reliable and economic operation of the microgrids relating to the integration of stochastic renewable energy resources and the effective energy balance between supply and demand and also tackles the power quality related issues using intelligent demand response management, multi-functional power conditioner and advanced storage technologies.

To analyse infrastructure needs in smart cities with the focus on electrical vehicle deployment and to ensure interoperability of automation and control aspects of the evolving smart microgrids.

This workshop will also provide a platform to showcase and share the participants on our current research activities and state of art laboratory facilities at IIT Mandi.

- Introduction and hands on experiments on *Smart Grid Test Bed* developed at IIT Mandi
- Introduction and hands on training on *Real Time Digital Simulator* (RTDS) facility available at IIT Mandi.

Some of the solutions based on advanced technologies/methodologies will be discussed. Several technical studies based on the recent research work will also be presented.

REGISTRATION FORM

A National Workshop On
Reliability and Economic Performance of Multi-Functional Microgrids for Indian Scenario

December 21-23, 2017

Name _____

Date of birth _____ Designation _____

Organization _____

Address for correspondence _____

Phone _____ Fax _____

Email _____

Accommodation Required: Yes/NO (Tick one)

Payment details:

Draft/Cheque No. _____ Issuing bank _____

Amount _____ Drawn on _____

Date _____

Signature of applicant

* Make photocopies of registration form if required