TARGET AUDIENCE

The workshop is open for faculty/students of engineering 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. S. N. Singh, IIT Kanpur
- Prof. Naran M. Pindoriya, IIT Gandhinagar
- Prof. Franscisco Gonzales-Longatt, Loughborough University UK
- Dr. Kusum Deep, IIT Roorkee
- Dr. S. Dharmaraja, IIT Delhi

REGISTRATION FEE

The registration fee is Rs. 1500/- for academic participants and Rs. 4000/- 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 (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	May 25th, 2015
Notification and selection	May 26th, 2015

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

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 May 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 along with the registration fee should be sent to:

Dr. Manoj Thakur
Indian Institute of Technology Mandi
Mandi-175001, HP, INDIA
Phone: 01905-237927(O)/ 9805132227(R)
Fax: 01905-300009
Email: manoj@iitmandi.ac.in

A

National Workshop

On

Computational Intelligence Techniques for Smart Grid Applications

May 28-30, 2015

Indian Institute of Technology Mandi

Coordinators
Dr. Manoj Thakur
Dr. Bharat Singh Rajpurohit
Dr. Samar Agnihotri

INTRODUCTION

The European Smart Grids ETP defines the smart grids as "electricity networks that can intelligently integrate the behavior and actions of all users connected to it - generators, consumers and those that do both – in order to efficiently deliver sustainable, economic and secure electricity supplies". In developed as well as developing nations smart grid technologies are being implemented in order to improve the grid's efficiency and to integrate renewable energy resources into the grid.

Looking beyond 2030, the challenges of efficient distribution and management for electricity networks are likely to get tougher. There exists a general consensus that the challenges of climate change, system security, and a need to accommodate significant volumes of decentralized and renewable generation, require that the network infrastructure must be upgraded to enable smarter operation. The major changes to the way we supply energy and monitor its consumption by building a smarter grid lies at the heart of these changes. Large increase in electricity contributed by intermittent/highly variable renewable resources, the increase of stressing/narrowly conditions on transmission system, a massive decoupling between generation/load caused by dc system and several other features expected into the future electricity networks will negatively affect the system stability.

The reliable and sophisticated solutions to the unforeseen issues of the future networks are creating dynamically intelligent applications/solutions to be deployed during the incremental process of building a smarter grid.

IEEE Computational Intelligence Society classifies its subjects of interest as "theory, design, application, and development of biologically and linguistically motivated computational paradigms emphasizing neural networks, connectionist systems, genetic algorithms, evolutionary programming, fuzzy systems, and hybrid intelligent systems in which these paradigms are contained".

SCOPE OF THE WORKSHOP

In the recent past Computational intelligence (CI) has emerged as a reliable and powerful subject to develop smart technologies in a wide area of industrial application. CI gives efficient alternative to the classical methods of problem solving particularly when they either fail to give a solution or no effective computational algorithms to attempt the problem at hand. CI is best suited for the problems which may not be defined explicitly in the form of a mathematical model.

CI based techniques can play a key role in building smart grids intelligent and providing valuable benefits to functioning of the grid environment and stakeholders. A comparatively new era in computing, CI is already at the heart of many types of "smart" technologies and services in a variety of industries. In particular, CI enables us to interpret big data and extract knowledge from it to make decisions in real-time for critical business functions.

The future electricity networks and their potential issues require looking beyond the existing research frontiers, independent of disciplinary boundaries. For this reason, a discussion of the future developments on sophisticated/intelligent applications/solutions is a key research issue, especially with the objective of integrating economic and social welfare into the design and maintenance of future smarter networks. 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

National Workshop On

Computational Intelligence Techniques for Smart Grid Applications

May 28-30, 2015

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**