

ABOUT THE INSTITUTE

Maulana Azad National Institute of Technology (MANIT) is one of the first eight regional colleges of engineering in the country to move into the direction of self-reliance based on industrial growth. MANIT has been imparting education to graduate and postgraduate students in engineering since 1960 and is subsequently upgraded to National Institute of Technology (NIT) in 2002. The institute has been named after great educationist, scholar and first education minister of India Maulana Abul Kalam Azad. The institute is situated on a 650 acre green plateau commanding a magnificent view of the new township, new assembly house and BHEL township. The institute has been a center of excellence for higher technical education in central India.

Bhopal, the capital of Madhya Pradesh and is commonly known as city of lakes. It is situated on the site of an 11th century city, Bhojpal, founded by Raja Bhoja. Hundreds of Moghul age pieces of architecture which include Taj-ul-Masjid, Jama & Moti Masjid & Shaukat Mahal are some of the monumental buildings. Pachmarhi is the nearest hill station. It is well connected from different parts of the country by rail route and air. The institute is 9 kms away from Bhopal main railway station and 6 kms from Habibganj railway station. Bhopal airport is 16 kms away from the Institute. The weather of Bhopal is not very hot and temperatures during May vary from 35 - 38^o C.

COURSE COORDINATORS

Dr. K.R.Pardasani

Mobile : 09425358308 Ph. No. : 0755-4051552 (O)

Dr. Usha Chouhan

Mobile : 08989161687 Ph. No : 0755-4051555 (O)
e-mail : ycchouhan@gmail.com

ADDRESS FOR CORRESPONDENCE

Dr. K.R.Pardasani & Dr. Usha Chouhan
Department of Mathematics, Bioinformatics & Computer Applications
MANIT, Bhopal – 462003 (M.P.)

ELIGIBILITY

Faculty, Students, Research Scholars, IT Professionals from academic institutions, research organizations, Engineers from Industries, Government / Semi-Government organization with specialisation in Life Sciences / Computer Sciences / Engineering / Mathematics / Medical Sciences / Pharmacy. The number of seats are limited, preference will be given on first cum- first serve, basis.

REGISTRATION FEE

(A) Research Scholars/Students	Rs. 1500/-
(B) Faculty	Rs. 2000/-
(C) Industry Professionals	Rs. 4000/-

The fee has to be paid in the form of DD drawn in favour of **"DIRECTOR, MANIT, Bhopal"** payable at Bhopal. The fee includes course material, lunch and refreshment etc.

Last date of receiving completed registration form is 25/06/2017. We also encourage sending a copy of registration through email at ycchouhan@gmail.com with Subject line **CHEMINFO-2017**, to speed up the process. The participants sending the registration through email are requested to ensure that their DD and formal registration form should reach here not later than 30/06/2017 in any case. The registration process will be completed only if we received the DD and registration form. We will confirm your selection through email latest by 30th June 2017. The candidates who are not selected will be intimated and their draft will be returned.

ACCOMMODATION

Accommodation to outstation participants can be arranged at Faculty Guest House on request. The request for the accommodation should be made well in advance.

National Workshop

on

CHEMINFORMATICS

July 01-05, 2017

under

Bioinformatics Infrastructure Facility

of

Department of Biotechnology,

New Delhi

Organised by



Coordinators

Dr. K.R. Pardasani

Dr. Usha Chouhan

Department of Mathematics, Bioinformatics and

Computer Applications

Maulana Azad National Institute of Technology,

Bhopal

(A deemed university)

Telephone: 0755-2670416-17, 2670327-28

Fax: 0755-2670562, 2670904

Website: www.manit.ac.in

PREAMBLE

Cheminformatics is one of the frontier and interdisciplinary area, which draws upon techniques from many applications including computer science, mathematics, computational chemistry and data visualisation to tackle these problems. It is a rapidly growing field with a large application potential in the pharma industry. The aim of this workshop on Cheminformatics is to provide individuals / professionals from basic sciences/ biological sciences / computer sciences / Bio Chemical Sciences research & development, a basic level of knowledge and skills in Cheminformatics & Drug Design and its usage in the research and industry. Cheminformatics involves use of IT tools to describe, analyze, simulate and predict the dynamics of various biochemical processes. The ultimate goal of Cheminformatics is to enable the discovery of new biochemical insights as well as to create a global perspective from which unifying principles in Biochemistry, Biotechnology and Biology can be discerned. Government and companies in the business of developing drugs, agriculture, chemicals, hybrid plants, plastics, and IT among other related areas are developing Cheminformatics division and looking to provide new avenues and research outputs. Here is a \$ 300 billion pharmaceutical industry and very rapid-growing biotech industry to support it. There is an acute shortage of Cheminformatics and molecular drug design specialists. The nature of work in Cheminformatics requires in depth logic, programming, and relational database skills with mature biological and biochemical concepts.

SIGNIFICANCE

Cheminformatics is seeing significant growth, which will be further catalyzed by the widespread availability of public databases to support the development and validation of new approaches.

Large volume of data has resulted from Biochemical experiments which need to be collected, described and organized in the form of databases/data warehouses for analysis.

The huge volume of Biochemical data possess new challenges and opportunities for the development of computational models, Algorithms, Tools and Softwares for analysis and discovering new hidden patterns and relationships in data to predict the dynamics of Biochemical processes.

It creates new opportunities for Biomedical scientists health due to growth of population and Biotechnologists to use It tools for design of new biotech products like drugs.

OBJECTIVES

- Create awareness among the participants about this new area of Cheminformatics and bring applied orientation among them.
- To give exposure of concepts, skills, tools and techniques in the application area of Cheminformatics to the participants.
- To expose the utility, significance and importance of Cheminformatics.
- To train teachers how to teach Cheminformatics in different disciplines of Biology, Pharmacy, computer science & IT.
- Exposure to Computational Modelling, Simulation, and various areas in Cheminformatics.
- Recent trends and future directions.

CONTENTS

- Bioinformatics and its applications
- Biological Databases and Structural Bioinformatics
- Molecular Modelling
- Protein Structure Prediction
- Active Site Identification
- Lead identification and Optimization
- In Silico generation of novel ligand molecules
- Molecular Docking
- 3-D QSAR
- Pharmacophore Modelling
- Drug Discovery, Drug Design
- Mathematical Modelling & Simulation
- Tools & Softwares like Autodock, FlexX, Gromacs, Modeller,SPSS etc.

RESOURCE PERSON

Faculty for IITs, NITs, Industry and Faculty from Host Institution

Course material, lecture slides and other reference material will be provided on CDs.

Maulana Azad National Institute of Technology

Bhopal (M.P.) – 462003

Registration Form

National Workshop

on

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New Delhi

July 01-05, 2017

✓ Please check: Academic Industry/Govt. Student

✓ Please check: Accommodation Required: Yes No

Name: _____

Designation: _____

Affiliation: _____

Mailing Address: _____

Telephone No. (with STD code): _____

Fax: _____

Email: _____

Specialisation: _____

DD No. / Date: _____

Amount: _____

Bank: _____

(DD must be drawn in favour of "**DIRECTOR, MANIT, Bhopal**" payable at Bhopal)

Date: _____ Signature of Applicant

(If required Xerox of registration form can be used)