

Short Term Training Programme On

## NONLINEAR ANALYSIS AND OPTIMIZATION

Organized by  
Department of Applied Mathematics  
IIT (ISM), Dhanbad  
18 - 22 August, 2017

### REGISTRATION FORM

Name: .....

Designation: .....

Qualification: .....

Organization: .....

Address for Correspondence:

.....

.....

Tel. (O) ..... (M) .....

E-mail: .....

DD Particulars:

Amount .....No.....

Date .....Bank .....

Accommodation Required: Yes / No

Date: Signature of the Applicant

Place:

Forwarded through Head Dept/ Institution

### CHIEF PATRON

Prof. D.D. Mishra  
Chairman GC & EB, IIT (ISM) Dhanbad

### PATRON

Prof. D.C. Panigrahi  
Director, IIT (ISM) Dhanbad

### ORGANIZING COMMITTEE

Prof. A. Chattopadhyay  
Prof. G. S. Seth  
Prof. S. Gupta, HOD  
Prof. G. N. Singh  
Prof. B. Mukherjee  
Prof. Prof. R. K. Upadhyay  
Dr. M. K. Singh  
Dr. S. Chatterjee  
Dr. S. P. Tiwari  
Dr. B. S. Kushvah  
Dr. P. S. Rao  
Dr. Abhay. Kr. Singh  
Dr. G. K. Viswakarma  
Dr. S. Kundu  
Dr. S. Sahu  
Dr. P. K. Kewat  
Dr. Abhisek Kr. Singh  
Dr. D Pradhan  
Dr. (Mrs) A. Rani  
Dr. R. B. Kaligatla

### INVITED SPEAKERS (TENTATIVE)

Prof. B. N. Mandal, FNASc  
Prof. P. K. Jain, FNASc  
Prof. Q. H. Ansari, Aligarh Muslim University, Aligarh  
Prof. Pankaj Jain, South Asian University, New Delhi  
Prof. M. Mursaleen, Aligarh Muslim University, Aligarh  
Prof. J. Dutta, IIT Kanpur  
Prof. (Miss) A. Mehra, IIT Delhi  
Prof. C. S. Lalitha, University of Delhi (South Campus)  
Prof. B. K. Mishra, BIT Mesra  
Prof. Pankaj Gupta, University of Delhi  
Prof. Sanjeet Singh, IIM Kolkata  
Prof. D. R. Sahu, BHU Varanasi  
Prof. C. Nahak, IIT Kharagpur

Short Term Training Programme On

## NONLINEAR ANALYSIS AND OPTIMIZATION

18 - 22 August, 2017



**Coordinator**  
**Dr. Anurag Jayswal**

**Co-coordinator**  
**Dr. Akhilesh Prasad**



Organized by  
**DEPARTMENT OF APPLIED MATHEMATICS**  
**INDIAN INSTITUTE OF TECHNOLOGY**  
**(INDIAN SCHOOL OF MINES)**  
**DHANBAD 826 004**  
**Jharkhand, India**

## INTRODUCTION

Nonlinear and variational analysis is rapidly growing areas of mathematics with numerous applications to optimization, control theory, economics, engineering, and other disciplines. During the last three decades, the study of nonlinear and variational analysis has been devoted vigorously and such activity had great influence on other areas of science as much as mathematics. At the same time, Optimization has grown in connection with the study of problems of convexity, equilibrium, control, and stability of linear and nonlinear systems. These two mathematical disciplines have no border and they rather have good effects together. The main objective of the course is to discuss recent results in nonlinear and variational analysis and their applications as well as recent research trends in optimization. This course has several unique features and to hold this meeting is very important for development of nonlinear analysis and optimization and its related area all over the world. We hope and believe that each participant in this training programme will have good opportunities not only to explore themselves in this field and its applied areas but also to establish deepen our friendship.

## ABOUT THE PROGRAMME

The main objective of the programme is to provide the platform where the participants can benefit from the lectures delivered by some eminent experts from country on the given below topics and have interaction with them. The programme provides an opportunity to young researchers to get an overview of the current trends in nonlinear analysis and optimization and to interact with the experts in the field. The program is useful to mathematicians, scientists and engineers intending to step into this fascinating area. This programme is designed to provide an introduction to the applications of nonlinear analysis and optimization in different aspect.

## COURSE CONTENTS

- Nonlinear and Variational Analysis
- Mathematical Modeling
- Fixed Point Theory
- Convex and Nonsmooth Analysis
- Variational Inequality
- Wavelet Analysis

## WHO CAN ATTEND?

PG Students, Research Scholars, Faculty members, Scientists and persons from industries

## REGISTRATION FEE

The following registration fee includes kit, breakfast, working lunch, tea & snacks, dinner and accommodation, on all five days

Academic Institute/University Rs. 5000/-

Industry and R&D Organizations Rs. 7000/-

IIT ISM Students with registration fee only Rs. 500/- are eligible for attending lecturer class only.

The registration fee should be paid through Demand Draft (DD) drawn on favor of “**Registrar, Indian Institute of Technology (Indian School of Mines), Dhanbad**” payable at SBI, ISM Branch, Dhanbad. The filled in registration form along with the DD should be sent to:

**Dr. Anurag Jayswal, Coordinator,**  
**Dr. Akhilesh Prasad, Co-coordinator**  
Department of Applied Mathematics,  
Indian School of Mines,  
Dhanbad-826 004, Jharkhand, India  
Ph.: 09431122002/09431711231  
**E-mail: anurag\_jais123@yahoo.com**  
**apr\_bhu@yahoo.com**

**Last Date for Registration: July 25, 2017**

## ABOUT THE DEPARTMENT

The Department of Applied Mathematics is a highly reputed Department which functions with excellence as its motto. The Department was started in the year 1926 along with other Engineering and Science Departments of the institute and has established itself as a dynamic centre for academic and research activities. In addition to the teaching of courses in Mathematics for B. Tech and M. Tech Programmes, the Department offers two P.G. Programs, M. Sc. and 5 Yr. Int. M. Tech. The faculty is actively engaged in research in diverse fields such as Analysis, Algebra, Topology Operations Research, Cryptography, Graph theory, Solid Mechanics, Fluid Dynamics, and Mathematical Modelling. At present, there are 23 members on the Teaching Faculty in the Department and more than 100 Research Scholars are working for their Ph.D. The Department has a full-fledged computation laboratory to meet the requirements of the M.Sc. students, research scholars and the faculty.

## ABOUT THE INSTITUTE

The Indian National Congress at its XVII Session of December 1901 passed a resolution stating that “in view of the fact that the tendency of recent legislation namely, The Indian Mines Act VII of 1901, is that all Indian mines must be kept under the supervision of mining experts, the Congress is of opinion that a Government College of Mining Engineering be established in some suitable place in India on the models of the Royal School of Mines in England, Mining Colleges of Japan and at other places in the continent”. The McPherson Committee formed by Govt. of India, recommended the establishment of an institution for imparting education in the fields of Mining and Geology, whose report, submitted in 1920, formed the main basis for establishment of the Indian School of Mines, Dhanbad.