

Short Term Course on
Numerics of PDE Solvers
Organized by
Department of Applied Mathematics
Indian Institute of Technology (ISM), Dhanbad

September 07 - 09, 2017

REGISTRATION FORM

Name :

Designation :

Qualification :

Organization :

Address for Correspondence :

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Tel. (O)(M)

E-mail:

DD Particulars/online transfer:

AmountNo.....

DateBank

Accommodation Required: Yes / No

Date:

Place:

Signature of the Applicant

Forwarded through Head of the Dept/ Institution

CHIEF PATRON

Prof. D.D. MISRA
Chairman GC & EB, IIT(ISM) DHANBAD

PATRON

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

ORGANIZING COMMITTEE

Professor Vishnu Priye, Dean (R & D), IIT (ISM) Dhanbad
Professor S Gupta, (HOD/AM , **Convener**) IIT (ISM) Dhanbad
Professor R K Upadhyay, IIT (ISM) Dhanbad
Prof. B.V. Rathish Kumar, IIT Kanpur
Dr P S Rao, IIT(ISM) Dhanbad - **Coordinator**
Indian Institute of Technology (Indian School of Mines)
Dhanbad -826 004, Jharkhand State, India.
Ph: 0326-2235766, 09471191351(M)
E-mail: pentyalasrinivasa@gmail.com

INVITED SPEAKERS (TENTATIVE)

Prof. B.V. Rathish Kumar, IIT Kanpur
Prof . P.V.S.N Murthy, IIT Kharagpur
Prof .S.V.K. Verma, S.V University, Tirupathi.
Prof B. Rushi Kumar, VIT University, Vellore
Prof. Y N Reddy, NIT Warangal
Dr P S Rao, IIT (ISM) Dhanbad

Short Term Course on
Numerics of PDE Solvers
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Coordinator
Dr. P S RAO



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DEPARTMENT OF APPLIED MATHEMATICS
INDIAN INSTITUTE OF TECHNOLOGY (ISM)
DHANBAD 826 004
Jharkhand State, India.

INTRODUCTION

Scientific Computing involves numerical modelling and simulation of real life problems like computational fluids flows; porous media heat transfer, numerical weather prediction, image processing and so on. All these models require high precision numerical algorithms with huge computational recourses and demands high accuracy. Since the real life models are highly nonlinear due to its multi dimensional properties and abrupt variations due to external forces and solving these problems is the need of current research.

ABOUT THE PROGRAM

The aim of the present program is to start Second order PDEs of Parabolic, Elliptic and Hyperbolic type and their invariants arising in real life industrial applications. Since most of these equations are highly nonlinear and solutions to these problems would require a special schemes like Upwind Techniques, Collocation techniques, multi grid techniques, element by element computation and super convergence analysis.] with finite difference numerical technique, finite element, finite volume, domain decomposition approach, Discontinuous Galerkin methods have exchange of ideas of common interest. 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 use of Advanced Computational techniques includes:

- Upwind Finite Difference Methods
- Finite Element/Finite Volume Method
- Domain decomposition method
- Spectral Element Methods

- Parallel Computing issues and challenges
- Discontinuous Galerkin Methods etc.

ELIGIBILITY CRITERIA

The programme is aimed at mathematics; science and engineering scholars, faculty & scientists who wish to gain a basic understanding of the concepts involved and advanced tools for numerics.

REGISTRATION FEE

The following registration fee includes course kit, Breakfast, lunch & Dinner tea & snacks on all the five days (with accommodation)

For Faculty:	Rs. 5000/-
Research Scholars and PG Students	Rs. 3000/-
Software and R&D Organizations	Rs. 8000/-

Registration fee for IIT (ISM) faculty, JRF & M.Tech students.

For Faculties:	Rs. 3000/-
Research Scholars and PG Students	Rs. 500/-

No TA and DA will be paid to the participants as it is self financed course.

The registration fee may be paid through Demand Draft (DD) drawn in favour of "**Registrar, IIT (ISM) Dhanbad**, payable at **Canara Bank, Saraidhela Branch, Dhanbad**. Also on line transfer can be made to the Registrar (Project Account),**CANARA Bank, Saraidhela Branch, Dhanbad, Jharkhand State**, A/C No: **0986101009746, IFSC Code: CNRB0000986, MICR Code: 826015003**. The filled in registration form along with the DD/online transfer receipt should be sent to.

Dr. P S Rao , Coordinator, Short Term Course on Numerics of PDE Solvers

Department of Applied Mathematics,
Indian Institute of Technology (Indian School of Mines),
Dhanbad – 826 004, Jharkhand State, India.
Ph: 0326-2235766 (Off), 09471191351

Last Date for Registration: 2nd September, 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 (Mathematics & Computing) and 5 Yr. Int. M.Tech (Mathematics and Computing). The faculty is actively engaged in research in diverse fields such as Solid Mechanics, Fluid Dynamics, Bio Mechanics, Operations Research, Cryptography and Analysis. At present, there are 21 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. On 10th August, 2016 Gazettee of India notified the conversion of ISM into Indian Institute of Technology (ISM) under the Technology act of ministry of Human Resource development, Govt. of India.