

INTRODUCTION

Pakistan Institute of Nuclear Science and Technology (PINSTECH) is a pioneer research institute of Pakistan Atomic Energy Commission (PAEC). Since its inception in 1965, it has been regarded as a leading research institute in Pakistan as well as in the Islamic World.

Theoretical Plasma Physics Division (TPPD) is one of PINSTECH's very productive Divisions having prolific and veteran researchers not only in the field of Plasma Physics but also in Fluid Mechanics and Numerical Simulation. To promote and continue this research culture two days workshop on Finite Element Method (FEM) has been organized to share and disseminate knowledge about FEM.

Finite element method is the most widely accepted technique these days for modeling of many engineering problems like the linear/non-linear dynamics of solids, fluids, gas and their interactions etc. Its acceptance in both research and industry is due to its accuracy, efficiency and robustness in solving many challenging problems. In Pakistan, very few people are working in the development of this method however, softwares based on FEM are generally utilized to accomplish R&D tasks.

Purpose of the workshop

The overall purpose of the workshop is to develop better understanding of FEM and to bring together those who are using or intend to use FEM in their R&D work within PAEC and Strategic Organizations. The purpose also includes to establish a regional network among finite element users for dynamic and continuing exchange of expertise.

Outline of the workshop

- Introduction to FEM
- Types of elements, meshes and their generation
- Solution of FEM generated system of linear / nonlinear equations
- Convergence of solution
- Sparse matrices and their storage
- Solution of sample problems in one dimension and two dimensions
- Finite element mesh adaptivity

Workshop Venue
Physics Division Lecture Hall
PINSTECH, Nilore, Islamabad

Eligibility

All scientists and engineers involved in R&D work will be welcomed but preference will be given to those having some previous experience of scientific computing.

Registration

Workshop Registration Form duly recommended by the Head of Establishment should reach TPPD, PINSTECH, P.O. Nilore, Islamabad before March 25, 2010. (Soft copy of the Registration Form is available at <http://www.sidnlps.org.pk>)

Registration Fee

Rs 4,000/- per participant (in advance) by cheque/draft in favour of Head LAO, PINSTECH, P.O. Nilore Islamabad.

Accommodation/Travel

Participants will have to make arrangement of stay in Islamabad / Rawalpindi at their own. TA/DA is the responsibility of nominating Organization / Establishment.

Pick and Drop to Venue

Enroute pick and drop from Rawalpindi/Islamabad to the workshop venue (PINSTECH) will be provided.

**A Two days workshop on Applications of
Finite Element Method**
April 5-6, 2010

REGISTRATION FORM *

Name : _____

Father's Name : _____

Date of Birth : _____

NIC No. : _____

Highest Qualification : _____

Experience : _____

Designation/Post : _____

Organization/Establishment : _____

Mailing Address : _____

E-Mail : _____

Ph : Off : _____ Home : _____

Mobile _____

Signature (Participant) : _____

Date : _____

***Note :** Participants from Universities / academic institutions and other non-strategic organizations are required to submit security clearance form (copy attached) alongwith two photographs at least two weeks before the start of workshop.

Recommendation by the Head of nominating Establishment:

Signature _____

Stamp _____

Head TPPD, PINSTECH

Workshop Organizers

Patron

Engr. Nasrullah Khan Qazi

Director General, PINSTECH

Advisory Committee

Dr. Jamshed Hussain Zaidi

Director Science

Dr. Qamar-ul-Haq

Head Theoretical Plasma Physics
Division

Dr. Rashid Mahmood

Head Modeling and Simulation Group

Dr. Shaukat Iqbal

Dr. Shafqat Hussain

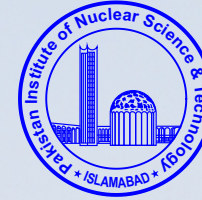
For further information please contact :

Dr. Rashid Mahmood

Phone: 051-220 7724

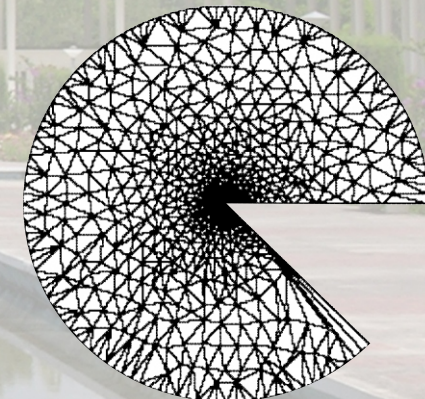
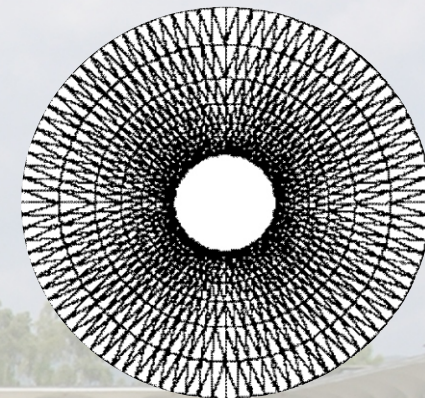
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Applications of Finite
Element Method**

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**Theoretical Plasma Physics Division
Directorate of Science
Pakistan Institute of Nuclear Science & Technology**