One Day online training program

On

"*Study and Analysis of Mathematical Models of Moving Boundary Problems*"

Sponsored by Science and Engineering Research Board (SERB), Govt. of India

January 28, 2022

Organised by:

Department of Mathematical Sciences
Indian Institute of Technology (Banaras Hindu University)
Varanasi-221005

Venue:
Department of Mathematical Sciences IIT (BHU), Varanasi-221005

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Introduction:

Moving boundary problems (or Stefan Problems) involving diffusion processes have attracted a numerous investigators just over a century, since they have many practical applications in the fields of science, engineering and technology. The practical applications can be seen in heat transfer where phase transition occur (melting, solidification, thawing), moisture transport such as swelling of grain or polymers, sediment transport in fluvial depositional systems, oxygen diffusion problem, fluid flow in porous media, cryosurgery, tumour growth, etc. All these processes contain either a moving interface or moving reaction front which is unknown initially.

In the literature, the mathematical models related to moving boundary problems are discussed under some assumptions as usual. Therefore, there is still scope to modify the models related to moving boundary problems which is more near to the real physical processes. Moreover, there are many important physical processes associated to moving boundary problems which have not been adequately studied and are not understood till now. To have a deeper understanding of such complex physical mechanics of these important problems, a detailed studies need to be performed to present more realistic mathematical model of moving boundary problems and its solution.

Who can attend?

Research scholars of colleges/University/Engineering colleges working in the departments of Applied or Pure Mathematics/Mechanical Engineering/other interested department are eligible to attend the course.

Registration Process

The scanned copy of the filled in application form to be mailed at rajeev.apm@itbhu.ac.in by **January 25, 2022**. Application format is given in this brochure.
Registration fee: Nil

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HEAD:

Prof. S.K. Pandey
Department of Mathematical Sciences, IIT (BHU)

COORDINATOR:

Dr. Rajeev
Department of Mathematical Sciences, IIT (BHU)

Objectives:

- To discuss some mathematical models of moving boundary problems having physical relevance.
- To deliberate the scope of modifications in the mathematical models in view of real world problem.
- To discuss various approximate/numerical solution to the problems.
- To promote R&D in the areas of the moving boundary problems.
- To promote societal benefits of study of moving boundary problems.

Indian Institute of Technology (BHU), Varanasi
Department of Mathematical Sciences

Registration Form

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1. Name ……

2. a) Age …….. b) Sex: M/F ……

3. Designation ……

4. Organization ……

5. Address for correspondence

……

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E-mail…… Phone/Mobile……

6. Highest academic qualification……

7. Specialization ……

Please register me for the one day online training program on ***Study and Analysis of Mathematical Models of Moving Boundary Problems*** to be held on January 28, 2022 at Department of Mathematical Sciences, IIT (BHU) Varanasi.

Date……..

Place …….. Signature of the Participant