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**Call for papers**
Original research papers are invited for presentation in the conference. All correspondence (including abstract & full paper preferably in **MS Word**) should be made on following email address:
ncetpfs.jumath@gmail.com
For registration, queries, clarifications, please contact the **organizing secretary.**

**Important Deadlines**
Abstract Submission: 25-01-2013
Notification of Acceptance: 31-01-2013
Registration Fee & Full length Paper: 15-02-2013

**Registration Fee**
   a. Faculty Members: Rs.1000/-
   b. Students / Research Scholars: Rs.500/-
 Due to paucity of funds, participants are requested to arrange their own travel expenses.

# National Conference on Emerging Trends in Physics of Fluids & Solids

## February 27-28, 2013

## Organized by Department of Mathematics Jadavpur University Kolkata-700 032

## Sponsored by DST-PURSE & UGC

## About the University

In 1910 the Society for the Promotion of Technical Education in Bengal which looked after Bengal Technical Institute (which later became College of Engineering and Technology, Bengal) was amalgamated to NCE. NCE henceforth looked after the College of Engineering and Technology, Bengal which by 1940 was virtually functioning as a University. After Independence, the Government of West Bengal, with the concurrence of the Govt. of India, enacted the necessary legislation to establish Jadavpur University on the 24th of December, 1955. Now Jadavpur University has successfully established itself as a foremost Indian University with a vast repertoire of courses offered, an enviable list of faculty members and has come to be known for its commitment towards advanced study and research.

## About the Department

This department is an important constituent of the Faculty of Science since 1956, the year when it was established, with its proficiency in taught programmes and strong research projects of excellence it has made significant contributions in the study of Mathematics in the country. The department has been taking a leading role in developing curricula and syllabi for engineering mathematics as well as a wide spectrum of areas in Mathematics such as: Algebra and Analysis, Fuzzy Mathematics, Differential Equations and their applications, Discrete Mathematics and its applications, Statistics and Operations Research, Mathematical Modeling, Elasticity, Thermo-elasticity, Numerical Analysis, Fluid Mechanics, Biomathematics and Ecological systems, Mathematical Physics and Plasma Dynamics etc.
The Department has an interdisciplinary centre - Centre for Mathematical Biology and Ecology (CMBE)- established by the University in 1997.

## Aims and Objective of the Conference

The aim of this conference is to bring together the academicians, scientists, engineers, researchers and students to exchange and share their knowledge, experiences and research results for better understanding on the Emerging Trends in Physics of Fluids & Solids. This conference aims to consider the study of nonlinearity and supernonlinearity of the system through the appropriate mathematical modeling and to consider the system as a dynamical system for identifying its qualitative behavior. With an aim to explain/solve any physical problem with proper justification by means of mathematics/ mathematical modeling one can apply/ cover a large portion of physical situation. In other words, with the help of simple definitions, theorems of mathematics our aim is to establish the existence of solution of physical problems or to extend the physical interpretation from a specific physical situation to a general one. Numerical simulation of a particular physical problem is another important branch of this conference. Most of the physical problems are generally modeled by a set of nonlinear equations and except some few cases, it is impossible to find the exact solution of the problem. In such cases, numerical computation/simulation plays an important role to interpret the physical situation. Again, in general, there are several parameters associated with a particular problem and in such cases numerical simulation also plays an important role to study the nature and convergence of solution of the problem in the parametric space. Stability analysis of a physical problem is another remarkable research area of physics of fluids & solids. Without being analyzing mathematically a physical problem regarding its existence, stability and dynamical behavior it is not possible to maintain the quality of research at the national and international level.

## Areas and Topics to be covered

Emerging Trends in Physics of Fluids & Solids, specifically Classical Fluid and Solid Mechanics, Biomechanics, Computational Fluid Dynamics, Nonlinear Wave Mechanics, Ocean and Coastal Waves Phenomena, Micro- & Nano- fluidics, Magnetohydrodynamics, Plasma Physics, Physics of Dusty Plasma, Quantum Physics, Thermo-elasticity, Fracture Mechanics, Heat Transfer and Thermal effects in Solids and Fluids, Fluid Structure Interactions and Multiscale Modeling.

## Conference Location

The campus of Jadavpur University is located in South Kolkata 8 km by local train from Sealdah Railway Station; 15 km by road from Howrah Railway Station and 20 km from Netaji Subhas Chandra Bose International Airport, Kolkata.

## National Conference on Emerging Trends in Physics of Fluids & Solids

## February 27-28, 2013

### Registration Form

Name: ……………………………………

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Mailing Address: ……………………………

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Contact No.: ………......………………….

Email: ……………………………………...

Presenting paper: Yes ☐          No ☐

If yes, Title of the paper: …………………………

………………………………………………

**Accommodation Required** (YES/NO): ………
Outside participants will be given free boarding provided they should inform it to the organizing secretary through the prescribed format of registration form **along with the registration fee by specified deadlines.**

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DD Date: …………. DD Amount: ……........

Signature

Draft should be made in favor of "**Registrar, Jadavpur University**" payable at **Kolkata.**