



NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA

**Short Term Course on  
FUZZY SET THEORY AND  
ITS APPLICATIONS**

22-24 April, 2016  
[Registration form]

1. Name:
2. Position:
3. Department:
4. Institution/Organization:
5. Address:
6. E-mail Address:  
Mobile No.:
- Telephone No.:
- Fax No.:
7. Educational background
8. Areas of research interests:

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DD Particulars:

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

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

Accommodation Required: Yes / No

Date: \_\_\_\_\_ Signature of the Applicant  
Place: \_\_\_\_\_

Forwarded through Head Dept/ Institution

**DEPARTMENT OF MATHEMATICS**

The department imparts teaching of Mathematics in undergraduate engineering and post graduate courses (2 years and 5 years integrated) in Mathematics. In the M.Sc. (Mathematics) various applied and pure courses viz. Differential Equation, Algebra, Numerical Analysis, Operations-Research, Topology, Functional Analysis, Statistics, Fuzzy Set Theory, Fluid Dynamics, etc. are taught as core/special papers. The Department is also engaged in research on various interdisciplinary subjects.

**IMPORTANT DATES**

Receipt of applications along with DD: **April 8, 2016.**

Course duration: **April 22 to April 24, 2016.**

**PATRON**

**Prof. Sunil Kumar Sarangi, FNAE**  
(Director, NIT Rourkela)

**ORGANIZING COMMITTEE**

All faculty members of the Department of Mathematics, NIT Rourkela

**ADDRESS FOR CORRESPONDENCE**

Prof. S. Chakraverty  
(Coordinator: FSETA-2016)  
Department of Mathematics, NIT Rourkela,  
Odisha- 769008, India  
Phone: 0661- 2462713 (O)

**E-mail: fseta2016@gmail.com**

**Short Term Course on**

**FUZZY SET THEORY  
AND ITS APPLICATIONS**

**(FSETA-2016)**

**22 –24 April, 2016**



**Prof. S. CHAKRAVERTY**

**(Coordinator)**

**ORGANIZED BY**



**DEPARTMENT OF MATHEMATICS  
NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA  
ODISHA 769008, INDIA**

## INTRODUCTION

This short term course on FUZZY SET THEORY AND ITS APPLICATIONS will be organized by Department of Mathematics, NIT Rourkela during April 22-24, 2016. This course is being organized to have overall knowledge of Fuzzy set theory and its applications in various areas. The topics of the course have been formulated to cater the needs of teachers, scientists from R&D labs, practicing engineers, research scholars and students. The course aims to bring-out the importance of uncertainty modeling using fuzzy based approach. It provides a forum for lectures and discussions by expert speakers in this area combining inter-disciplinary subjects.

**SCOPE:** In real life problems, dealing with variables and parameters of uncertain value is an important issue, although the parameters are taken as crisp for simplifying the problem. However, there is incomplete information about the variables being a result of errors in measurement, observations, experiment or the application of different operating conditions or a maintenance induced error etc. The so-called vague, imprecise and incomplete information about the parameter is called the uncertain information. Basically these uncertainties can be modeled through probabilistic approach and fuzzy theory.

Probabilistic methods are not able to deliver reliable results at the required precision without sufficient experimental data. In the contrary, fuzzy theory is becoming a powerful tool for many real life applications. In this approach, the uncertain variables and parameters are represented by fuzzy numbers, vectors or matrices. Rather than the particular value of the properties or parameters, we may have only the imprecise bounds of the values.

The corresponding problem will then become uncertain and the analysis and solution would require then careful application of the methods. In order to have an idea of how to handle the uncertainty in physical problems, this course will give a new vista.

## TENTATIVE TOPICS TO BE COVERED

- Fuzzy set theory
- Fuzzy differential equations
- Fuzzy system of equations
- Fuzzy eigenvalue problems
- Fuzzy modeling for different uncertain science and engineering application problems viz. diffusion equations, static and dynamic problems of structures etc.

## REGISTRATION FEE

**Research Scholars and students: Rs.2500/-**

**Faculties from Academic Institutes: Rs.3500/-**

**Personnel from Industry and R&D**

**Organizations: Rs.5000/-**

**Foreign Participants: \$150/-**

**Registration fee includes kit, Breakfast and Lunch during all the course days only.**

The registration fee should be paid through a **Demand Draft**, drawn in favor of “**Continuing**

**Education, NIT Rourkela**” Payable at Rourkela.

The filled in registration form along with the DD should be sent to

Prof. S. Chakraverty  
(Coordinator: FSETA-2016)  
Department of Mathematics, NIT Rourkela,  
Odisha- 769008, India  
Phone: 0661- 2462713 (O)

## ACCOMMODATION

Outstation participants may be provided accommodation in institute Guest House/ Hostels/Hotels (**on payment basis with first come first serve**). The institute is situated at only 15 minutes driving distance from Rourkela railway station. For institute accommodation please contact the convener well in advance at the e-mail.

**Last Date for Registration**  
**April 8, 2016**