

### ABOUT THE INSTITUTE

National Institute of Technology Jamshedpur (NIT Jamshedpur), formerly Regional Institute of Technology, Jamshedpur, is a technology higher education institute located at Jamshedpur, Jharkhand, India. It was among the first eight Regional Engineering Colleges (RECs) established as part of the Second Five-Year Plan (1956–1961) of Government of India. It was the only REC which was set-up as an institute of technology rather than a college of engineering at that time. With a view to give further impetus to the technical education, in 2002, the Central Government has upgraded the RECs into NITs and declared these as *Institutes of National Importance*. The Institute is situated in the heart of the rich mineral and industrial belt of Jharkhand State, formerly a part of undivided Bihar. It is on the banks of the river Kharkai at a distance of 3 km from Adityapur railway station and 12 kilometers from Tatanagar Railway Station. The institute offers the 4-year B.Tech.(Honours) degree in the seven branches of engineering and M. Tech, MCA, M. Sc and Ph. D. degrees in various specializations.

### ABOUT JAMSHEDPUR

Jamshedpur also known as Tatanagar is a city located in the Saraikela district of the state Jharkhand in India. Originally named 'Sakchi', Lord Chelmsford renamed it as Jamshedpur in 1919 as a tribute to its magnificent founder Jamsheji Tata. Jamshedpur is home to the first private Iron and Steel company of India, Tata Steel, and is commonly called "Tata" as a result of the company's significant presence. It is well connected by rail, road and air. It is 135 KM from Kharagpur and 250 KM from Howrah (Kolkata), West Bengal by train route. Tatanagar Jn is connected to Kharagpur and Howrah Junctions through over a dozen of superfast/ express/local trains. The Distance between Kolkata International Airport and Howrah Rly station is about 18 KM. The distance of Jamshedpur from Birsa Munda Airport, Ranchi, Jharkhand is about 145 KM.

### ABOUT THE PROGRAMME

Numerical Analysis is a promising discipline in shaping future research and development activities in both academia and industry. It naturally finds applications in all fields of engineering and the physical sciences. The subject of Numerical Analysis provides Numerical Methods for the study and solution of mathematical problems arising in the field of Science and Engineering. Due to the enormous progress in hi-speed computer technology in recent years, the use of numerical methods has become more and more attractive and important. Numerical methods in many cases offer cost effective and, therefore, very attractive possibility for the investigation and optimization of products and processes. The successful and efficient application of such methods requires certain basic knowledge about the underlying methodologies and their possibilities with respect to specific applications. The main objective of this programme is to provide preliminaries of the Numerical Analysis and to make aware of the various numerical techniques to solve mathematical problems that cannot be solved by exact methods and deliver some state of the art lectures on the advanced topics by experts.

#### The topics to be covered include:

- Equations and System of Linear and Nonlinear equations
- Interpolation and Approximations
- Differentiation and Integrations
- Ordinary and Partial differential equations
- Theory of Computation and Parallel Computing
- Computational fluid dynamics
- Singular perturbations and
- Fractional differential equations.

Use of MatLab software is planned to give hands on experience in the practical/laboratory sessions.

### REGISTRATION FORM

**National Institute of Technology,  
Jamshedpur - 831014 (Jharkhand)**

**STTP on**

**Numerical Methods and Its Application in  
Science and Engineering  
(NMASE- 2013, 19<sup>th</sup> – 23<sup>rd</sup> August, 2013)**

1. Name: \_\_\_\_\_
2. Designation : \_\_\_\_\_
3. Organization : \_\_\_\_\_
4. Highest Educational Qualification: \_\_\_\_\_
5. Experience (in years):  
(Teaching/Research/ Industry)
6. Area of Specialization: \_\_\_\_\_
7. Mailing Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

8. Sex( Male/Female .....)

9. Registration Fee Details:

DD. No: \_\_\_\_\_ Date: \_\_\_\_\_

Bank Name: \_\_\_\_\_

10. Accommodation required: Yes/No .....

Place:

Date: \_\_\_\_\_ Signature \_\_\_\_\_

I am recommending the registration of the above person for attending the STTP on Numerical Methods and Its Application in Science and Engineering.

Signature with seal  
Head of the forwarding Institute/Department

**Short Term Training Programme  
On  
Numerical Methods and Its Application in  
Science and Engineering  
(NMASE - 2013, 19<sup>th</sup> – 23<sup>rd</sup> August, 2013)**



**Coordinator  
Dr. H. S. Prasad**

**Organized by  
Department of Mathematics,  
National Institute of Technology  
Jamshedpur:- 831014.  
Jharkhand, India**

**IMPORTANT DATES**

**The completed registration form in the prescribed format along with registration fee should reach Coordinator on or before: 5<sup>th</sup> August, 2013.**

**Last date for Registration: 5<sup>th</sup> August, 2013.**

**The selected candidates will be informed by e-mail by: 8<sup>th</sup> August, 2013.**

**PATRON**

**Prof. Rambabu Kodali  
Director, NIT Jamshedpur**

**HEAD OF THE DEPARTMENT  
Dr. S. Jha**

**RESOURCE PERSONS**

Lectures will be delivered by the faculty members of NIT, Jamshedpur and Eminent speakers from IIT's and other NIT's.

**ADDRESS FOR CORRESPONDANCE:**

**Dr. H. S. Prasad**  
(Coordinator, STTP on NMASE – 2013)  
Department of Mathematics,  
National Institute of Technology,  
Jamshedpur – 831014 (Jharkhand), India

Mobile : 9470320842, 8651273422  
Fax : 0657-2373246  
E-mail : [hspritjsr@yahoo.co.in](mailto:hspritjsr@yahoo.co.in)

Institute Website: [www.nitjsr.ac.in](http://www.nitjsr.ac.in)

**ABOUT THE DEPARTMENT**

The Department of Mathematics is one the reputed departments, which functions with 'excellence' as its motto. Started in the year 1960, along with the other engineering and science departments, it has steadily grown as a dynamic center for academic and research activities. In addition to the regular mathematics courses for B.Tech(Hons), M.Tech and MCA programmes, the department offers Ph.D. program in various specializations.

**WHO CAN ATTEND**

The program is open for the Faculty members of Science and Engineering streams, Research Scholars, Final year students of Master Programmes and the persons work in Industry / R&D Organizations. Participants are invited to register by sending the duly filled registration forms enclosed herewith. Forms can be downloaded from our institute website ([www.nitjsr.ac.in](http://www.nitjsr.ac.in)).

**REGISTRATION FEE**

**Participant from Industry/R&D organizations: Rs.4000/- (per head).**

**Faculty members of Science and Engineering streams: 2500/-(per head).**

**Research Scholars and Final year students of Master Programmes: Rs.1500/- (per head).**

The registration fee should be submitted along with the filled registration form through Bank Draft drawn in favor of “NMASE - 2013” payable at SBI, RIT Jamshedpur Branch (Code: 1882). Please write your name on the back of the DD.

**ACCOMMODATION**

The registered outstation participants will be provided twin-shared accommodation in the institute campus. **No TA/DA will be paid for attending the STTP.** Lunch, Dinner and Breakfast will be provided to the external participants. The number of participants aimed for the program is limited to 40 (External participants:20 +Internal participants:20). Therefore, the registration is based on the first come first serve basis.