



# DEPARTMENT OF MATHEMATICS NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA



अनुसंधान नेशनल रिसर्च फाउंडेशन  
Anusandhan National Research Foundation

Sponsored Five-Day Workshop  
on

## RECENT ADVANCES IN SCIENTIFIC COMPUTING (RASC) - 2025 (26<sup>th</sup> to 30<sup>th</sup> May, 2025)

### OVERVIEW OF THE WORKSHOP

Scientific computing has become an essential tool for solving complex mathematical problems arising in various fields, including engineering, physics, biology, and finance. With recent advancements in numerical analysis, high-performance computing, and data-driven modelling, the role of mathematical techniques in computational sciences has expanded significantly. This five-day workshop on "Recent Advances in Scientific Computing" aims to bring together researchers, academicians, and students to explore cutting-edge developments in numerical methods, computational algorithms, and their realworld applications.

The Department of Mathematics was established in 1963. It has grown from just four faculty members to fourteen at present. Many of the faculty members are actively contributing to research in areas such as Fluid Mechanics, Numerical Analysis, Fractional Differential Equations, Computational Fluid Dynamics, Quantum Algebra, and Special Functions. The department offers an undergraduate programme (B.Tech.) in Mathematics and Computing, and a postgraduate programme (M.Sc.) in Mathematics. It also provides research opportunities through a doctoral (Ph.D.) programme. The department is equipped with a full-fledged computational laboratory to meet the academic and research needs of M.Sc. and B.Tech. students, research scholars, and faculty members.

### ABOUT THE DEPARTMENT

Chief Patron  
Prof. B.V. Ramana Reddy  
Director  
NIT Kurukshetra

Patron  
Prof. A.S.V. Ravi Kanth  
HoD, Department of Mathematics  
NIT Kurukshetra

Conveners  
Dr. Raghvendra Pratap Singh  
Dr. Madduri Mani Harshita  
NIT Kurukshetra

### TOPICS IN THE WORKSHOP

- Numerical Analysis and Approximation Methods
- Singularly Perturbed Problems and Differential Equations
- High-Performance Computing and Parallel Algorithms
- Computational Fluid Dynamics and Engineering Applications
- Financial Mathematics and Computing
- Neural Networks and Machine Learning
- Finite difference and finite element methods

### TENTATIVE LIST OF RESOURCE PERSONS

Lectures will be delivered by faculty from IITs, NITs, and other centrally funded institutes/universities.

- Prof. S. Natesan, Department of Mathematics, IIT Guwahati
- Prof. Manoranjan Mishra, Department of Mathematics, IIT Ropar
- Prof. Subrahmanya Sastry Challa, Department of Mathematics and Department of Artificial Intelligence, IIT Hyderabad
- Prof. K. Sreenadh, Department of Mathematics, IIT Delhi

### HOW TO APPLY

Generate the payment slip (to be attached with the registration form) by following these steps:

1. Visit SBI Collect → **Select Educational Institutions**
2. Choose State: **Haryana** → Search for **DIRECTOR NIT KURUKSHETRA**
3. Select Payment Category: **RASC2025**
4. Fill in the required details, complete the payment, and save the payment slip as **.pdf or .jpeg**
5. Fill out the registration form at:

<https://forms.gle/e7LzWKafhuzKtfhS6>



### REGISTRATION FEES

- **Faculty (Science & Engineering):** ₹2360 (₹2000 + 18% GST)
- **Research Scholars / Final-year Master's Students:** ₹1180 (₹1000 + 18% GST)
- **Industry / R&D Professionals:** ₹4720 (₹4000 + 18% GST)
- **Fee Includes:** Registration kit, working lunch, and tea/snacks for all 5 days of the workshop.
- **Accommodation:** May be provided on a paid basis inside the campus, subject to availability.

**Last Date of Registration: May 22, 2025**

**Notification about selection: May 23, 2025**

**Confirmation from Participants: May 24, 2025**

