



About NIT Durgapur

National Institute of Technology Durgapur (formerly Regional Engineering College, Durgapur) was established in 1960 under an Act of the Parliament of India. In 2003, the institution was granted Deemed University status with the approval of the University Grants Commission / All India Council for Technical Education; it was renamed the National Institute of Technology Durgapur and started granting degrees under its name. It became a fully-funded institution administered by an autonomous Board of Governors under the Ministry of Human Resource Development, Government of India.



SERB Sponsored Workshop

on

Differential Equations: Fundamentals to Applications (DEFA-2023)

11 -15 December, 2023

Organized by the Department of Mathematics, NIT Durgapur

Resource Persons

Dr. S. Gowrisankar, Department of Mathematics, NIT Patna
Dr. Sanjib K. Pal, Department of Mathematics, Jadavpur University
Dr. Simanta De, Department of Mathematics, University of Gour Banga
Dr. Partha P. Gopmandal, Department of Mathematics, NIT Durgapur
Dr. Pinaki Pal, Department of Mathematics, NIT Durgapur

Who Can Participate

Faculties from College/ University/ Institute; Limited number of Post Doctoral Fellows, Research Scholars, UG/PG students.

Important Informations

Last date for registration: 7th December, 2023

Announcement of selected applicants: 8th December, 2023

Date of workshop: 11th -15th December, 2023

Registration fee: NIL

Link for Registration:

https://docs.google.com/forms/d/e/1FAIpQLSf51e1rNHDx0q8iCdp1nZsJiELux7TU1GIEvoYxMuOpNz6oQ/viewform?usp=pp_url

The registered participants will be provided working lunch during the workshop. The accommodation needs to be arranged by the participants.

Patron

Professor Arvind Choubey
Director
NIT Durgapur

Convener

Dr. Pinaki Pal
Associate Professor
NIT Durgapur

Coordinator

Dr. Partha P. Gopmandal
Assistant Professor
NIT Durgapur

Contact Details and Address

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About the Workshop

The objective of the workshop is to provide introductory ideas about different mathematical techniques used to solve a wide range of initial and boundary value problems appearing in several physical and technological systems. The workshop is sponsored by the **Science and Engineering Research Board (SERB)**, Dept. of Science and Technology, Govt. of India, under the **Scientific Social Responsibility (SSR)** head of the project no. **CRG/2021/002484**.

Topics to be covered

- ✓ **Fundamentals of differential equations**
- ✓ **Some analytical methods and their limitations**
- ✓ **Numerical methods: Finite difference, Finite volume, Finite element and Spectral.**
- ✓ **Implementation of the numerical techniques using computer programming and softwares.**
- ✓ **Applications in different research problems: Convective Instabilities, Heat equation, Patterns, Chaos, Reaction–Diffusion problems, Microfluidic modelling, Electrokinetic transport phenomena, etc.**

**Maximum number
of Participants: 40**