

## Online Workshop on

### APPLICATIONS OF ALGEBRA IN SCIENCE AND ENGINEERING (AASE-2020)

[October 12–16, 2020]



*Organized by:*

*Department of Mathematics  
National Institute of Technology  
Jamshedpur, Jharkhand*



**Objective:** To provide an online platform to UG, PG, Ph.D. students and faculty members to learn and discuss various applications of algebra and linear algebra in different fields of science and engineering by eminent experts.

#### Topics:

- Applications of linear algebra in engineering, life sciences, optimization and computer science
- Applications of algebra in cryptography and coding theory
- Modulo operation for secure communication
- Applications of group of elliptic curves in cryptography
- Applications of Rees and Cluster algebra, graded rings
- Weyl algebra and Lie algebra in partial differential equations, singular value decomposition
- Applications of matrix theory in control systems
- Linear algebra and matrices in differential-algebraic equations

**Registration Fee:** Free for all participants

#### Organizing Committee

Patron	Prof. Karunesh Kumar Shukla Director, NIT Jamshedpur, India
Chairperson	Dr. Sunil Kumar, HOD Mathematics, NIT Jamshedpur, India
Convener	Dr. Ratnesh Kumar Mishra, Department of Mathematics, NIT Jamshedpur, India
Coordinator	Dr. Mahendra Kumar Gupta, Department of Mathematics, NIT Jamshedpur, India

#### Advisory Committee

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Prof. Shiv Datt Kumar	MNNIT Allahabad, Prayagraj (UP), India
Dr. Nutan Kumar Tomar	IIT Patna, India
Prof. Raja Sridharan,	School of Mathematics, TIFR Mumbai, India
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Prof. T. Mandal	Dean (S&W) NIT Jamshedpur, India
Prof. Amresh Kumar	Dean (AA) NIT Jamshedpur, India
Prof. P. Chand	Dean (F&W) NIT Jamshedpur, India

#### Departmental Organizing Committee

Dr. T. Mandal	Professor
Dr. Ramayan Singh	Associate Professor
Dr. Sripati Jha	Associate Professor
Dr. Raj Nandkeolyar	Assistant Professor
Dr. Hari Shankar Prasad	Assistant Professor
Dr. Snehasis Kundu	Assistant Professor
Dr. Sourav Das	Assistant Professor
Dr. Rajat Tripathi	Assistant Professor
Dr. Sumit Kumar Debnath	Assistant Professor

## Technical Program Committee Members

Dr. Pratibha Tyagi	Assistant Professor, Department of Mathematics, Doon Business School, Dehradun, Uttarakhand
Ms. Amarjit Kaur	Senior Assistant Professor, Department of Management, Ideal Institute of Management and Technology, GGSIP University, New Delhi
Mr. Ravi Ranjan	Technical Assistant, Director Secretariat, NIT Jamshedpur, India
Mr. Vineet Kumar	Research Scholar, NIT Jamshedpur, India
Mr. Ajay Kumar	Research Scholar, NIT Jamshedpur, India
Mr. Abhinav Kumar	Research Scholar, NIT Jamshedpur, India
Mr. Anish Kumar	Research Scholar, NIT Jamshedpur, India
Ms. Meenakshi	Research Scholar, NIT Jamshedpur, India
Ms. Abha	Research Scholar, NIT Jamshedpur, India

## About the Institute

The National Institute of Technology Jamshedpur (NIT Jamshedpur), is an Institute of National Importance located at Jamshedpur, Jharkhand, India. Established as a Regional Institute of Technology in 1960, it was upgraded to National Institute of Technology (NIT) on 27 December 2002 with the status of Deemed University. It is one of the 31 NITs in India, and as such is directly under the control of the Ministry of Human Resource Development (MHRD). It is the third in the chain of eight NITs established as a part of the Second Five Year Plan (1956–61) by the Government of India. The Institute has twelve departments including engineering, science and humanities.

The institute offers a 4-year Bachelor of Technology degree in the various streams. The institute also offers Master and Ph.D. degrees in various streams. The institute is bound to the quest for academic excellence and good governance, growth of institute, admired and respected institute for students, employees and industry, innovative leader.

## About Department of Mathematics

Department of Mathematics was established since the inception of National Institute of Technology as Regional Institute of Technology, Jamshedpur in 1960. The Department provides an outstanding research environment complemented by excellent teaching for its students to flourish in different areas of academics and industry as well. Department offers M.Sc. in Mathematics and PhD for highly motivated students looking to pursue an academic or industrial career in Mathematics.

## Invited Speakers (Tentative)

**Dr. Shiv Datt Kumar** Professor, Department of Mathematics, MNNIT Allahabad, India

**Dr. Ashish Srivastava** Professor, Department of Mathematics & Statistics, St Louis University USA

**Dr. Vinay Kumar** Professor and Ex. Scientist E & Technical Director, National Informatics Centre, Govt. of India, Delhi, India

**Dr. Nutan Kumar Tomar** Associate Professor, Department of Mathematics, IIT Patna, Bihar

**Dr. Sahadeo Padhye** Associate Professor, Department of Mathematics, MNNIT, Allahabad, India

**Dr. Rajeev Anand Sahu**, Department of Mathematics, University of Luxembourg

**Dr. Vikas Kumar** Department of ELEC, Vrije University, Brussels, Belgium

**Dr. Lazaros Moysis** Department of Physics, Aristotle University of Thessaloniki, Greece

**Dr. Jyoti Singh** Assistant Professor Department of Mathematics, VNIT Nagpur, India

**Dr. Priti Singh** Assistant Professor, Department of Mathematics, Patna Science College, Patna University, Bihar

**Dr. Sonika Singh** Assistant Professor, Department of Mathematics, CMP Degree College, Allahabad

**Dr. Sumit Kumar Upadhyaya** Assistant Professor, Department of Mathematics, IIIT Allahabad

**Dr. Pratibha Tyagi** Assistant Professor, Doon Business School, Dehradun, Uttarakhand

**Mr. Rajkumar** Head, Department of Mathematics, Govt P.G. College Jhunjhunu, Rajasthan

## Link for registration

<https://rb.gy/agf0to>

## Contact us:

### Convener:

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## Website:

<http://www.nitjsr.ac.in/academics/departments/maths/>