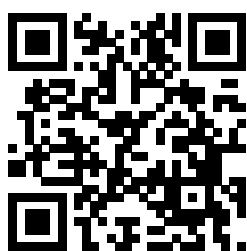


## Registration

Please register for this workshop by scanning the QR code or by clicking this link: <https://forms.gle/Wef8fZ3bgxpGP19X8>

Up to 75 participants will be invited to participate in the workshop.



## About the Workshop

Data mathematics plays a critical role in many areas of modern science, engineering, and technology, such as data science, machine learning, computer vision, signal processing, and bioinformatics. It provides a powerful set of tools for analyzing and making sense of large and complex datasets and is essential for many applications in modern science, engineering, and technology.

This event focuses on exploring the intersection of mathematical and computational techniques for analyzing and solving problems in various fields such as physics, engineering, biology, economics, and social sciences. This event provides a forum for researchers and practitioners to share their knowledge, exchange ideas, and collaborate on solving challenging problems in various domains.

**Data is the raw material, and mathematics is the alchemy that transforms it into valuable insights**

## Important Dates

Last Date for Abstract Submission	8 August 2023
Abstract Acceptance Notification	10 August 2023
Regular Registration	12 August 2023
Selected Participants List	15 August 2023
Confirmation from Participants	17 August 2023
Last Date to Pay Registration Fee	19 August 2023
Late Registration	30 August 2023



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



Indo-German Workshop  
on

# Data Mathematics and Scientific Computing

**SEPTEMBER 8, 2023**

## About DAAD



DAAD, the German Academic Exchange Service, is a publicly funded organization that promotes international academic cooperation. It offers scholarships, grants, and funding opportunities for students, researchers, and faculty members worldwide to study, research, and gain practical experience in Germany. DAAD also provides support services and resources to assist international students and researchers during their stay. Overall, DAAD plays a vital role in fostering global academic exchange and collaboration.



## About Flax & Teal

Flax & Teal is a UK-headquartered tech firm that builds products for data science, geospatial and scientific computing services using the latest technologies such as Kubernetes, IoT and VR. The company was a 2020 Hong Kong Global Accelerator Academy graduate, has won R&D projects from Google DNI and the Open Data Institute, and serves key players in German industry and UK public sector.



## About IIT Tirupati

Indian Institute of Technology Tirupati (IIT Tirupati) is incorporated under the Institutes of Technology Act, 1961 and has its campus at Yerpedu-Venkatagiri Road, Yerpedu Post, Tirupati District, Andhra Pradesh-517619. It is the first among the 3rd phase of the Indian Institutes of Technology, announced in 2014, to have its foundation stone laid in March 2015. IIT Tirupati is currently offering the programmes – B.Tech, M.Tech, M.Sc, MPP, M.S(Research) and Ph.D. IIT Tirupati has nine departments – Civil & Environmental Engineering, Computer Science & Engineering, Electrical Engineering, Mechanical Engineering, Chemical Engineering, Mathematics & Statistics, Physics, Chemistry and Humanities & Social Sciences. The pedagogy is aimed at nurturing innovation, creativity, quality, teamwork, communication skills, ethics, and societal interaction.

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Scientific computing is the catalyst that ignites the fusion of data, algorithms, and computation, unlocking the potential for groundbreaking discoveries and advancements in the realm of science and technology

## Target Audience

- Research Scholars
- Master Students
- Faculty Members
- Professionals from Industry

## Registration Fee

The registration fee covers the accommodation and food charges at IIT Tirupati.

### With Oral Presentation

- Rs. 2000 for Master Students
- Rs. 4000 for Research Scholars
- Rs. 6000 for Faculty Members
- Rs. 8000 for Industry Professionals

### With Poster Presentation

- Rs. 1500 for Master Students
- Rs. 2500 for Research Scholars
- Rs. 5000 for Faculty Members
- Rs. 7000 for Industry Professionals

### Without Poster/Oral Presentation

- Rs. 750 for Master Students
- Rs. 1500 for Research Scholars
- Rs. 3000 for Faculty Members
- Rs. 5000 for Industry Professionals
- Late Registration Charges Rs. 500 Extra

## How To Pay?

Selected participants will receive an email and payment procedures from the organizer on 15 August 2023.

## Objectives

- ✓ Provide a platform for researchers, practitioners, and students to share their knowledge in this field.
- ✓ To share experts' experience of how to use mathematical and computational tools for data analysis and scientific computing.
- ✓ Foster collaboration among participants from different fields and backgrounds to address interdisciplinary research problems.
- ✓ Introduce participants to the latest research findings, techniques, and tools in the field of data mathematics and scientific computing.
- ✓ Encourage the use of data-driven approaches to address real-world problems in various fields.
- ✓ Provide opportunities for participants to network and establish collaborations with other researchers and practitioners in the field.

## Any Questions?

- 📞 +91-877-250-3358
- 📍 IIT Tirupati, Yerpedu Post, Tirupati
- ✉ mathworkshop@iittp.ac.in
- 🌐 <https://mast.iittp.ac.in>

## Organizer

Dr. Panchatcharam Mariappan  
Assistant Professor and Head  
Department of Mathematics and Statistics  
Indian Institute of Technology Tirupati  
Tirupati, Andhra Pradesh - 517619



## Presentation Topics

- Data Science
- Scientific Computing
- Mathematics of Machine Learning
- Big Data
- Data Visualization Tools
- High-Performance Computing of Big Data

- Data Science in Finance, Medicine, etc
- Scientific Computing in Medicine, Finance
- Geospatial Data Science
- Mathematics of Data Science
- Statistical Tools of Data Science
- Data Mathematics in Industry



## Oral Presentation

Participants can prepare oral presentations that summarize their research findings or work related to the themes of the workshop. There will be 5 parallel sessions with a maximum of 5 presentations in each session. Each session will be monitored by experts.

- Submit Abstract
- Selection based on Abstract
- Maximum: 25 Presentations
- 5 Parallel Sessions
- Duration: 12 + 3 Minutes



## Poster Presentation

Participants can prepare poster presentations that summarize their research findings or work related to the themes of the workshop. Posters will be displayed at a designated area and participants can discuss their work with experts.

- Submit Abstract
- Selection based on Abstract
- Maximum: 20 Posters
- A3 Portrait Mode
- Duration: 1 Hour



## Program Schedule

09:00	Welcome Address and Inaugural Address
09:15	Data Mathematics: What? Why? How? - Dr. Panchatcharam M, IIT Tirupati
09:45	Opportunities for Data Mathematicians - Dr. Ratikanta Behera, IISC Bangalore
10:30	Tea Break
10:45	Glimpse of Scientific Computing - Prof. S. Sundar, IIT Madras, Director, NIT Mizoram
11:30	Industrial Lecture - Flax & Teal
12:15	Big Data in Medicine - Dr. Nagarajan Ganapathy, IIT Hyderabad
13:00	Lunch Break
14:00	Oral Presentation by Participants (5 Parallel Sessions)
15:15	Poster Presentation and Tea Break
16:15	Industrial Mathematics and Opportunities in Germany - Dr. Joerg Kuhnert, Fraunhofer ITWM, Germany
17:15	Research Opportunities in Germany - Dr. Vasudarani Devanathan, IISER Tirupati
17:45	Concluding Remarks and Valedictory Address