



National Conference on Theoretical and Numerical Approaches in Water Wave Mechanics

December 16 and 17, 2024

Jointly organized
by

Centre for Clean Environment,
and Department of Mathematics,
School of Advanced Sciences,
Vellore Institute of Technology, Vellore



VIT

Vellore Institute of Technology (VIT) was founded with the intention of offering superior higher education on par with global norms. It consistently looks for and employs novel approaches to raise the standard of higher education. It was formed in 1984 as a self-supporting institution called the Vellore Engineering College and was done so in accordance with Section 3 of the University Grants Commission (UGC) Act, 1956. Vellore Engineering College received university status from the Union Ministry of Human Resources Development in 2001. Dr. G. Viswanathan, the University's Founder and Chancellor, previously served as a member of parliament and a minister in the Tamil Nadu government. Four branch campuses of the Vellore Institute of Technology are located in Vellore, Chennai, Andhra Pradesh, and Bhopal. For more detail visit <https://vit.ac.in/>

CCE

Centre for Clean Environment (CCE) at VIT was established and formally inaugurated on 30th April 2024 with the intention to associate with Global Sustainable Development Goals adopted by the United Nations. CCE focuses on finding innovative technologies and sustainable solutions for the environmental issues from local to global scale. The centre address environmental concerns by collaborating with government, industry, non-government organizations and leading academic partners through national and international research networks. The centre has several ongoing consultancy and research projects both at regional, national, and international level. The centre targets to use transdisciplinary approach in solving the environmental issues.

SAS

School of advanced sciences (SAS), a platform for intellectuals in VIT, is pledged to internationally acclaimed research and inventive instruction with a priority on disciplinary rigor and establishing academic achievement. SAS comprises three academic departments spanning Mathematics, Physics, and Chemistry. The school offers Ph.D. research programs in all these disciplines and Master's Programmes in Mathematics, Physics, and Chemistry

Department of Mathematics:

The subject of Mathematics in VIT is ranked 8th in India and top 201-250 in the world as per QS World University Rankings by Subject 2023. It has 134 faculty members who support the other engineering departments through teaching and are actively involved in mathematical and interdisciplinary research. Currently, the department is offering Masters Programs in Data Science, Business Statistics, Integrated M. Sc. Computational Statistics and Data Analytics, Integrated M.Sc. Mathematics and Ph.D. with a plethora of field expertise. Several departmental research projects are financially supported by the leading funding agencies.

Organizing Committee

Honorable Patron

Dr. G. Viswanathan,
Founder & Chancellor, Vellore Institute of Technology

Chief Patrons

Shri Sankar Viswanathan, Vice President, VIT Vellore
Dr. Sekar Viswanathan, Vice President, VIT Vellore
Dr. G.V. Selvam, Vice President, VIT Vellore
Dr. Sandhya Pentareddy, Executive Director, VIT Vellore
Ms. Kadhambari S. Viswanathan, Assistant Vice-President, VIT Vellore

Patrons

Dr. V.S. Kanchana Bhaaskaran, Vice Chancellor, VIT Vellore
Dr. Partha Sharathi Mallick, Pro-Vice Chancellor, VIT Vellore
Dr. T. Jayabharathi, Registrar, VIT Vellore

Convener

Dr. S. Shantha Kumar, Director, CCE, VIT Vellore
Dr. K. Karthikeyan, Dean, SAS, VIT Vellore

Co-Convener

Dr. M.S. Jagadeesh Kumar, HOD, Mathematics, SAS, VIT Vellore
Dr. B. Srimuruganandam, Professor, CCE, VIT Vellore

Organizing Secretaries

Dr. Sunanda Saha, CCE, VIT Vellore
Dr. Sanjay Kumar Mohanty, SAS, VIT Vellore

Advisory Committee

Dr. Swaroop Nandan Bora, IIT Guwahati
Dr. Trilochan Sahoo, IIT Kharagpur
Dr. S. C. Martha, IIT Ropar
Dr. Ramanababu Kaligatla, IIT (ISM) Dhanbad
Dr. Soumen De, Calcutta University
Dr. K. G. Vijay, IIT Madras

About the Conference

Unlike conventional conferences, the National Conference on Water Wave Mechanics is an annual gathering that brings together researchers and academicians from various parts of India, all of whom share a deep interest in water waves and their impact on floating and submerged marine structures. This conference serves as a platform for fostering collaboration among young researchers and academics from prestigious institutions such as IITs, NITs, Central Universities, and globally ranked State and Private Universities.

The primary aim of this national meet is to establish fruitful connections among participants, encouraging the exchange of ideas and expertise across different domains of Water Wave Mechanics. The conference offers a unique opportunity for attendees to engage in in-depth discussions about each other's research, learn about the latest advancements in the field, and explore potential collaborations with peers from across the country.

To accommodate the busy schedules of academic professionals and to provide a conducive environment for focused interaction, this conference is scheduled during the winter vacation. Hosted at VIT Vellore, the event not only promises academic enrichment but also provides a break from the routine academic responsibilities and teaching commitments, allowing participants to fully immerse themselves in the intellectual exchange and networking opportunities.


Who can Attend?

- Faculty / Researchers / Scientists from academic institutions / industries and R&D Centers.
- PDF/Ph.D./M.Tech students from various institutes, universities, colleges and research organizations.

Please visit the following link for the registration:

<https://forms.gle/qkFPDhnrUR9qbkD8>

Contact

 **Dr. Sunanda Saha (8971939565)**
Dr. Sanjay Kumar Mohanty (99389 42839)

 **sunanda.saha@vit.ac.in**
sanjaykumar.mohanty@vit.ac.in

Topics

- Wave and Tidal Energy
- Ocean Thermal Energy
- Offshore Wind Energy
- Modeling Waves, Currents, Ice and Their Interactions in Coastal and Shelf Seas
- Circulation and Dynamics Modeling
- Data Assimilation and Ocean Forecast Systems
- Multi-Scale Ocean and Atmospheric Processes
- Modeling and Prediction of Extreme Marine Events
- Numerical Techniques and Approaches in Ocean Modeling
- Artificial Intelligence approaches applied to Ocean Data Analysis and Modelling

Call for Papers & Publications

Participants intending to present a paper at the Conference should upload a one-page abstract, which must include the research aim, problem formulation, and solution methodology. To ensure proper reproduction in the Proceedings, all content, including text, figures, tables, etc., must be formatted on A4-size paper (8.27 in. by 11.69 in. or 210 mm by 297 mm) with margins set to 0.875 in. on the left and right and 1.125 in. on the top and bottom. The font used throughout the document should be Times New Roman.

The document should use single line spacing (approximately 4.2 mm). The font size for normal text is 10 points. The article title should be 16 pt., bold, and centered, with author names in 12 pt., normal, and centered. Affiliations and addresses should be in 10 pt., normal, and centered. Section headings should be 12 pt., bold, centered, and in all caps, while captions should be in 10 pt., normal font.

Further information about the publication of presented papers in special issues of indexed journals will be provided later. An e-proceedings version of the conference, including the abstracts, will be made available to all participants.

Important Dates

Conference Dates: December 16 and 17, 2024
Abstract Submission Deadline: December 05, 2024
Abstract Acceptance: December 08, 2024
Registration Deadline: December 12, 2024

Accommodation

Student participants will be provided accommodation in nearby hotels. Accommodation for faculty members, industry personnel, and postdocs will be provided in VIT Guest House.

Registration Fee*

Faculty/Scientist from academic institutions with single occupancy	Rs. 9000
Faculty/Scientist/PDF from academic institutions with shared occupancy	Rs. 6000
Ph.D./ M.Tech students with shared occupancy	Rs. 3300

The registration fee includes the following:

- Accommodation for three nights (Check-in on 15-12-2024 afternoon and Check-out on 18-12-2024 before noon)
- Food (3 dinners, 2 lunches, 3 breakfasts, and evening snacks)
- Registration kit (tag, notepad, pen, folder, and certificate)

#####

Faculty/Scientist from academic institutions without accommodation	Rs. 1000
Ph.D./ M.Tech students without accommodation	Rs. 700

The registration fee includes the following:

- Food (2 lunches, and evening snacks)
- Registration kit (tag, notepad, pen, folder, and certificate)

***Excluding bank transaction charges. It does not include GST of 18% as per institute norms. It also does not include travel and local transport.**