

## Technical Tours

The guided tours will be arranged on 17<sup>th</sup> December 2022 which include the visits of important coastal protection sites, major ports, marsh land and desalination projects. More details of the Technical Tours will be provided in the website.

## Accommodation

Accommodation in guesthouses and hostels in and around IIT Madras will be arranged on the request of the delegates for which reservations must be through the Local Organizing Secretariat. The rates are tentative and should serve only as guideline.



Prof. S. A. Sannasiraj  
Organising Secretary  
Prof. B.S. Murty and Prof. R. Panneer Selvam  
Joint Organizing Secretary  
23rd IAHR-APD 2022  
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# 23<sup>rd</sup> Congress of the International Association for Hydro-Environmental Engineering and Research – Asia Pacific Division

14-17 December 2022

Indian Institute of Technology Madras, Chennai,  
Tamil Nadu, India



“Water – From Land to Sea – Conservation and Management ”

## IIT Madras Director's

### Welcome Message

The Indian Institute of Technology Madras (IIT Madras) which has hosted the 15<sup>th</sup> Congress of IAHR-APD in 2006 is pleased to host the 23<sup>rd</sup> Congress of IAHR-APD during 14-17 December 2022 on IIT campus, Chennai, India. The Congress has made a global impact in the fields of Coastal, Ocean and Port Engineering, Water resource management, Hydraulics and Climate change. India has been playing a leading role by addressing and contributing number of global challenges. The organizing committee takes pleasure in inviting Researchers to Chennai to participate in this conference and to enjoy the culture of India and the IIT Madras Campus which is an oasis within a bustling city.

### The Conference

The International Association for Hydro-Environmental Engineering and Research of Asian and Pacific division, IAHR-APD was founded in 1973.

The objective of the current IAHR APD congress series is to bring together scientists, engineers and researchers in the region to share their ideas and experiences in the area of hydraulic research including Maritime Hydraulics. The main theme of this congress is Water-From Land to Sea Conservation and Management. The Asia-Pacific regions have been experiencing floods as well as water problems forcing Researchers to work towards conservation, mitigation and also to cope up with the climate change effects on the water Resources and coastal stability. The 2015 flood in Chennai and the recent mammoth floods in China are examples. The sedimentation hampering smooth transport through navigable rivers, closure of river mouths, coastal erosion are problems that are perennial needing remedial measures. The climate change adds a new dimension to the aforementioned problems.

### Registration

Registration Fee (USD)	Normal	Early bird	On site
IAHR member fee	550	500	600
Non IAHR member fee	600	550	650
IAHR member developing country	450	400	500
Non IAHR member developing country	500	450	550
Student fee (Registered in tertiary insti)	300	300	350

### Fellowships

To meet the main objective of the congress, limited scholarships are being planned to be made available by the sponsors. The fellowship will be provided by Ships Offshore Coastal and Environmental Research Society (SOCER) to individuals on application, but not to institutions. Fellowship application forms may be downloaded from the conference website. The applicants are advised that only a part funding will be given, based on their preferences and by the Fellowship Awards Committee. Funding is restricted to international air transport, and/or conference registration fee and accommodation. Funding will be provided primarily for authors and emphasis will be on young active professionals.

Applicants will be informed whether their applications are successful by 31 July 2022.

The last date of submitting the application is the same as the final date of full paper submission. The acceptance of the scholarship will be announced at the time of full paper acceptance.

### Venue

The Conference will be held in Chennai, India at the IC & SR building in the wooded IIT campus, providing an ideal environment for stimulating technical deliberations. The IIT-M campus is self-contained with all the basic facilities.



### Objectives

To

1. provide an international platform for exchanging scientific knowledge and experience from scientists, academicians, engineers, researchers, industrialist and entrepreneurs.
2. enable the developing countries to have a sustainable human resource pool of coastal and port development professionals.

Papers will focus on practical applications, planning, management and environmental aspects of coastal and port engineering in developing and industrialized countries, including documentation of case studies.

## Advisory committee

Prof. V. Kamakoti, Director, IIT Madras  
Prof. V. Sundar, Former Chairman, IAHR-APD  
Mr. Udhayan, A., I.F.S., Pollution Control Board, TN  
Dr. Gupta R.K., CWC  
Mr. Dhiman, S.C., CGWB  
Dr Akhilesh Gupta, DST  
Mr. Sunil Paliwal, I.A.S., Chennai Port Trust

## International organizing committee (IOC):

Abbas, K., Kyoto Univ., Japan	Mudgal, B.V., CWR, AU, India
Adrian, W.-K. Law., NTU, Singapore	Mujumdar, P. P., IISc, India
Babel, M. S., AIT, Thailand	Mukherjee, S., IIT Bombay, India
Balachandar, R., Univ. of Windsor, Canada	Nagesh Kumar, D., IISc, India
Deo, M. C., IIT Bombay, India	Neelamani, S., KISR, Kuwait
Dey, S., IIT Kgp, India	Nistor, I., Univ. of Ottawa, Canada
Didenkulova, I., Univ. of Oslo, Norway	Ojha, C.S.P., IIT Roorkee, India
Efim, P., Nizhny Novgorod St. Tech. Univ., Russia	Prasad, K. B., IIT Kgp, India
Ferrant, P., École Centrale de Nantes., France	Ramachandran, R., NCSCM, India
Ghosh, S., IIT Bombay, India	Ramadas., NIOT, India
Hans, B., NTNU, Norway	Rao, A.D., IIT Delhi, India
Hiraishi, T., Kyoto Univ., Japan	Schüttrumpf, H., RWTH Univ., Germany
Jain, S. K., IIT Roorkee, India	Stamm, J., TU Dresden, Germany
James, E. J., KITS, India	Tare, V., IIT Kanpur, India
Kankara, R.S., CWPRS, India	Thirumalaivasan, D., IRS, AU, India
Manasseh, R., SUT, Australia	

## Keynote speakers

**Dr. Adrian Wing-Keung Law, NTU, Singapore**  
UAV-based Remote Sensing of Water Quality in Coastal Environment for Engineering Applications

**Prof. Alexander Babanin, Univ. of Melbourne, Australia.**  
Ocean Waves as a Link Between Metocean Time Scales: Turbulence, Waves, Weather, Climate; and Between Environments: Deep Water, Coasts, Marginal Ice Zone

**Dr.-Ing. Holger Schüttrumpf, RWTH Aachen Univ., Germany**  
Experiences and observations from the Flood Disaster 2021 in Germany

**Prof. Jain S.K., IIT Roorkee, India**  
Applications of Systems Analysis Techniques to Resolve Inter-State Water Sharing Disputes

**Prof. Mujumdar P. P., IISc Bangalore, India**  
Urban Floods in India : An Emerging Hydrologic Challenge

**Dr. Norio Tanaka, Saitama Univ., Japan**  
Hybrid defense system for inundating tsunami current or overbank flow from a river

**Prof. Pengzhi P. Z. Lin - IAHR, Sichuan Univ., China**  
Wave transformation inside vegetation domain under current effect

**Prof. Ram Balachandar, Univ. of Windsor, Canada**  
The need for and characterization of fully developed flow in open channels

## Call for Papers: Papers will be presented in the following themes.

### Theme I: Surface and Ground Water Resources

Assessment and development  
Remote sensing and GIS applications  
Watershed development and conservation  
Inter-basin transfer  
Surface and sub-surface flow interaction  
Integrated water resources management  
Hydro informatics  
River hydraulics  
Flood modelling  
Ground water management

### Theme II: Conveyance and distribution systems

Pipe hydraulics and network analysis  
Water quality modelling  
Leak detection  
**Theme III: Environment Management**

### Water quality and health

Contaminant transport modelling  
River and ground water pollution  
Environmental impact assessment  
Recycling and reuse  
Desalination

Micro pollutants  
Oil spill

### Theme IV: Maritime Hydraulics

Coastal erosion and protection  
Sediment transport and dredging  
Integrated coastal zone management  
Inland waterways and navigation  
Port, Harbour and Coastal structures  
Coastal Hazards and Mitigation  
Smart coastal cities  
Machine learning and artificial intelligence  
Computational hydrodynamics  
**Theme V: Socio-economic and institutional aspects**

### People participation

Gender issues  
Conflict resolution  
Water regulations and Law  
Society, Technology and Values

### Impacts of large waterfront infrastructure

Blue economy  
Risk assessment

### Theme VI: Climate change

Climate modelling  
Impacts on coastal infrastructure and adaptation  
Water resources and waste management  
Eco-system bases design

## Local Organising Committee (LOC)

Nallayarasu, S., Chairman	Sriram V.
Sannasiraj S.A., Organizing Secretary	Sundar V.
Murty B.S., Joint organizing secretary	Sundaravadivelu R.
Panneerselvam R., Joint Organizing Secretary	Suresh Kumar G.
Abhilash Somayajula	Vagesh D. N.
Arjun Jagannathan	Vengadesan S.
Arul Prakash K.	Venu Chandra
Chandan Sarangi	Vijay K.G.
Deepak Kumar	Vijayakumar R.
Indumathy Nambi	Vinu R.
Ligy Philip	D. Diwakar, IHH Poondi
Murali K.	Krishnaveni M., IOM, AU
Narendran K.	Nandakumaran, CGWB
Nilanjan Saha	Saravanan R., CWR
Prasad Patnaik B.S.V	Tune Usha, NCCR
Soumendra Kuiry	Vijaya Ravichandaran, NIOT

Papers need not be limited to the above themes and topics pertaining to allied areas will be accommodated. Selection of papers for presentation will be based on a one or two page abstract, provided as a digital copy (email document) which shall be either submitted through our web portal or forwarded to the paper selection Secretary by email to: [iahrpd2022@doe.iitm.ac.in](mailto:iahrpd2022@doe.iitm.ac.in) before 31 May 2022. For any clarifications, the delegates can contact the IAHR APD 2022 secretariat.

## Special Sessions

Sustainable Urban Drainage System  
 Water Security and Climate Adaptation  
 Geosynthetics in Hydraulic and Coastal Engineering  
 In honour of Professor Vallam Sundar

## Pre- and Post- Conference Tours

The LOC will make necessary arrangement with an authorized travel agent and the tour packages will be displayed on the website. Similarly, for accompanying persons, tour packages to places of interest will be arranged with the same travel agent. Please visit the website for detailed tours.

Places of visit	Days
Mahaballipuram <a href="http://tamilnadutourism.org/places/CitiesTowns/Mamallapuram.aspx">http://tamilnadutourism.org/places/CitiesTowns/Mamallapuram.aspx</a>	1
Pichavaram <a href="https://cuddalore.nic.in/tourist-place/pichavaram/">https://cuddalore.nic.in/tourist-place/pichavaram/</a>	1
Kerela backwaters <a href="http://www.alleppeybackwatertour.com/">http://www.alleppeybackwatertour.com/</a>	2
Kanyakumari <a href="https://kanniyakumari.nic.in/tourist-places/">https://kanniyakumari.nic.in/tourist-places/</a>	2
Mysore <a href="https://mysore.nic.in/en/tourist-places/">https://mysore.nic.in/en/tourist-places/</a>	3

Mahaballipuram



Pichavaram forest



Kerela Backwaters



Kanyakumari

