



**International Conference on Ships and Offshore Structures  
ICSOS 2024**

8 – 12 September 2024, Chennai, India

**TECHNICAL PROGRAMME**

**IC&SR Building, IIT MADRAS**

**Day 0 - SUNDAY 8<sup>TH</sup> SEPTEMBER 2024**

14:00-17:00	REGISTRATION - IC&SR IITM
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**Day 1 - MONDAY 9<sup>TH</sup> SEPTEMBER 2024**

08:00-09:00		REGISTRATION - IC&SR IITM	
09:00-10:00		INAUGURATION - TTJ AUDITORIUM	
10.00 - 10:30		Tea Break	
TS01: SHIPS 01			
S. No.	Time	Paper ID	Paper Title
1	10:30	SOS01	Performance of high-speed planning hull with stern interceptor in calm water and head waves <i>Suneela Jangam</i>
KL	11:00	K1	<b>TTJ AUDITORIUM ONLINE</b> <b>Keynote Lecture 1 – Prof. DSc. (Tech.) Sören Ehlers</b>
	11:30	K2	<b>Keynote Lecture 2 - Prof. Dr. Jeom Kee Paik FREng</b>
TS01: SHIPS 01 (Contd..)			
2	12:00	SOS02	Study on the Effect of Hull Vane on the Resistance of Medium speed Surface Ship using CFD <i>Gopinath S, Vijayakumar R</i>
3	12:20	SOS03	Collision-Accidental Safety Design and Engineering of a 25,800 TEU Containership Powered by Small Modular Reactors <i>Hyeong Jin Kim, Dong Houi Seo, M.P. Mujeeb-Ahmed, Kunhou He, Yan Dong, Fang Wang, and Jeom Kee Paik</i>
4	12:40	SOS04	Validation of multi-phase flow simulation for the tip-leakage cavitation of a stationary hydrofoil <i>Kenshiro Takahashi</i>
13.00 - 14:00		Lunch Break	
TS02: OCEAN ENERGY 01			
5	14:00	SOS05	Power Performance and Structural Stability of Semisubmersible Integrated with PAWEC under Real Seas <i>Alok Kumar, Swarnadip Dey, Atul Krishna Banik</i>
6	14:20	SOS06	Power take-off mechanism to improve the efficiency of TSUSUCA DOLPHIN <i>Srinivasan Chandrasekaran, Basanagouda I Patil, Meher Prasad A</i>
7	14:40	SOS07	Design and Analysis of Spar for a Floating Wave Energy Converter <i>Prashant Kumar, Atul Kumar Pandey, Sailesh Kumar Swain, Sumedh Ravindra Kulkarni, Akshoy Ranjan Paul and Abdus Samad</i>
8	15:00	SOS08	Impact of Ocean Currents on the Power Absorption by a Hybrid Wave Energy Converter Device <i>Santanu Kumar Dash, Santanu Koley</i>
9	15:20	SOS09	Hydrodynamic Studies on Platform for High Capacity Offshore OTEC Plant <i>Ashwani Vishwanath, Ogbenna Favour, Pannerselvam R, Purnima Jalihal</i>
10	15:40	SOS10	Predicting Local Scour for Offshore Wind Turbine Monopile Foundations in Wave Current Environments <i>Raman Yadav, Manmathakrishnan Palraj, Rajamanickam Panneer Selvam</i>
16.00 - 16:30		Tea Break	
TS03: COASTAL STRUCTURES 01			



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11	16:30	SOS11	Diffraction of surface waves by a dock over a pair of shelves <i>Asha Maria Martina, A. Choudharya</i>
12	16:50	SOS12	Optimal allocation of multiple rigid bars to enhance Bragg reflection of surface gravity waves <i>Deepali Goyal, S. C. Martha</i>
13	17:10	SOS13	Hydroelastic analysis of wave scattering by multiple bottom-standing flexible permeable barriers in uniform finite depth <i>Koushik Nandi, Selina Hossain, Biman Sarkar, Soumen De</i>

**Day 2 - TUESDAY 10<sup>TH</sup> SEPTEMBER 2024**

**ICSR AUDITORIUM**

TS04: SHIPS 02			
S. No.	Time	Paper ID	Paper Title
1	08: 40	SOS14	Reinforcement Learning to Solve the Power-Spectrum Efficiency Trade-off Problem on LEO Satellites <i>Shuxian Du, Changyi Du</i>
2	09:00	SOS15	Numerical study on the hydrodynamic performance of a ducted propeller for the DARPA SUBOFF submarine <i>Kenshiro Takahashi</i>
3	09:20	SOS16	High-speed craft with double interceptor system in calm water: URANS Solution <i>Fatemeh Roshan, Abbas Dashtimanesh, Fabio De Luca, Simone Mancini</i>
4	09:40	SOS17	Numerical Analysis and Modification of Stern of a 1500 T Semi Displacement Vessel For Minimum Resistance <i>Rajan, R.Vijayakumar</i>
5	10.00	SOS18	Vibration attenuation of marine vehicles using SMA based auxetic lattices <i>Wagh., Vedant and Chatterjee., Punng</i>
6	10:20	SOS19	Investigation on digital twin technique of hull stress monitoring based on modal superposition method <i>Boxiang Jing, Yuchao Yuan, Li Guo, Wenyong Tang, Hongxiang Xue, Zhongdi Duan, Jun Liu</i>
10:40 -11:00		Tea Break	
KL	11:00	K3	Keynote Lecture 3 –Weicheng Cui ONLINE
	11:30	K4	Keynote Lecture 4 – Prof V Ananthasubramanian OffLine
	12 :00	IT01	Invited Lecture Dr Y V Sathish Kumar
TS05:NUMERICAL MODELLING 01			
7	12:30	SOS20	Investigating wave-beam interactions using SPH modelling: methodology and insights <i>Soroosh Afzali, Bruce W. Quinton, Mohammed F. Islam, Ayhan Akinturk</i>
8	12:50	SOS21	Numerical investigation of gap resonance using Coupled FNPT-Dual SPHysics solver <i>Prabhat Kumar Maurya, V.Srirama Shaswat Saincher, K.Murali</i>
9	13:10	SOS22	Numerical simulation of floating structure using overset meshing <i>Keshav Pathak, Nilanjan Saha</i>
13: 30 - 14:30		Lunch Break	
TS06: OFFSHORE STRUCTURES 01			
10	14:30	SOS23	Experimental and Numerical Investigation of Bearing Capacity of Jacket Mudmat with Central Opening in Soft Clay <i>Kranthi Konda Boppana &amp; Seeninaidu Nallayarasu</i>
11	14:50	SOS24	Mitigation of Heave Response in Semi-submersible using Tuned Mass Damper under Critical Sea States <i>Srinivasan Chandrasekaran, Ajaya Kumar Das, Kantapon Tanakitkorn</i>
12	15: 10	SOS25	Evaluation of Stress Concentration Factor in Tubular Joints of Offshore Structures <i>S Vishnuvardhan, Kanchana Devi, M. Saravanan, A. Ramachandra Murthy, G. Raghava</i>
13	15:30	SOS26	Time and Frequency Domain Response of the Coupled Inline and Crossflow VIV Response of the Flexible Cylinder



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			<i>R. Prethiv Kumar, S. Nallayarasu</i>
14	15:50	SOS27	Assessment of Scour Mitigation Measures for Offshore Monopile Foundation <i>Akash Kumar Nag, Manmathakrishnan Palraj, Rajamanickam Panneer Selvam</i>
15	16:10	SOS28	Nonlinear Dynamic Analysis of Steel Frame Structures in Offshore Environment Under extreme Loading Conditions <i>Ram Kumar, Deepak Kumar</i>
<b>16:10 - 16:30</b>		<b>Tea Break</b>	
<b>TS07: COASTAL STRUCTURES 02</b>			
16	16:30	SOS29	Wave Interactions with Multiple Surface-Piercing Barriers of Rectangular Cross-sections Placed Over an Undulated Seabed <i>Subhendu Paul, Santanu Koley</i>
17	16:50	SOS30	Design of Deep-Water Sea Dyke with Accropode- II & XblocPlus Armour Units for The Kalpasar Coastal Reservoir Project, Gujarat, India. <i>A V Mahalingaiah, Kumaran V, R. S. Kankara, Uday B. Patil, Ganesh N. S</i>
18	17:10	SOS31	Seismic stability of Rubble mound breakwater using Tetrapod vs Accropode II <i>R. Ashwin Kamalakannan, Dr. S. Nallayarasu</i>
19	17:30	SOS32	Interaction of waves with submerged membrane type barrier floating over a breakwater under the influence of ocean current <i>Kailash Chand Swami, Santanu Koley</i>
20	17:50	SOS33	Hydrodynamic Performance of a Single Row Perforated Plus Shaped Floating Breakwater for Small Wave Periods <i>A.K. Banik, Burhan Ahmad Wani</i>

**Day 3 - WEDNESDAY 11<sup>TH</sup> SEPTEMBER 2024**

**ICSR AUDITORIUM**

<b>TS08: OFFSHORE STRUCTURES 02</b>			
S. No.	Time	Paper ID	Paper Title
1	09:00	SOS34	Analysis of Offshore Topside Under Hydrocarbon Fire <i>Pradeepa M, Srinivasan Chandrasekaran</i>
2	09:20	SOS35	Experimental Investigations on Hydrodynamic Loads of a Jacket Structure with Anodes <i>Kasthuri Nallayarasu, Panneer Selvam Rajamanickam, Seeninaidu Nallayarasu</i>
3	09:40	SOS36	Effect of wave directionality on TLP with passive damper for surge motion control <i>Srinivasan Chandrasekaran, Suja T P</i>
4	10:00	<b>SOS37</b>	Experimental and Numerical Investigation of Ultimate Strength of Ring Stiffened Tubular X-Joint Under Axial Compression Load <i>Bharath Raj A &amp; Seeninaidu Nallayarasu</i>
5	10:20	SOS38	Stability analysis of offshore triceratops under tether failure conditions in diverse sea states <i>Ashish Unnikrishnan, Adwait Panindre, Srinivasan Chandrasekaran</i>
<b>10:40 - 11:00</b>		<b>Tea Break</b>	
KL	11:00	K5	<b>Keynote Lecture 5 - Professor Jonas Ringsberg Online</b>
	11:30	IT02	<b>Invited Lecture – Dr Mujeeb M P Online</b>
<b>TS09: OCEAN ENERGY 02</b>			
6	12:00	<b>SOS39</b>	Dynamic Response Analysis of an Offshore Wind Turbine under Seismic Loads and Vibration-Induced Shutdown <i>Subham Kashaypa, Nilanjan Saha, Zhiyu Jiang, Mohammad Poursina</i>
7	12:20	<b>SOS40</b>	Development of a Digital Twin Module for Digital Healthcare Engineering in Aging Monopile-Type Offshore Wind Turbines under Combined Environmental and Operational Conditions <i>Abdulaziz Sindi, Fang Wang, Giles Thomas and Jeom Kee Paik</i>
8	12:40	<b>SOS41</b>	Ultimate capacity experiment for containment system of LNG cargo under compression load along normal direction



MECHANICAL  
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		SHI Guijie, WANG Deyu, WANG Zhiqian, WANG Jiaying, WAN Zhong
13:00 - 14:00		Lunch Break
14:00 - 15:00		DOE Visit/NIOT Talk/Mr. Rahul Talk - ICSR HALL-3
15:00 - 16:30		IAHR Young Professionals Network panel discussion - ICSR HALL-3
16:30 - 17:00		Tea Break
17:00 - 17:30		VALEDICTORY FUNCTION - ICSR HALL-3

**Day 4 - THURSDAY 12<sup>TH</sup> SEPTEMBER 2024**

**09:00-17:00 TECHNICAL TOUR**

## Local Tour

on Thursday, Sep 12th, 2024

TO NIOT & MAHABALIPURAM

**TRAVEL ITINERARY**

- 09.00 am Departure from ICSR, IIT Madras to National Institute of Ocean Technology (NIOT).
- Lab visit at NIOT with guided tour and researcher interaction.
- Lunch at a nearby restaurant or NIOT cafeteria.
- Travel to Mahabalipuram.
- Sightseeing in Mahabalipuram: Shore Temple, Pancha Rathas, Arjuna's Penance, and Krishna's Butterball.
- Return to IIT Madras by 07.00 pm.

**MORE INFO:**

- 📍 Help Desk at IC & SR Hall, IIT Madras
- 🌐 [Visit ICSOS 2024 Website](#)

**FEES**  
**RS. 2000**  
1 Person