

Metocean Science and Engineering

Overview

The subject examines in-depth the observation, analysis and prediction of wind-generated waves in the open ocean, in shelf seas, and in coastal regions. It also provides an introduction to wave and hydrodynamics modelling as a support for engineering applications. It provides a multi-disciplinary overview of problems by combining cutting-edge research in Maritime and Coastal Engineering and industry applications. Topics include linear wave theory, second-order wave theory, wave spectrum, tides, wave measurements, near-shore processes, wave statistics, hydrodynamics and wave modelling.

The subject will provide students with a solid grounding in wave physics that is essential to evaluate the environmental impact on design and operation of marine structures.

Course Dates	20th Sep. 2020 to 3rd Oct. 2020 Number of participants for the course will be limited to fifty.
You Should Attend If...	<ul style="list-style-type: none">▪ You are a Civil/Mechanical/ Marine engineer or Naval architect interested in understanding ocean waves.▪ You are an Oceanographer or with Physics background and interested to learn theoretical basics of extreme ocean waves.▪ You are a student or faculty from academic institution interested in learning how to initiate a course or to obtain a research theme in breaking waves.
Fees	<p>The participation fees for taking the course is as follows:</p> <p>Participants from abroad : USD 200 Student participants: INR 2000 Faculty participants: INR 5000 Industry: INR 8000 Research Organizations: INR 5000</p> <p>The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility.</p> <p>Payment: Account Name: CCE IIT Madras Acc. No: 36401111110; Branch: SBI, IIT Madras IFSC Code: SBIN0001055; Swift Code: SBININBB453</p> <p>Note: The participants should be mentioned the purpose of GIAN while the transaction and have to send the email to gian@iitm.ac.in</p>
Accommodation	<p>The participants may be provided with hostel accommodation depending upon availability on payment basis.</p> <p>http://hosteldine.iitm.ac.in/iitmhostel/</p>

Course Faculty



Prof. Alexander V Babanin is a professor – Ocean Engineering in Department of Infrastructure Engineering, University of Melbourne, Australia. He is the Co-Director of Australia-China Centre for Maritime Engineering and Adjunct Professor in Swinburne University of Technology, Melbourne. His areas of expertise and research are wind-generated waves, maritime engineering, air-sea interactions, ocean turbulence, ocean mixing, climate, remote sensing of the ocean. He has produced more than 200 publications.



Prof. S. A. Sannasiraj is a Professor in Department of Ocean Engineering, Indian Institute of Technology Madras. He is an expertise in design and analysis of breakwaters, port and harbour structures, wind wave modelling, wave data assimilation, wave energy devices, nonlinear free surface problems using FEM, SPH and LBM, wave breaking & wave structure interaction with wave basin/flume experiments and numerical approaches.

Course Co-ordinator

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<http://www.gjan.iitkgp.ac.in/GREGN>