Background

The International Symposium on Advancement in Marine Renewable Energy (MRE) will bring together ocean energy leaders, decision-makers and researchers from all corners of the globe for a rich and exciting program of sessions, workshops, networking opportunities, technical lab visits and an insight into India's rapidly evolving ocean energy activities.

The conference will consist of keynote addresses, invited talks from eminent speakers and poster presentations.

About MoES

The Ministry of Earth Sciences (MoES), under the Government of India, is mandated to provide services for weather, climate, ocean and coastal states, hydrology, seismology and natural hazards. It also aims to explore and harness marine living and non-living resources sustainably and to explore the two poles of the Earth: the Arctic and the Antarctic.

About NIOT

The National Institute of Ocean Technology (NIOT) was established in November 1993 as an autonomous society under the Ministry of Earth Sciences (MoES), Government of India. NIOT works with a mandate to develop reliable indigenous technologies to solve various engineering challenges associated with harvesting non-living and living resources in the Indian Exclusive Economic Zone (EEZ) in an environmental friendly manner. Desalination of seawater is an important mission for the institute and various floating and island-based plants utilizing ocean temperature gradient have been established, along with waste heat recovery desalination plants in coastal thermal power stations. NIOT has also developed small-scale, off-grid ocean energy devices and is now embarking on a first-ever Ocean Thermal Energy Conversion (OTEC) powered desalination system.

Why Ocean Energy?

Oceans offer one of the largest untapped sources of energy on earth. Tidal, river, ocean current and wave power as well as differences in temperature and salinity can be used to produce energy. In recent years, a growing global population and socioeconomic growth are driving an increase in global energy demand. Much of this demand is fulfilled by fossil fuels, which contributes to greenhouse gas emissions and climate change. Marine Renewable Energy resources can be one of the solutions to the world's energy needs. These resources, which tap into the tremendous potential of our oceans, provide a varied range of renewable energy sources. The energy generated by tides, waves and Ocean Thermal Energy Conversion (OTEC) is important and largely unexplored renewable energy sources in the pursuit of the nation's sustainable and decarbonised energy sources.

With a vast 7,500 km coastline, India has the potential to make ocean energy a backbone of its energy sector. Advanced technologies, along with the design and modeling of power modules, can play a crucial role in generating emission-free energy.

Topics

- Energy from Thermal Gradient
  - i. OTEC
  - ii. Thermal Desalination
- Tidal/Hydrokinetic Energy
- Wave Energy
- Offshore Wind Energy
- Floating Solar Photovoltaic
- Energy from Salinity Gradient
- Hydrogen from MRE sources
- Standardization of Marine Energy Conversion Systems
  - i. IEC TC-114
  - ii. BIS ETD-54

Patrons

Dr. M. Ravichandran, Secretary, MoES
Prof. Balaji Ramakrishnan, Director, NIOT

Convener

Dr. Purnima Jalihal, Scientist-G
Head- Energy & Fresh Water, NIOT

Co-Conveners

Prasad Dudhgaonkar Scientist-E, NIOT
Biren Pattanaik Scientist-E, NIOT
Ashwani Vishwanath Scientist-E, NIOT

Poster Competition

Abstracts focusing on the Marine Renewable Energy themes limited to 300 words can be submitted through the online form for poster presentation. The work submitted should be original and properly attributed.

All the submissions shall be reviewed before acceptance.

Prizes will be awarded to the selected posters based on the originality, novelty, approach and content quality. Prizes will be given to the winners.

Drawing Competition

School students of classes 8th to 12th are invited to participate in the drawing competition on the theme Marine Renewable Energy. The artwork submitted should be original. The winners will be awarded exciting prizes.

Registration

Registration link for competitions and delegates.
https://www.niot.res.in/ISAMRE/online_registration.php

Free Registration for all.

Last date for Registration ~~**20 February**~~ **is extended till 28 February 2025.**

Scan for Registration

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MRE 2025 SYMPOSIUM
ADVANCEMENTS IN MARINE RENEWABLE ENERGY

INTERNATIONAL SYMPOSIUM ON ADVANCEMENTS IN MARINE RENEWABLE ENERGY

at

National Institute of Ocean Technology,
Chennai
17th and 18th March 2025

NATIONAL INSTITUTE OF OCEAN TECHNOLOGY • CHENNAI • NIOT

सत्यमेव जयते
Ministry of Earth Sciences
Govt. of India