



**23rd Congress of the
IAHR APD**
13th December 2022
IIT Madras, Chennai

Transfer Workshop on Geo-Textile Technology and its Application for Climate Change Adaptation

Geosynthetic fabrics are artificial materials made up of polymers used for stabilizing terrains. These materials find applications in civil, hydraulic, environmental, marine, and coastal engineering because of their reliability and cost-effective solutions. The functions performed by the geosynthetics are filtration, drainage, separation, lining, reinforcement, provision of a fluid barrier, and environmental protection. They are widely used for dewatering, flood control, sediment transport control, and coastal protection. Geo-Textiles are increasingly being recognized as an alternative to conventional construction materials in many applications. If their applications are properly designed and implemented, they effectively achieve continuity and longevity of the structure as they are flexible in nature. Energy dissipation is another basic feature of such structures. Locally available material can frequently be used in conjunction with geosynthetic material as an alternative to conventional rock and concrete structures. In deepening navigation channels, dredging the subsequent encapsulation of dredged material in geosynthetic containers offers protection for channel banks. Presently in India polymer products are being used in various coastal protection works and in beach reclamation structures such as sea walls, bulkheads, breakwaters, and groins. As Geo-synthetic products further prove their utility, river training structures can also adopt these materials. Geo-synthetic products have many more advantages over traditional elements; with the field efficacy of these materials having been proven all over the world. The following are some of the topics which will be covered during workshop 1. Fundamental Principles, properties of Geo-synthetics, and International testing standards 2. Durability with particular reference to UV resistance and performance 3. Filtration, Drainage, and Erosion Control 4. Design Approaches 5. Role of Geo-synthetics in Engineering Measures for Natural Disasters 6. Geo-systems (Geo-tubes, Geo-containers, Etc) 7. Geosynthetics for sustainable coastal infrastructure 8. Case studies for coastal protection and other near-shore structure applications 9. Bio-shields-vegetation for stability and green fencing 10. Construction techniques 11. Geo-synthetic applications for multi-functional artificial reefs. The invited talks will be delivered by eminent researchers and scientists from worldwide academic and research institutes and industries.

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Special Lectures by

Prof V Sundar
Emeritus Professor,
Department of Ocean
Engineering,
IIT Madras



Prof R Sundaravadivelu
Emeritus Professor,
Department of Ocean
Engineering,
IIT Madras



Prof S A Sannasiraj
Professor,
Department of Ocean
Engineering,
IIT Madras



Prof K Murali
Dean & Professor,
Department of Ocean
Engineering,
IIT Madras



Mr. Shantanu Bhat
Research Associate,
Young Professional
ITA, RWTH Aachen



Prof Thomas Gries
Professor,
ITA, Textile Engineering
and Textile Institute,
RWTH Aachen



Prof Tetsuya Hiraishi
Professor,
DPRI,
Kyoto University



Dr. Mohit Raina
Managing Director,
Raina Industries,
Mumbai, Maharashtra



**Dr. Sherlin Prem
Nishold S**
Young Professional
Jacobs, Bangalore

Day - 0	Preconference Workshop Programme	13 th December 2022 (Tuesday)
Time	Events	Venue
09:00-09:30	Registration	On-Site Registration
09:30 – 10:00	Inauguration	Seminar Hall, 2 nd Floor Department of Ocean Engineering, IIT Madras
10:00-17:00	Transfer Workshop on Geotextile Technology and its application on climate change adaptation	
LUNCH BREAK (12:50 to 13:50, Terrace @ IITM)		
17:00-19:00	Registration conference	IC&SR Building, IIT Madras

DINNER (19:00 TO 21:00)

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