CURRICULUM VITAE

DR. MANU

Objectives

- **To be an integral part of the Institution.**
- **To be actively involved in challenging and innovative projects.**
- **To grow with the Institution.**

Qualification : **B.E (Civil), M.Tech (Structural Engg.)**

Ph. D (Marine Structure)

Academic Profile :

Degree	University/ Institution	Year
B.E (Civil Engg.)	The National Institute of Engineering (NIE), Mysore Mysore University	1998
M.Tech (Structural Engg.)	Manipal Institute of Technology, Manipal Academy of Higher Education (MAHE) Manipal University	2001
Ph.D (Marine Structures)	National Institute of Technology of Karnataka, Surathkal	2012

Experience : **Teaching ≈ 19 Years**

Research = 15 Years

Professional Career

Name of Institution	Designation	Duration
N.I.T.K., Surathkal	Lecturer (Temporary)	Aug 2001 – Feb 2004
R.V.C.E., Bangalore	Lecturer (Temporary)	March 2004 – July 2004
N.I.T.K., Surathkal	Senior Research Fellow	Aug 2004 – Nov 2007
N.I.T.K., Surathkal	Assistant Professor	Dec 2007 – Sept 2019
N.I.T.K., Surathkal	Associate Professor	Sept 2019 – Oct 2023
N.I.T.K., Surathkal	Professor	Oct 2023 – till date

Research Area : **Coastal Engineering and Marine Structures**

ORCID id : **https://orcid.org/0000-0002-9993-190X**

Scopus Author ID : 11240474400

Research Publications :

(Annexure – I)

International Journal	**: 26**
National Journal	**: 07**
Book Chapter	**: 07**
International Conference	**: 38**
National Conference	**: 14**
Research Bulletin	**: 02**

Short Term Courses/Work shop /Conferences Attended :

(Annexure – II)

International Conference	**: 19**
National Conference	**: 09**
Short Term Training Programme	**: 03**
Work Shop	**: 14**
Training Programme	**: 02**

Achievements:

- Received the **Financial Assistance from Dept. of Science and Technology, New-Delhi**, under the Young Scientist Scheme, to attend an International Conference, APAC-2009, at Singapore held during 13th -16th October, 2009.
- **Best Paper award** for the paper titled "A semi empirical approach to model the wave transmission characteristics for submerged reef breakwater" in 2nd International Conference on Earth Science and Engineering (**ICEE 2015**) held during 20th – 21st March, 2015, at Nehru Institute of Technology, Coimbatore, Tamil Nadu, India.
- **Best Paper award** for the paper titled "Experimental investigation of dynamic pressure on wall type breakwater with slotted breakwater" in 1st International Conference on Recent Advancements in Civil Engineering (**ICRACE 2021**) held during 17th – 19th September, 2021, at National Institute of Technology, Silchar, Assam.

Foreign Visits

- Visited Ocean Civil Engineering Department, **Kagoshima University, Japan** for Research Interaction during the period of 15th November to 6th December, 2008.

- Visited **Nanyang Technological University, Singapore** to attend the 5th International Conference on Asian and Pacific Coasts – APAC-2009 held from 13th – 16th October, 2009.
- Visited **Kumamoto University, Japan,** to attend International Engineering Symposium-IES 2011, held from 3rd March to 5th March, 2011.
- Visited **Plymouth University, United Kingdom,** to attend 12th International Coastal Symposium-ICS 2013, held from 8th to 12th April, 2013.
- Visited **Dubai**, to attend International Journal Conference on Civil and Transport Engineering – 2013, held from 4th to 5th October, 2013.
- Visited **Hamburg University**, **Hamburg, Germany**, to attend 11th International Conference on Hydro-Science and Engineering – 2014, held from 28th September to 2nd October, 2014.
- Visited School of Engineering & Technology, **Asian Institute of Technology, Bangkok**, **Thailand**, for Research Interaction during the period of 11th to 15th January, 2016.
- Visited **Zurich, Switzerland**, to attend 19th International Conference on Coastal and Ocean Engineering – ICCOE 2017, organized by World Academy of Science, Engineering and Technology (WASET.org) held from 13th to 14th January, 2017.

Member of Professional Bodies:

- Associate Member of International Association for Hydraulic Research (IAHR) No.10002465
- Life Member of Indian Society for Hydraulics (ISH) – LM 807

Assignments / Responsibilities

Department Level :

- Secretary – DUGC (2008–11, 2022-23)
- Secretary – DRPC (2012-14)
- Time-Table In-charge (2014-16)
- In-charge – Wave Mechanics & Marine Geotechnical Lab.
- Faculty Advisor –for M.Tech (MS) – (2019 –21)
- NBA Coordinator (M.Tech Marine Structures)-2022-23

Institute Level :

- Treasurer – KSCST – SPP 32nd Series held during 4th – 5th September, 2009.
- Co-convenor – Food Committee – Annual Convocation, from 2013 to 2023
- Co-convenor – Inauguration of Diamond Jubilee Celebration Committee
- Faculty advisor, Music Club, 2019-22
- Associate Dean (P&D), March, 2023 – January,2024
- Professor In-Charge (Accreditation & Ranking), March, 2024- till Date

Outside Institute Level:

- Chairman for the technical session in the 19th International Conference on Coastal and Ocean Engineering – ICCOE 2017, organized by World Academy of Science, Engineering and Technology (WASET.org) held at Zurich, Switzerland, from 13th to 14th January, 2017.
- Expert Member of Research Advisory Committee, SSIT, Tumkur-February, 2022.
- DTAC member of Manipal Institute of Technology (MIT), MAHE, Manipal, 2022-25.
- DAC member of Shri Jayachamarajendra College of Engineering (SJCE), Mysore, 2022-24, 2025-till Date.
- Member of Research Advisory Committee, VTU Belgum
- Expert for the evaluation of Research Proposal, NIT Pondychery, 2024.
- Ph.D. thesis reviewer, IIT Madras, 2024, 2025.
- Ph.D. thesis reviewer, Malnad College of Engineering, Hassan, 2025.
- Technical Paper Reviewer, Journal of Ocean Engineering and Marine Energy, 2025
- Committee Member, Revision of Syllabus for GATE-NM Paper, 2025

Expert Lecture:

- Expert talk on “Hydrodynamic Performance Characteristics of Caisson Type Breakwater” at Sri Siddhartha Institute of Technology, Tumakuru during Research Expert Visit on 21-02-2022.
- Expert talk on “ Innovative type of Breakwater – A Physical Model Approach” in National Workshop on “Recent Research Trends in Ocean Engineering, Science and Technology” held at IIT, Bombay during 22nd – 24th September, 2022.

Consultancy work :

1. Consultancy Project on Technical View on the ongoing interlock touch piles for the construction of pump house for augmentation of fire-fighting facilities at berth No. 13, NMPT, Panambur" submitted to Chief Engineer (Civil), NMPT, Panambur, September, 2015. (Consultancy Charge: Rs. 5.725 Lakhs).
2. Third Party Monitoring Services for "Construction of Coastal Berth at Old Mangalore Port", by Port & Fisheries Division, Udupi, Government of Karnataka. (Consultancy Charge: Rs. 1 Lakh/visit). Duration: December-2021 to December-2023.
3. Proof checking for the Design of Jetty at Ganguli Fisheries Port, by Port & Fisheries Division, Udupi, Government of Karnataka. (Consultancy Charge: Rs. 1.5 Lakh). Duration: March to April-2024.

Patent:

Application Number 202441058465 A, Filed: 01-08-2024, Published: 16-08-2024

Title: L-shaped Floating Oscillating Water Column Wave Energy Converter system and Method Thereof.

Sponsored R & D Projects :

Sl.No.	Title of the Project	Amount (Rs.)	Year /Duration	Sponsoring Agency
1.	Stability of Submerged Breakwater with Artificial Armour Units under Regular Waves (PI)	5 Lakh	2009 2 Years	N.I.T.K., Surathkal
2.	Hydrodynamic Performance Characteristics of Caisson Type Breakwater (PI)	78.84 Lakh	2016-22 6.5 Years	MoES, GoI New-Delhi
3.	Fund for improvement of S&T infrastructure in Universities and Higher Educational Institutions (FIST) Program - 2014. Level 1: Engineering Science.	209 Lakh	2015 5 Years	Ministry of Science and Technology, DST, GoI
4	Design, Analysis and Development of Hybrid Floating Offshore Breakwater (Co-PI)	49.21 Lakh	2021 2-Years	Ministry of Ports, Shipping and Waterways

Project and Thesis (Dissertation) Supervision :

U.G. Level

Sl.No.	Title of the Project	Name of the Student	Academic Year
1	Numerical Simulation of Ocean Waves with varying Mesh sizes using CFD Software	Amith AVijayan Paul Anoop Raj Vehan Shetty Vineet Pujari	2020-21
2.	Analysis of Bendable Concrete	Abdhesh Jha Gaurav Chaurasia Piyush Tiwari	2021-22
3.	Cyclone Resistant Structure	Adarsh Kumkar Rajendra Meena Sachin Saroha	
4.	Self Healing Properties of Concrete	Vijay, Jigmi Dorji Tamang, Amit Kumar, Krishna Khandal	2022-23
5.	An Overview on Ground Water Pollution	B C Satish, Gudivada Sathvik, Kamisetty Abhiram, T. Prem Sagar	
6.	RCC Structure – Maintenance and Protection	Vijay, Jigmi Dorji Tamang, Amit Kumar, Krishna Khandal	
7.	Exploring the Relationship between Atmospheric Carbon dioxide, Forest cover and Carbon Emissions: A Comparative study of Indian States	Druva Chandra Prajapati, Aditya Joshi, Aman Kumar Yadav, Shri Prakash Shukla	

P.G. Level

1.	An Experimental Study on Tandem Breakwater	Shrikant Lamani	2007-08
2.	Laboratory investigation of Tandem Breakwater with concrete cubes as artificial armour units	Usharani P.T.	2008-09
3.	Stability of Submerged Breakwater with Artificial Armour Units	Manohara H.R.	2009-10
4.	Dynamic Analysis of Piled Jetty	Harish	
5.	Stability of Defenced Breakwater with Concrete Cube Armour	Kiran Kodge	2010-11
6.	A Comprehensive Study of Port Safety management	Anil Kumar Rai	

7.	Stability of Submerged Breakwater of 1:1.75 Sloe with Concrete Cube Armour	Ananth Krishnan	2011-12
8.	Stability of Conventional Breakwater of 1:1.75 Slope with Concrete Cube Armour	Sneha S.	
9.	Design of Intake Structure for a Thermal Power Plant	Hemanth J.	
10.	Delay Analysis in Construction with a Case Study using MSP	Kiran Baby	
11.	An Experimental Investigation of Submerged Breakwater of 1:1.5 Slope	Subrahmanyam K.	2012-13
12.	Stability of Conventional Breakwater of 1:1.5 Slope with Concrete Cube Armour	Naveen J. Therattil	
13.	Experimental Study of Submerged Breakwater made of Concrete Cubes	Balu R.	
14.	Arbitration and Conciliation Act of India and United Kingdom (1996) – A Comparision	Bestin C. Joseph	
15.	Causes of Cost Overrun in Construction Projects	Deepak B.	
16.	Time – Cost- Risk Optimisation in Construction Using ANT Colony Algoritham	Paul Shaji	
17.	Sediment Trend Matrix Analysis in the vicinity of Sasihithlu and Padubidri Estuaries, Karnataka	Shwetha B. Patil	
18.	Fatigue analysis of fixed offshore platforms	B. Abhilash Reddy	2013-14
19.	Tsunami travel time and maximum wave height prediction using ANN and SVM	Ranjith N.P.	
20	Development of new technique for the estimation of excavator productivity	Vishnu Raj K.	
21.	Feasibility study of alternatives to sand in plastering	Arjun V.R.	
22.	Sediment transport along open coast – A case study of Pondicherry	Sruthi G.S.	
23.	Planning of oil terminal for proposed oil refinery in outer harbor at Cochin port	Abhijith R.	2014-15
24.	Experimental study on submerged breakwater made of concrete cubes	Inthikab K.	
25.	Planning of proposed container terminal at Vizhinjam international sea port	Saneesh Pannian	
26.	Design and analysis of equipment skids on offshore platform	Subodh Vijay Kusare	
27.	Simulation and Validation of Local Scour Using Open Source CFD Tool: REEF3D	Sanooj A.	2015-16
28.	Prediction of Transmitted Wave Height and Damage Level of Tandem Breakwater Using SVM	Jithin J.S.	
29.	Experimental Investigation on Submerged Breakwater of Slope 1:1.75	Chavan Akash S.	
30.	Analysis and Design of Offshore Met Mast Supported on Jacket Substructure*	Pardha Saradhi J.	
31.	Modeling of Wave Transmission Co-efficient for Submerged Reef Breakwater.	Sindhu S.	
32	Design of Substructure for an Offshore Wind Turbine in Remote Islands of Lakshdweep	Srilakshmi K.	2016-17

33.	Physical Model Studies on Caisson Breakwater	Surya Teja Reddy	
34.	Study of Beach Parameters and Sediment Trend Matrix along Dakshina Kannada and Udupi Coast	Runku Kranthi	
35.	Protective Measure to Storm Surge Prone Areas along the East Coast of India	Shailesh K.	2017-18
36.	Study on the Ductile Behaviour of Fixed Based Offshore Jacket Platforms under Seismic Conditions using Non-Linear Static Analysis	Sanal C.D.	
37.	Physical Model Studies on Caisson Breakwater with and without Toe Protection	Shakeel Ahammed	
38.	Siltation and Tranquility Studies for a Harbour Breakwater using Delf T 3D	Therese Kurian	2018-19
39.	Numerical Modelling of Wave Attenuation Along NMP Approach Channel	Niveditha Mohan	
40.	Stability of Toe Armour Unit of Vertical Caisson Breakwater – A Physical Model Approach	Vinay Kumar B.	
41.	Prediction of Transmitted Wave Height over the Submerged Reef of Tandem Breakwater Using MIKE21-BW	Minosh Mohan K.R.	
42.	Wave Energy Dissipation by Porous Breakwaters	Praveen Kumar Kola	2019-20
43.	Study on Vertical Caisson Breakwater With Toe Protection-A Physical Model Approach	D.L.V. Ravi Teja	
44.	Experimental Investigations on Performance Characteristics of Caisson Type Breakwater	Kiran R.	
45.	Numerical Investigation on Wall Type Breakwater with Slotted barrier	Alishaban Nazar	2020-21
46.	Physical model study on vertical caisson breakwater with Slotted barrier	Ann Riya Reji	
47.	Prediction on the safety of the jacket structure after collision with a vessel	Nifin Thalhath	
48.	Mooring Vessel Analysis: Case Study at Berth No.13, New Mangalore Port Trust Using Mike 21 MA	K. Raja Sekhar Reddy	
49.	Study on Vertical Caisson Type Breakwater- A Numerical Approach	Roshin J. Kappen	
50.	Effects of Submerged Reef on Wall Type Breakwater – A Numerical Approach	Abel Jacob	2021-22
51.	Hydrodynamic Performance Characteristics of Perforated Vertical Caisson Breakwater: An Experimental Study	Akshay K.	
52.	Hydrodynamic Performance of Quarter Circle Breakwater- A Numerical Approach	Fesih C. P.	
53.	Experimental studies on Hydrodynamic characteristics of floating kelp farm	Muhammed Ashraf E.K.	
54.	Study on Vertical caisson type breakwater using soft computing techniques	Nikhil	2022-23
55.	Experimental investigations on the effect of meadow width on transmission characteristics of floating kelp farm	Merin Babu	

56.	Wave attenuation studies on coastal vegetation using soft computing techniques	Nithin K M	
57.	Numerical investigation of wave interaction with perforated caisson type breakwater	Sathri John Samuel Christopher	
58.	Numerical investigation on the influence of blade length of floating Kelp farm on wave hydrodynamics	L Divyasree 2220247MS014	2023-24
59.	Experimental Investigation of Cylindrical Floating Breakwater integrated with Oscillating Water Column (OWC)	Neethu Jacob 2220250MS017	
60.	Performance evaluation of an L-shaped Oscillating Water Column (OWC) integrated with Cylindrical Floating Breakwater	C Pooja Sree Sai 2220339MS009	
61.	Numerical Investigation on Wave Attenuation Characteristics of Floating Kelp Farm by Varying the Density of the Plant	Gaurav 2220229MS012	
62.	Numerical study on L-Shaped Oscillating Water Column Wave Energy Converter Integrated with Cylindrical Breakwater	Jeevan J S 2320062MS012	2024-25
63.	Experimental Investigation of Wide-Inlet L-Shaped Oscillating Water Column Wave Energy Converter Integrated with Cylindrical Breakwater	Sandra Mahendra Prasad 2320484MS019	
64.	Modelling of Wave and River Current Attenuation from Vegetation using Mike21	Tarun V 2320533MS24	
65.	Numerical Investigation on the Combined Effect of Floating Kelp Farm and Mangrove Forest on Wave Attenuation Characters	Jaidev M K 2320434MS011	

Ph.D Supervision :

Sl.No.	Area of Research	Name of the Student	Year of Joining	Status
1.	Prediction of Wave Transmission and Damage Level of Tandem Breakwater using Soft Computing Techniques	Geetha Kuntoji	2012	Completed [2018]
2.	Studies on Simulation of Local Scour around the Bridge Pier using Soft Computing Techniques and CFD Tool	Sreedhara B.M.	2013	Completed [2019]
3.	Prediction of Design Wave height along Karnataka Coast considering Climate Change Effects	Sandesh Upadhyaya K.	2017	Completed [2021]
4.	Studies on Caisson Type Breakwater- A Physical and Numerical Approach.	Kumaran V. 177134AM500	2017	Completed [2022]
5.	Experimental investigation on wave attenuating characteristics of floating kelp farm	Surakshitha 197065AM008	2019	On Going
6.	Investigation on Performance of Floating Breakwater Integrated with Oscillating Water Column Wave Energy Converters.	Harikrishnan T.A. 207WO008	2020	On Going
7.	Wave Interaction with Stratified Floating Porous Structure	Aparna Panda 207WO002	2020	Thesis Submitted
8.	Prediction of Hydrodynamic Characteristics of Caisson Type Breakwater Using Soft Computing Techniques	Shankar Krishna 217WO008	2021	On Going
9.	Coupled Dynamic Analysis of Combined Wind and Wave Energy Conversion Systems	Binoy Sebastian 217WO003	2021	On Going
10.	Biochar derived from Arecanut Husk: A viable strategy for Carbon Sequestration and Sustainable cement production	Manjunath Bharadwaj 217WO501	2021	Ongoing

ANNEXURE - I

International Journal [26]

1. Kiran G Shirlal, Subba Rao Ganesh V and Manu, (2006), “Stability of Breakwater Defenced by a Seaward Submerged Reef”, in **Ocean Engineering,** an **International Journal of Research and Development, Pergamon, Elsevier Science** Ltd. New York, N.Y., U.S.A. Vol. 33, issues 5 - 6 April, 2006, Page 829 – 846. ***[Scopus Indexed]***
2. Kiran G. Shirlal, Subba Rao, and Manu, (2007), “Ocean Wave Transmission by Submerged Reef – A Physical Model Study”, in **Ocean Engineering,** an **International Journal of Research and Development, Pergamon, Elsevier Science** *Ltd.* New York, N.Y., U.S.A. Vol. 34, issues, 14-15, October, 2007, Page 2093-2099. ***[Scopus Indexed]***
3. Kiran G Shirlal, Subba Rao and Manu (2008), “Performance of a Submerged Reef – A Physical Model Study” in **International Journal of Ecology and Development,** Vol. 11, No. F08, Fall 2008, pp 90 - 98.
4. Kiran G. Shirlal, Subba Rao and Manu (2009). “Design of Sheltered Breakwater", in **International Journal of Earth Sciences and Engineering,** Vol. 02, No. 02, June, 2009, pp 95 -103.
5. Manu, Kiran G. Shirlal and Subba Rao (2011). “Development of Concrete Armoured Protected Breakwater Structure", in **International Journal of Earth Sciences and Engineering,** Vol. 04, No. 05, September, 2011, pp 253-260. ***[Scopus Indexed]***
6. Manu, Kiran G. Shirlal and Subba Rao (2013). “Performance of Submerged Reef of Concrete Cubes", in **International Journal on Chemical, Environmental and Biological Sciences, ISAET,** Vol. 01, Issue 04, 2013, ISSN 2320-4079, pp 651-654.
7. Sindhu S., Kiran G. Shirlal and Manu (2015). “A semi empirical approach to model the wave transmission characteristics for submerged reef breakwater” in **International Journal of Earth Sciences and Engineering,** April, 2015, Vol. 08 No 02 ISSN 0974-5904.
8. Geetha Kantoji, Subba Rao, Manu and S. Mandal (2017). “Performance Evaluation of ANFIS and SVM Model in Prediction of Wave Transmission over Submerged Reef of Tandem Breakwater” in **International Journal of Ecology and Development,** Vol. 32, Issue No. 2, Int. J. Ecol. Dev. ISSN-0972-9984 (print), ISSN-0973-7308 (online), pp 141–155. ***[Scopus Indexed]***
9. Geetha Kantoji, Subba Rao, Manu and Mandal S. (2017). “Application of Support Vector Machine Technique for damage level prediction of Tandem Breakwater” in **International Journal of Earth Sciences and Engineering,** ISSN-0974-5904, Vol. 10, No. 03, pp 633-

638, DOI: 10.21276/ijee.2017.10.0322**.**

10. Sreedhara B.M., Manu and S Mandal (2018) “Estimation of live bed scour depth around different shapes of bridge piers using ANFIS and SVMR approach” in **International Journal of Ecology and Development**, Vol. 33, Issue No. 3, Int. J. Ecol. Dev. ISSN-0972-9984 (print), ISSN-0973-7308 (online), pp 31–46.
11. Sreedhara B.M., Manu Rao and S Mandal (2019), “Application of an Evolutionary Technique (PSO-SVM) and ANFIS in clear water scour depth prediction around bridge piers” in **Neural Computing and Applications**, Vol 31 Issue 11, November, 2019, Published online: 07 June, 2018, https://doi.org/10.1007/s00521-018-3570-6, , Springer, pp 7335-7349. ***[Scopus Indexed]***
12. Sreedhara B.M., Geetha Kuntoji, Manu and S Mandal (2019) “Application of Particle Swarm based Neural Network to Predict Scour Depth around the Bridge Pier” in **International Journal Intelligent Systems and Applications**, Published Online November 2019 in MECS (http://www.mecs-press.org/) DOI: 10.5815/ijisa.2019.11.04, pp 11, 38 - 47.
13. Kumaran V., Manu and Subba Rao (2021), “Assessment of Dynamic pressure and wave forces on Vertical-Caisson Type Breakwater” in **Marine Geo-resources Geotechnology** – Taylor & Francis online, Volume 40 Issue 2, pp 147-158, http://doi.org/10.1080/1064119X.2021.1873469, pubished online: 02-March, 2021. ***[Scopus Indexed]***
14. Kumaran V., Manu and Subba Rao, I. Srinivasula Reddy (2021), “Hydrodynamic Performance of Wall Type Breakwater - A Physical and Numerical Approach” in **Journal of Naval Architecture and Marine Engineering**. http://dx.doi.org/10.3329/jname.v18i2.52134 December, 2021 ***[Indexed in Scopus and Web of Science]***
15. Kumaran V., A.V. Mahalingaiah, Manu and Subba Rao (2023), “Optimization of a numerical wave flume for efficient simulation” in **Ocean Systems Engineering** – Techno-Press Ltd, Volume 13 No.4 (2023), pp 325-347, https://doi.org/10.12989/ose.2023.13.4.325, ISSN 2093-6702 (print), Published online: 2093-677X. ***[Scopus Indexed]***
16. Sandesh Upadhyaya K., Subba Rao, and Manu (2024), “Assessment of wind and wave energy potential along the Indian coast” in **Cogent Engineering**, Taylor & Francis, 2024, VOL. 11, NO. 1, 2316950 , https://doi.org/10.1080/23311916.2024.2316950.
17. Binoy Sebastian, D. Karmakar and Manu (2024), “Coupled dynamic analysis of semi-submersible floating wind turbine integrated with Oscillating Water Column WEC” in **Journal of Ocean Engineering and Marine Energy**, https://doi.org/10.1007/s40722-023-00313-x ***[Scopus Indexed]***

18. Panda A., Karmakar D. and Rao M. (2024), “Hydrodynamic analysis of an H-shaped pile-restrained floating breakwater combined with a pair of vertical barriers” in **Ocean Engineering**, Elsevier, Vol. 298, https://doi.org/10.1016/j.oceaneng.2024.117152 ***[Scopus Indexed]***
19. Panda A., Karmakar D. and Rao M. (2024), “Hydrodynamic analysis of an H-shaped pile-restrained floating breakwater integrated with horizontal plates” in **Journal of Marine Science and Application**, 1-22, Springer Nature Link https://doi.org/10.1007/s11804-024-00477-4 ***[Scopus Indexed]***
20. Balasubramanya Manjunath, Claudiane M Ouellet-Plamondon, B B Das, Subba Rao, Chandrasekhar Bhojaraju and Manu Rao, PhD (2024) “Unlocking the potential of areca nut husk biochar as a sustainable carbonaceous filler in cementitious composites” in **Industrial Crops and Products**, Elsevier, https://doi.org/10.1016/j.indcrop.2024.119883 ***[Scopus Indexed]***
21. Harikrishnan T.A., Manu, Subba Rao, (2024) “Experimental Investigation on L-Oscillating Water Column Wave Energy Converter Integrated with Floating Cylindrical Breakwater”, in **Journal of Ocean Engineering**, Elsevier, https://doi.org/10.1016/j.ocean eng.2024.119806. ***[Scopus Indexed]***
22. Vishwanatha Mane, Shankara Krishna, Manu & Subba Rao (2024), “Assessment Of Wave Overtopping Discharge at Quarter Circle Breakwater Using Soft Computing Techniques” in **Journal of Maritime Research**, Vol XXI. No. III (2024) pp 219–227, ISSN: 1697-4840.
23. Panda A., Karmakar D. and Rao M. (2025), “Effect of seabed condition on the hydrodynamic performance of a pile restrained H-shaped floating breakwater”, in Marine Geo-resources Geotechnology, published by Taylor & Francis, https://doi.org/10.1080/1064119X.2025.2453891.
24. Panda A., Karmakar D. and Rao M. (2025), “Hydrodynamic performance of H-shaped floating breakwater in the presence of a partially reflecting seawall”, in **Marine Geo-resources Geotechnology**, published by Taylor & Francis, https://doi.org/10.1080/1064119X.2025.2525990.
25. Panda A., Karmakar D. and Rao M. (2024), “Oblique wave Interaction with pile restrained dual performance of a pile retained H-shaped Breakwater”, in **Indian Journal of Geo-Marine Sciences**. (accepted)
26. Kumaran V., A.V. Mahalingaiah, Manu and Subba Rao (2025), "Hydrodynamic Performances of Vertical Wall Type Breakwater with Slotted Barriers A Physical and Numerical Approach" accepted in Scientific Report.

National Journal [07]

1. Kiran G. Shirlal, Subba Rao, and Manu, (2007), “Stability Equation for Breakwater sheltered by Seaward Submerged Reef”, in **Journal of Indian Society for Hydraulics (ISH)**, Pune. Vol.13 No.1 –March, 2007, pp 18 -31.
2. Manu Kiran G. Shirlal and Subba Rao Pathanjali Bharadwaj (2009). “Hydraulics Performance of Tandem Breakwater with Concrete Cubes as Armour Units", in **Journal of Institution of Engineers, India,** Vol.90, November 18, 2009, pp 7-12. ***[Scopus Indexed]***
3. Manu, Subba Rao, Kiran G. Shirlal, Prashanth J. and Balakrishna Rao K. (2011), “Physical Model Studies on Stability of Concrete Armoured Breakwater”, in **Indian Society for Hydraulics (ISH) Journal of Hydraulic Engineering,** Pune, Vol. 17, No. 3, October, pp 51-60. ***[Scopus Indexed]***
4. Geetha Kuntoji, Subba Rao and Manu (2020), “Prediction of Wave Transmission over Submerged Reef of a Tandem Breakwater using PSO-ANN and PSO-SVM Techniques”, in **Indian Society for Hydraulics (ISH) Journal of Hydraulic Engineering,** Pune, https://doi.org/10.1080/09715010.2018.1482796, Vol. 26, Issue 3, July, 2020. Pp 283-290, ISSN: 0971-5010 (Print) 2164-3040 (Online), Published online: 18 Jun 2018. ***[Scopus Indexed]***
5. Sandesh Upadhyaya K., Subba Rao, and Manu (2020), “Long-term Analysis of Wave off Mangaluru Coast” in **Indian Journal of Geo-Marine Sciences (IJMS),** Vol.49, Issue 05, May 2020, pp 717-723. ***[Scopus Indexed]***
6. Sandesh Upadhyaya K., Subba Rao, and Manu (2021), “Prediction of Wind Wave Climate along Karnataka Coast” in **Journal of Earth System Sciences (JESS)** 130, Article No.210, 8th October, 2021, https://doi.org/10.1007/s12040-021-01704-0. ***[Scopus Indexed]***
7. Kumaran V., Manu and Subba Rao (2022), “Damage Analysis of Toe for Wall Type Breakwaters” in **Journal of Institution of Engineers, India,** published online on November 9, 2022, Vol.103, pp 185-193 https://doi.org/10.1007/s40030-021-00591-4. ***[Scopus Indexed]***

Book Chapter [07]

1. Geetha Kuntoji, Subba Rao, Manu and Eluru Nava Bharath Reddy (2018), “Prediction of Damage Level of Inner Conventional Rubble Mound Breakwater of Tandem Breakwater Using Swarm Intelligence-Based Neural Network (PSO-ANN) Approach” in **Springer Nature** Singapore Pte Ltd. 2019., J.C. Bansal et al. (eds.), Book title ‘Soft Computing for

Problem Solving', **Advances in Intelligent Systems and Computing** 817, pp 441-453, https://doi.org/10.1007/978-981-13-1595-4_35. ***[Scopus Indexed]***

2. Sreedhara B.M., Manu and S Mandal (2018), "Swarm intelligence based Support Vector Machine (PSO-SVM) approach in the prediction of scour depth around the Bridge pier" in **Springer Nature** Singapore Pte Ltd. 2019., J.C. Bansal et al. (eds.), Book title 'Soft Computing for Problem Solving', **Advances in Intelligent Systems and Computing** 817, pp 455-463, https://doi.org/10.1007/978-981-13-1595-4_36. ***[Scopus Indexed]***
3. Sreedhara B.M., Geetha Kuntoji, Manu and S Mandal (2018), "PSO-SVM Approach in the Prediction of Scour Depth Around Different Shapes of Bridge Pier in Live Bed Scour Condition" in **Springer Nature** Singapore Pvt Ltd. 2019**, Advances in Intelligent Systems and Computing** 741, pp 383-392, https://doi.org/10.1007/978-981-13-0761-4_37. ***[Scopus Indexed]***
4. Geetha Kantoji, Subba Rao, Manu (2019), "Prediction of Wave transmission over an outer submerged reef of Tandem breakwater using RBF based Support Vector Regression technique" in **Springer, Singapore**, Vol. 23, Book tilted **'Lecture notes in Civil Engineering',** pp 559-570, https://doi.org/10.1007/978-981-13-3134-3_42, Online ISBN 978-981-13-3134-3, Print ISBN 978-981-13-3133-6. ***[Scopus Indexed]***
5. K. Sri Lakshmi, Satya Kiran Raju Alluri, Manu (2018), "Offshore energy for the remote Islands of Lakshadweep" in **Springer, Singapore,** Vol. 23, Book tilted **'Lecture notes in Civil Engineering'** , pp 691-703, https://doi.org/10.1007/978-981-13-3134-3_51, Online ISBN 978-981-13-3134-3, Print ISBN 978-981-13-3133-6. ***[Scopus Indexed]***
6. Ajay Bhargav Gedda, Manu and Subba Rao (2018). " A Review on Stability of Caisson Breakwater" in **Springer Nature** Singapore Pte Ltd. 2019., M. Rathinasamy et al. (eds.), Book title **'Water Resources and Environmental Engineering**-I, https://doi.org/10.1007/978-981-13-2044-6_8.
7. Sandesh Upadhyaya K., Subba Rao, and Manu (2022), "A Review of Computational Studies on Indian Coast Considering Climate Change Effects" in R. Jha et al. (eds.), River and Coastal Engineering, Water Science and Technology Library 117 https://doi.org/10.1007/978-3-031-05057-2_11, pp 123 – 134.

International Conference [38]

1. Manu, Kiran G. Shirlal and Subba Rao (2008). "Hydraulic Performance of Tandem Breakwater with Concrete cubes as Armour units", in **2nd KU-NITK Joint Seminar** on

Recent Advances in Engineering and Technology, held at Kagoshima University, Japan, during 27th and 28th, November, 2008, pp153-160.

2. Subba Rao, Kiran G. Shirlal and Manu (2008). "Experimental Investigation of Reef Protected Breakwater with Concrete Armour" in 3rd International Conference on Ocean Engineering (**ICOE-09**) held at I.I.T., Madras during 1st to 5th February, 2009, pp 564-573.
3. Manu, Kiran G. Shirlal and Subba Rao (2009). "Performance of Tandem Breakwater with Concrete cubes", in the 5th International conference on Asian Pacific Coast (**APAC-2009**) held at NTU, Singapore, from 13th to 16th October, 2009.
4. Manu, Kiran G. Shirlal and Subba Rao (2010). "Physical Model Study on Tandem Breakwater with Concrete Cube Armour", in the 9th International Conference on Hydro-Science and Engineering (**ICHE-2010**) held at IIT, Madras, from 2nd to 5th August, 2010 pp 31 -40.
5. Manu, Subba Rao and Kiran G. Shirlal (2011). "Development of Concrete Armoured Protected Breakwater Structure" in International Engineering Symposium-**IES-2011**, held at Kumamoto University, Japan, during March 3-5, 201, pp C5-2-1 to C5-2-8.
6. Manu, Kiran G. Shirlal and Subba Rao (2013). "Performance of Submerged Reef of Concrete Cubes", in **International Journal Conference on Civil and Transport Engineering**, held at Holiday-Inn, Dubai, during 4th and 5th October, 2013, pp 94-97.
7. Manu, "Stability studies on Tandem breakwater with concrete cube armour" in 11th International Conference on Hydro-Science and Engineering - **ICHE-2014** held at Hamburg University, Hamburg, Germany, during 28th Sept to 2nd Oct, 2014, ISBN 978-3-939230-32-8, pp 445-452.
8. Sindhu S., Kiran G. Shirlal and Manu (2015). "Prediction of wave transmission characteristics at submerged reef breakwater", in Science Direct, Elsevier, 8th International conference on Asian and Pacific Coasts (**APAC-2015**) held at IIT, Madras, Chennai during 7th to 10th September, 2015, Procedia Engineering 116 (2015) 262-268. ***[Scopus Indexed]***
9. Sreedhara B M. Manu and Pruthviraj U. (2015) "Comparative Study on Different Bridge Scour Monitoring Techniques" in Conference proceedings of **HYDRO 2015 - INTERNATIONAL** held at IIT Roorkee during 17th -19th December, 2015.
10. Geetha Kuntoji, Subba Rao and Manu (2015) "Stability Analysis of Submerged Reef using Soft Computing Techniques" in Conference proceedings of **HYDRO 2015 - INTERNATIONAL** held at IIT Roorkee during 17th -19th December, 2015.
11. Inthikab K. and Manu (2015) "Experimental Study of Submerged Breakwater made of Concrete Cubes" in Conference proceedings of **HYDRO 2015 - INTERNATIONAL** held at

IIT Roorkee during 17th -19th December, 2015.

12. Abhijith R, Manu (2015), “Planning of Oil Terminal for proposed Oil Refinery in Outer Harbour at Cochin Port" in Conference proceedings of **HYDRO 2015 - INTERNATIONAL** held at IIT Roorkee during 17th -19th December, 2015.
13. Geetha K., Jithin, Subba Rao, Manu, S. Mandal (2016), “Prediction of Wave Transmission using ANN for Submerged Reef of Tandem Breakwater” in International Conference on Emerging Trends in Engineering – **ICETE-2016** held during 12th &13th May, 2016 at NMAM Institute of Technology, Nitte, IJIRSET, Volume 5, Special Issue 9, May, 2016, ISSN (print) 2347-6710, ISSN (online) 2319-8753.
14. Sreedhar B.M, Sanooj, Manu, S. Mondal (2016), “Simulation of Local Scour around Circular and Round Nosed Bridge Pier using REFF3D” in International Conference on Emerging Trends in Engineering – **ICETE-2016** held during 12th &13th May, 2016 at NMAM Institute of Technology, Nitte, IJIRSET, Volume 5, Special Issue 9, May, 2016, ISSN (print) 2347-6710, ISSN (online) 2319-8753.
15. Sreedhar B.M, Manu, S. Mandal (2016), “CFD-3D Modeling of Local Scour around Circular Pier with REFF3D” in International Symposium on Lowland Technology – **ISLT-2016** held during 15th &17th September, 2016 at Mangalore, India, pp 459-463.
16. Jithin J.S., Geetha K., Manu, Subba Rao, S. Mandal (2016), “Study of Submerged Reef using SVM Technique”, in International Symposium on Lowland Technology – **ISLT-2016** held during 15th &17th September, 2016 at Mangalore, India, pp 404-408.
17. Sreedhar B.M, Manu, S. Mandal (2016), “CFD Modeling of Local Scour around Round Nosed Bridge Pier with REFF3D” in in Conference proceedings of **HYDRO 2016 - INTERNATIONAL** held at CWPRS, Pune during 8th -10th December, 2016, pp 1572-1578.
18. Geetha Kantoji, Subba Rao, Manu, S. Mandal (2016), “Prediction of Wave Transmission over Submerged Reef of Tandem Breakwater using SVM Technique” in Conference proceedings of **HYDRO 2016 - INTERNATIONAL** held at CWPRS, Pune during 8th -10th December, 2016, pp 1528-1534.
19. Manu, Pardha Saradhi J. and Ramanamurthy M.V. (2016), “Analysis and Design of Offshore Met Mast Supported on Jacket Substructure”, in 19th International Conference on Coastal and Ocean Engineering – **ICCOE-2017,** organized by World Academy of Science, Engineering and Technology (WASET.org) held at Zurich, Switzerland, during 13th -14th January, 2017, pp 718.
20. Sandesh Upadhyaya K., Subba Rao, and Manu (2018), “A Review of Computational Studies on Indian Coast Considering Climate Change Effects” in Conference Souvenir of **HYDRO**

2018 – INTERNATIONAL, Hydraulics, Water Resources and Coastal Engineering, held at NIT Patna, during 19th – 21st December, 2018, pp 263.

21. Sandesh Upadhyaya K., Subba Rao, and Manu (2019), "Historical data analysis of wind speeds from ERA-interim dataset and CMIP5 models for Arabian Sea'', in Book of Abstract of International Conference on Climate Change Impacts, Vulnerabilities, and Adaptation: Emphasis on India and Neighbourhood – **CCIVA-2019**, organized by Centre for Ocean, Rivers, Atmosphere and Land Sciences (CORAL) of Indian Institute of Technology, Kharagpur during 26th February – 2nd March, 2019, pp 38.
22. Kumaran V., Manu & Subba Rao (2019), "An Experimental Investigation on Toe Stability for Vertical Caisson Breakwater", in 9th International Conference on Civil Engineering Trends and challenges for sustainability (**ICCTCS-2019**) held at NMAMIT, Nitte during 23rd -24th May, 2019. Code 249519. ***[Scopus Indexed]***
23. Sandesh Upadhyaya K., Subba Rao and Manu (2019), "Simulation of Design Wave Height along Karnataka Coast using MIKE 21 Numerical Model" in International Symposium on Advances in Coastal Research with special reference to Indo Pacific [**AdCoRe IP-2019]** held at NCCR, NIOT Campus, Chennai, during 17th-19th December, 2019, pp - 90.
24. Kumaran V., Manu and Subba Rao (2019), "Experimental Investigation on the Performance of Vertical-Caisson Type Breakwater" in International Symposium on Advances in Coastal Research with special reference to Indo Pacific [**AdCoRe IP-2019]** held at NCCR, NIOT Campus, Chennai, during 17th-19th December, 2019, pp - 161.
25. Sandesh Upadhyaya K., Subba Rao and Manu (2019), "Evaluating Wind Speed Datasets for Indian Domain" in **HYDRO 2019 – INTERNATIONAL, Hydraulics, Water Resources and Coastal Engineering,** organized by Dept. of Civil Engg., Osmania University at Hotel Marriote Hyderabad, during 18th – 20st December, 2019, pp – 3220-3226.
26. Kumaran V., Manu and Subba Rao (2019), "Experimental Investigation on the Performance of Vertical-Caisson Type Breakwater" in **HYDRO 2019 – INTERNATIONAL, Hydraulics, Water Resources and Coastal Engineering,** organized by Dept. of Civil Engg., Osmania University at Hotel Marriote Hyderabad, during 18th – 20st December, 2019, pp – 526-534.
27. Sandesh Upadhyaya K., Subba Rao and Manu (2019), "Assessment of Wind and Wave Energy Potential along the Indian Coast" in International Conference on Recent Advances on Renewable Energy [**RARE-2020]** held at NITK, Surathkal, during 7th-9th February 2020, pp – 130-135.
28. Surakshitha, Manu and Subba Rao (2021), "Innovative Soft Options of Coastal Protection by Floating Seaweed Farm – A Review" in **HYDRO 2020 – INTERNATIONAL, Hydraulics,**

Water Resources and Coastal Engineering, organized by Dept. of Civil Engg., NIT Rourkela, Odisha, during 26th – 28th March, 2021, pp – 5.

29. Kumaran V., Manu and Subba Rao (2021), "Experimental investigation of dynamic pressure on wall type breakwater with slotted breakwater" in 1st International Conference on Recent Advancements in Civil Engineering (**ICRACE 2021**) held during 17th – 19th September, 2021, at National Institute of Technology, Silchar, Assam.
30. Surakshitha, Manu and Subba Rao (2021), "Physical model study on the soft option of coastal protection works by vegetation meadow - A Review" in **HYDRO 2021 – INTERNATIONAL, Hydraulics, Water Resources and Coastal Engineering,** organized by Dept. of Civil Engg., NIT Surat, during 23rd – 25th March, 2021, pp – 5.
31. Aparna Panda, Shivakumar B. Patil, Manu and D. Karmakar (2022), "Hydrodynamic study of pile restrained H-shaped stratified porous breakwater " accepted in **HYDRO 2022 – INTERNATIONAL, Hydraulics, Water Resources and Coastal Engineering,** organized by Punjab Engineering College, Chandigarh, during December 22nd – 24th 2022.
32. Binoy Sebastian, Manu and D. Karmakar (2022), "Numerical Study on the Dynamic Behaviour of a Semi-Submersible Floating Offshore Wind Turbine Platform Combined with an Oscillating Water Column", accepted in **HYDRO 2022 – INTERNATIONAL, Hydraulics, Water Resources and Coastal Engineering,** organized by Punjab Engineering College, Chandigarh, during December 22nd – 24th 2022.
33. Surakshitha, Manu, Subba Rao (2022) "Experimental investigation on suspended kelp farm for wave attenuating characteristics", 27th International Conference on Hydraulics, Water Resources and Coastal Engineering (**HYDRO 2022 INTERNATIONAL**) at Punjab Engineering, Chandigarh , India during December 22-24, 2022.
34. Harikrishnan T A, Manu, Subba Rao (2022) "Breakwater integrated with Oscillating water column wave energy converter", 27th International Conference on Hydraulics, Water Resources and Coastal Engineering (**HYDRO 2022 INTERNATIONAL**) at Punjab Engineering, Chandigarh , India during December 22-24, 2022.
35. Shankara Krishna A, Vishwanath Mane, Subba Rao and Manu "Effect of Data Normalisation in Estimating Wave Overtopping Discharge Parameter of Semi-circular Breakwater Using ANN and Random Forest". **1st International Conference on Novel Sustainable Concepts and Technology in Civil Engineering** at SJEC Mangalore, India during September 23-25, 2022, doi:10.1088/1755-1315/1149/1/012001.
36. Binoy Sebastian, Debabrata Karmakar, Manu Rao "Numerical Study on the Dynamic Behaviour of a Novel Semi-Submersible Floating Wind Turbine Platform" accepted in **9th**

International Conference on Renewable Energy and Conservation – ICREC-2024, to be held during 22nd – 24th November, 2024 at Rome, Italy.

37. Panda A., Shivakumar B. Karmakar D. and Manu. (2022), "Hydrodynamic study of a pile restrained H-shaped stratified porous breakwater", in 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), held at Punjab Engineering College Chandigarh, India during 22nd – 24th December, 2022.
38. Panda A., Karmakar D. and Manu. (2024), "Hydrodynamic assessment of a pair of pile restrained H-shaped floating breakwater", in World Ocean Science Congress 2024 (WOSC-2024), held at IIT Madras, India during 27th – 29th February, 2024.

National Conference [14]

1. Kiran G Shirlal, Subba Rao, Sreekar Reddy, Manu, (2005), "Defenced Breakwater – Can it be a solution for Tsunami", in National Conference on Hydraulics and Water Resources with special emphasis on Tsunami, **HYDRO-2005**, held at SIT, Tumkur, during 8th and 9th, December, 2005, pp 61-67.
2. Kiran G Shirlal, Subba Rao, Manu, (2006), "Performance of a submerged Reef – A Physical Model Study", in National Conference on Hydraulics and Water Resources with special emphasis on Interlinking of Rivers, **HYDRO-2006,** held at Pune during 8th and 9th of December, 2006, pp 540-548.
3. Subba Rao, Kiran G Shirlal, Manu and Pathanjali Bharadwaj (2007), "Laboratory Investigation on Tandem Breakwater with concrete cubes as Armour Units" in Fourth Indian National Conference on Harbour and Ocean Engineering (**INCHOE-07**) held at N.I.T.K., Surathkal during 12th to 14th December, 2007, Vol. 1, pp 352-360.
4. Subba Rao, Kiran G Shirlal and Manu, (2008), "Physical Model Study on Reef Protected Breakwater with Concrete Armour" in National Conference on Advances in Civil Engineering, **ACE-2008**, held at AEC-Bhatkal, during 9th and 10th of March, 2008, pp 65 - 68.
5. Kiran G Shirlal, Subba Rao and Manu, (2008), "Physical Modeling as a Methodology in Furthering Research in Civil Engineering" in National Conference on Advances in Civil Engineering, **ACE-2008**, held at AEC-Bhatkal, during 9th and 10th of March, 2008, pp 14 - 17.
6. Manu, Kiran G. Shirlal and Subba Rao (2010). "Stability of Reef Protected Breakwater with Concrete Armour" in National conference on Sustainable Water Resources Management

SWaRM - 2010 held during 7th – 9th January, 2010 at NITK, Surathkal.

7. Manu, Kiran G. Shirlal and Subba Rao (2010), "Performance of Tandem Breakwater with Concrete Cubes", in National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, **HYDRO-2010,** held at M.M. University, Mullana, Haryana during 16th and 18th of December, 2010, pp 135-140.
8. Manu, Kiran G. Shirlal and Subba Rao, "Physical Model Study on Submerged Reef of Concrete Cubes", in National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, **HYDRO-2011**, held at SVNIT, Surat, Gujarath during 29th and 30th of December, 2011, pp 509-516.
9. Manu, Kiran G. Shirlal and Subba Rao, "Stability of Breakwater Defenced by Seaward Submerged Reef of Concrete Cube Armour", in National Conference on Contemporary Civil Engineering Research and Practices – **CCERP 2012**, held during 20th and 21st April, at M.I.T., Manipal, pp 1441-1450.
10. Manu, Kiran G. Shirlal and Subba Rao, "An Experimental Study on Stability of Concrete Cube Armoured Tandem Breakwater", in National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, **HYDRO-2012**, held at IIT Bombay, Mumbai, during 7th and 8th of December, 2012, pp 1525-1534.
11. Abhilash Reddy, Manu (2014) "Fatigue analysis of fixed offshore platform" in 1st Annual Conference on Innovative and Developments in Civil Engineering, **ACIDIC – 2014** held at NITK, Surathkal during 19th to 20th May, 2014. Pp 701-706.
12. Sandesh Upadhyaya K., Subba Rao and Manu (2018), "Evolution of geosynthetics in coastal engineering – A review" in 6th Indian National Conference on Harbour and Ocean Engineering (**INCHOE-2018**) to be held at CWPRS, Pune during 26th to 28th September, 2018, pp 1006-1016.
13. Geetha Kuntoji, Subba Rao and Manu (2018), "Levenberg-Marquardt based Neural Network approach for stability parameters prediction of submerged reef of tandem breakwater" accepted in 6th Indian National Conference on Harbour and Ocean Engineering (**INCHOE-2018**) held at CWPRS, Pune during 26th to 28th September, 2018, pp 469-482.
14. Panda A., Karmakar D. and Manu. (2024), "Hydrodynamic response of a pile restrained H-shaped floating breakwater to irregular waves", in 3rd Indian Symposium on offshore geotechnics (ISOG-2024), held at Mangalore, India during 8th – 9th November, 2024.

ANNEXURE – II

International Conference

1. 4 Days 15th Congress of the Asian and Pacific Regional Division of the International Association for Hydraulic Research **(IAHR-2006**), An International symposium on Maritime Hydraulics, held during August 7th to 10th, 2006 at IIT-Madras.

2. **2nd KU-NITK Joint Seminar** on Recent Advances in Engineering and Technology, held at **Kagoshima University, Japan**, during 27th and 28th, November, 2008.

3. 5 Days 3rd International Conference on Ocean Engineering - **ICOE-2009** held at I.I.T., Madras, during 1st to 5th February, 2009.

4. 4 Days 5th International Conference on Asian Pacific Coast (**APAC-2009**) held at **NTU**, **Singapore**, from 13th to 16th October, 2009.

5. 4 Days 9th International Conference on Hydro-Science and Engineering - **ICHE-2010** held at I.I.T., Madras, during 2nd to 5th August, 2010.

6. 3 Days International Engineering Symposium - **IES-2011** held at **Kumamoto University, Japan**, during 3rd to 5th March, 2011.

7. 5 Days 12th International Coastal Symposium-ICS 2013 held at **Plymouth University, United Kingdom,** during 8th to 12th April, 2013.

8. 2 Days **International Journal Conference on Civil and Transport Engineering**, held at Holiday-Inn, Dubai, during 4th and 5th October, 2013.

9. 2 Days 11th International Conference on Hydro-Science and Engineering – **ICHE- 2014**, held at **Hamburg University**, Hamburg, Germany during 28th September to 2nd October, 2014.

10. 3 Days International Conference on Water Resources, Coastal and Ocean Engineering, **ICWRCOE'15**, held at NITK Surathkal, during 12th and 14th March, 2015.

11. 4 Days 8th International conference on Asian Pacific Coast (**APAC-2015**) held at IIT, Madras, Chennai during 7th to 10th September, 2015.

12. 3 Days International Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering **HYDRO 2015 - INTERNATIONAL** held at IIT Roorkee during 17th -19th December, 2015.

13. International Conference on Emerging Trends in Engineering – **ICETE-2016** held during 12th – 13th May, 2016 at NMAMIT, Nitte, Karnataka.

14. 2 Days 19th International Conference on Coastal and Ocean Engineering – **ICCOE-2017** held at Zurich, Switzerland during 13th to 14th January, 2017.

15. 4th International Conference in Ocean Engineering (**ICOE-2018**) held during 18th-21st February, 2018 at IIT Madras, Chennai.

16. International Conference on Civil Engineering Trends and Challenges for Sustainability – **CTCS-2019** held during 23rd – 24th May, 2019 at NMAMIT, Nitte, Karnataka.

17. International Symposium on Advances in Coastal Research with special reference to Indo Pacific [**AdCoRe IP-2019]** held at NCCR, NIOT Campus, Chennai, during 17th-19th December, 2019.
18. 3 Days International Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering **HYDRO 2019 - INTERNATIONAL** organized by Dept. of Civil Engg., Osmania University held at Hotel Marriote Hyderabad, during 18th – 20st December, 2019.

19. 3 Days 1st International Conference on Recent Advancements in Civil Engineering (**ICRACE 2021**) held during 17th – 19th September, 2021, at National Institute of Technology, Silchar, Assam.

National Conference

1. Two Days National Conference on Hydraulics and Water Resources with special emphasis on Tsunami, **HYDRO-2005**, held at SIT, Tumkur, organized by Indian Society for Hydraulics held during 8th – 9th , Dec, 2005.

2. 3 days Fourth Indian National Conference on Harbour and Ocean Engineering (**INCHOE-07**) held at N.I.T.K., Surathkal during 12th to 14th December, 2007.

3. 3 days National Conference on Sustainable Water Resources Management **SWaRM - 2010** held during 7th – 9th January, 2010 at NITK, Surathkal.

4. 3 Days National Conference on Hydraulics, Water Resources, Coastal and Environmental Wngineering, **HYDRO-2010**, held at M.M. University, Mullana, Haryana during 16th and 18th of December, 2010.

5. 2 Days National Conference on Contemporary Civil Engineering Research And Practices – **CCERP 2012**, held during 20th and 21st April, at M.I.T., Manipal.

6. 2 Days National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, **HYDRO-2012**, held at IIT Bombay, Mumbai, during 7th and 8th of December, 2012.

7. 2 Days National Annual Conference on Innovations and Developments in Civil Engineering, **ACIDIC-2014**, held at NITK Surathkal, during 19th and 20th May, 2014.

8. 2 Days National Conference on “Emerging Trends in Science and Engineering” - NCETSE-2017, held at SMVITM, Bhantkal, Udupi, during 23rd & 24th February, 2017.

9. 3 days 6th Indian National Conference on Harbour and Ocean Engineering (**INCHOE-18**) held at CWPRS, Pune during 26th to 28th September, 2018.

10. 3 Days International Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, **HYDRO-2019**, held at Osmania University, Hyderabad , during 18th to 20th of December, 2019.

11. 3 Days International Symposium on "Advances in Coastal Research with Special Reference to Indo Pacific -2019 **(AdCoRe IP – 2019)** held at NCCR Chennai during 17th – 20th December, 2019.
12. 3 Days International Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, **HYDRO-2022**, held at Punjab Engineering College, Chandigarh, during 22nd – 24th of December, 2022.

Workshop / Seminar / STTP Organized

1. One Day Workshop on "Recent Trends in System Applications as Applied to Civil Engineering" held on 9th January, 2015 at NITK, Surathkal.
2. One Day Workshop on "Innovative Concepts in Ocean Engineering" held on 27th April, 2019 at NITK, Surathkal.
3. One Day Workshop on "Innovative Concepts in Ocean Engineering" held on 28th July, 2023 at NITK, Surathkal.

Workshop / Seminar / STTP Attended

1. Two days Workshop on "Coastal Erosion and Protection Management" held at KREC during 8th and 9th September, 2001.

2. Two days Workshop on "Earthquake Resistance Structure" held at KREC during September, 2003.
3. One Day Workshop on "Wetland Monitoring and Management" held at N.I.T.K, Surathkal, during February 02, 2005.

4. Two week's AICTE/ISTE sponsored Short Term Training Programme- STTP (Winter school) on " Planning, Development and Management of Modern Urban Core Infrastructure Solutions for India " conducted during 20th – 31st December 2004, in the Applied Mechanics Dept., NITK Surathkal.

5. One Day Indo Japan Workshop on “Recent Advances in Geotechnical Engineering” held at N.I.T.K, Surathkal, on 4th March, 2008.

6. Two days Workshop on “Mastering the Arts and Science of Teaching Engineering & Research” held at NITK during 13th to 14th March, 2008.

7. Two week's AICTE/MHARD sponsored Summer School on “Water Resources Development and Management” held during 28th July – 8th August 2008, in the Dept of Applied Mechanics., NITK Surathkal.

8. 3 Days Faculty Traning Programme on “Instructional Design and Delivery” organized by N.I.T.T.T.R., Chennai held during 22nd – 24th August, 2008, at NITK Surathkal.

9. 5 Days Short term course on “Offshore structures – Materials, Analysis, Design and Construction” held during 14th – 18th December, 2009 at I.I.T., Madras, Chennai.

10. 3 Days Training Programme on “Hydrological Conservation and Management of Lakes” held during 26th – 28th March, 2012 at N.I.H., Roorkee, Uttarakhand.

11. 2 Days National Workshop on “Conservation of Water Resources of West flowing Rivers in Coastal Karnataka” held during 14th – 15th December, 2012 at NITK Surathkal.

12. 2 Days International Workshop on “Geosynthetic and Modern Materials in Coastal Protection and Related Applications”, held at Indian Institute of Technology, Madras, Chennai, during 4th - 5th March, 2013.

13. One Day Workshop on “Recent Trends in System Applications as Applied to Civil Engineering” held on 9th January, 2015 at NITK, Surathkal.

14. 2 Days DFI-NITK Workshop on “Recent Trends in Piling and Ground Improvement” held during 31st July and 1st August, 2015 at NITK Surathkal.

15. One Day Workshop on “Tsunami Threat and its Mitigation along Indian Coast” held on 2nd November, 2015 at NITK, Surathkal.

16. One Day Workshop on “Coastal Hydrodynamics and Modelling” held on 7th October, 2016 at NITK, Surathkal.

17. 2 Days Workshop on “Computational Marine Hydrodynamics” held during 19th – 20th January, 2017 at NITK Surathkal.

18. One Day Workshop on “Past, Present & Future Scenario of Marine Structures” held on 20th February, 2017 at NITK, Surathkal.

19. One Day National Workshop on “ Innovative Concepts in Ocean Engineering” held at NITK Surathkal, on 26th April, 2019

20. 3 Days National Workshop on “Recent Research Trends in Ocean Engineering, Science and Technology” held at IIT, Bombay during 22nd – 24th September, 2022.