



Dr. DEBABRATA KARMAKAR

Department of Water Resources and Ocean Engineering
National Institute of Technology Karnataka, Surathkal, P.O: Srinivasnagar
Mangalore – 575025, Karnataka, India

1. Research Interest:

- Ocean and Coastal Engineering
- Offshore Renewable Energy (Waves and Wind)
- Fluid Structure Interaction
- Hydroelasticity
- Machine Learning in Coastal Engineering

2. Personal Profile:

Father's Name: Shri. S. C. Karmakar

Nationality: Indian

Date of Birth: 1st October 1979

Marital status: Single

Sex: Male

3. Research/Teaching Experience:

<i>S.No</i>	<i>Organization</i>	<i>Designation</i>	<i>Period</i>
1.	Department of Ocean Engineering & Naval Architecture, IIT Kharagpur	Research Scholar	August 2004 – November 2009
2.	Centre for Marine Technology and Ocean Engineering, IST, Lisbon, Portugal.	Research Associate	4 th January 2010-30 th April 2015
3.	School of Naval Architecture and Ocean Engineering, Indian Maritime University, Visakhapatnam Campus, India, Ministry of Shipping, GOI.	Assistant Professor	2 nd February 2013-5 th August 2013
4.	Department of Water Resources and Ocean Engineering, NITK Surathkal	Assistant Professor	5 th May 2015-Till Date

4. Patents Filed:

- Rony J.S.& D. Karmakar. “*Frustum Tension-Leg Platform for Floating Wind Turbine*”.
- Shivakumar B. Patil & D. Karmakar. “*Method, System and Apparatus for Floating Breakwater Integrated Wave-Energy Power Generation*”.

5. Researcher Association ID:

<i>Researcher ID</i>	<i>Scopus Author ID</i>	<i>ORCID ID</i>	<i>Web of Science ID</i>
B-4279-2014	23012034300	0000-0001-6596-3201	AAU-3886-2021

6. Projects Involved:

- A study on the interaction of surface waves with floating and submerged flexible structures, April 2004 – Dec 2007, Naval Research Board (NRB), New Delhi Ref No: IIT/SRIC/FWS/2004/40, Dept. of Ocean Engineering & Naval Architecture, IIT Kharagpur.
- Mathematical techniques in the wave interaction with flexible floating structures, April 2008 – Nov 2009, Council for Scientific & Industrial Research (CSIR), New Delhi, Ref No: IIT/SRIC/16/2008/23, Dept. of Ocean Engineering & Naval Architecture, IIT Kharagpur.
- Dynamics and hydrodynamics of ship in approaching fairways, Jan 2010 – Mar 2011, Portuguese Foundation for Science and Technology (FCT), Portugal, Ref No: PTDC/EME-MFE/75233/2006, Centre for Marine Technology and Engineering, IST, Lisbon, Portugal.
- Wave interaction with coastal structures in shallow waters, Apr 2011 – Dec 2011, Portuguese Foundation for Science and Technology (FCT), Portugal, Ref No: PTDC/ECM/111242/2009, Centre for Marine Technology and Engineering, IST, Lisbon, Portugal.
- Dynamic analysis of offshore floating wind turbine, Jan 2012 – April, 2015, Portuguese Foundation for Science and Technology (FCT), Portugal, Ref No: SFRH/BPD/81010/2011, Centre for Marine Technology and Engineering, IST, Lisbon, Portugal.

7. Sponsored Projects:

- Mathematical techniques in the wave interaction with flexible floating structures, (Principal Investigator), Council for Scientific and Industrial Research (CSIR), New Delhi, Ref No: IIT/SRIC/16/2008/23, Rs.3.76 lac, (Rs 14,000/- pm), April 2008 –Nov 2009.
- Wave structure interaction problems with application to hydroelasticity, (Principal Investigator), National Board for Higher Mathematics, Department of Atomic Energy, Mumbai, Ref No: 2/40(25)/2009-R&D-II/5623, Rs. 5.0 lac (Rs 18,000/- pm), Nov 2009.
- Dynamic and hydrodynamic analysis of offshore floating platforms for wind turbines, (Principal Investigator), Portuguese Foundation for Science and Technology (FCT), Portugal, Ref No: SFRH/BPD/81010/2011, 58,720 € (1495€ pm), Jan 2012 – April 2015.
- Mathematical techniques in the gravity wave interaction with floating offshore structures, (Principal Investigator), Science and Engineering Research Board (SERB), DST New Delhi, India, Rs 27.5 Lacs, 2015.
- Coupled dynamic analysis associated with the response and design loads of offshore floating wind turbines, (Principal Investigator), File No: YSS/2014/000812, Science and Engineering Research Board (SERB), DST New Delhi, India, Rs 25.32 Lacs, 2015-2018.
- Performance of combined wave and wind energy platform, (Principal Investigator), File No: DST/INT/Portugal/P-13/2017, India-Portugal Bilateral Technological Cooperation, Department of Science and Technology (DST), New Delhi, India, Rs 13.5 Lacs, 2017-2020.
- Design, analysis and development of combined wave and wind energy multi-use platform, (Principal Investigator), File No: CRG/2018/004184, Science and Engineering Research Board (SERB), DST New Delhi, India, Rs 43.30 Lacs, 2019-2022.

- Desalination of sea-water using wave and wind power (Principal Investigator), Vision Group on Science and Technology (VGST), Government of Karnataka, India Rs 3.00 Lakh, File No: VGST/RFS-F/GRD-901/2020-21/198, 2020-2022.
- Design, analysis of development of hybrid offshore floating breakwater, Dr. D. Karmakar (PI) and Dr. Manu (Co-PI), File No: DW-01013(13)/3/2021-Development Wing 3-2021, Ministry of Ports, Shipping and Waterways, New Delhi, India, Rs 49.21 Lacs, 2021-2023.
- Laboratory scale demonstration of a Kite based wind power system, Dr. A Karthikeyan (PI-EEE), Dr. Yashwant Kashyap (Co-PI-EEE), Dr. Manjunatha Sharma (Co-PI-EEE) and Dr. D. Karmakar (Co-PI-WROE), File No: CRG/2021/007655, Science and Engineering Research Board (SERB), DST New Delhi, India, Rs 57.74 Lacs, 2021-2024.

8. Workshops & Training Camps Attended:

- Mathematics Training & Talent Search–Level–I Organizing Chairman: Prof. S. Kumaresan, University of Mumbai, *Department of Mathematics, Indian Institute of Technology, Bombay, India, 21st May – 16th June, 2001.*
- Interactive Mathematics & Training Camp Organizing Chairman: Prof. Swadhyn Pattanayak, *Institute of Mathematics & Application, Bhubaneswar, India, 15th Oct – 10th Nov, 2001.*
- Training Camp on Advanced Operator Theory Organizing Chairman: Prof. B.V Rajarama Bhatt, *Indian Statistical Institute, Bangalore, India, 24th Dec – 4th Jan, 2001.*
- Mathematics Training & Talent Search–Level–II Organizing Chairman: Prof. S. Kumaresan, University of Mumbai, *Department of Mathematics, Indian Institute of Technology, Bombay, India, 20th May – 15th June, 2002.*
- National Seminar on Analysis & Related Topics Organizing Chairman: Prof. Swadhyn Pattanayak, *Institute of Mathematics & Application, Bhubaneswar, India, 26th – 27th May, 2003.*
- International Conference on Mathematical Fluid Dynamics, Organizing Chairman: Prof. T. Amaranth, *Department of Mathematics, University of Hyderabad, Hyderabad, India, 18th – 20th Aug, 2005.*
- Workshop on Acoustic in Fluid Structure interaction: Acoustic Fluid-Structure Interactions: Fundamentals and Computational Methods, Organizing Chairman: Prof. S. K Bhattacharya, *Department of Ocean Engineering, Indian Institute of Technology, Chennai, India, 28th – 30th Aug, 2005.*
- 1st National Workshop on Techniques in Applied Mathematics, Organizing Chairman: Prof. Uma Basu, *Department of Mathematics, Calcutta University, India, 18th – 28th Oct, 2005.*
- Workshop on Non-Linear Partial Differential Equation, Organizing Chairman: Prof. P. L. Sachdev, *Non-Linear Studies Group, Indian Institute of Science, Bangalore, India, 19th – 23rd Dec, 2005.*
- 2nd National Workshop on Techniques in Applied Mathematics, Organizing Chairman: Prof. Uma Basu, *Department of Mathematics, Calcutta University, India, 20th – 28th June, 2006.*

- DST Workshop on Computational Fluid Mechanics (CFD) with thrust on Atmospheric Science, Organizing Chairman: Prof. N Rudraiah, *Department of Mathematics, Bangalore University, India, 26th Oct – 9th Nov, 2006.*
- 18th International Ship and Offshore Structure Congress, Organizing Chairman: Prof. Wolfgang Fricke, *Rostock, Germany, 10th -13th September 2012.*
- Atlantic Stakeholder Conference, *Porto, Portugal, 20th January 2015.*
- 19th International Ship and Offshore Structure Congress, Organizing Chairman: Prof. Carlos Guedes Soares, *Cascais, Portugal, 6th -10th September 2015.*
- *Tsunami Threat and Its Mitigation along Indian Coast, Department of Applied Mechanics and Hydraulics, NITK Surathkal, 2nd November 2015.*
- *Coastal Hydrodynamics and Modelling, Department of Applied Mechanics and Hydraulics, NITK Surathkal, 7th October 2016.*
- *Faculty Pedagogy Training Programme, TEQIP-III, National Institute of Technology Karnataka, Surathkal, 7th – 8th September 2018.*
- *Innovative Concepts in Ocean Engineering, Department of Applied Mechanics and Hydraulics, NITK Surathkal, 26th April 2019.*

9. Workshops & GIAN Courses Organized/Approved:

- Offshore Renewable Energy (Wave, Wind and Tidal Energy), Instructor: Prof. Tomoki Ikoma, Nihon University, Japan, GIAN, *MHRD, New Delhi, 7th – 11th November, 2016, Dr. Debabrata Karmakar & Prof. Arkal Vittal Hegde.*
- Computational Marine Hydrodynamics, Workshop, *TEQIP-II, 19th – 20th January, 2017, Dr. Debabrata Karmakar & Prof. Arkal Vittal Hegde.*
- Present, Past and Future Scenarios of Marine Structures, Workshop, *TEQIP-II, 20th February, 2017, Dr. Debabrata Karmakar & Dr. T. Nasar.*
- Design and Analysis of offshore Floating Wind Turbine, Instructor: Prof. Motohiko Murai, Japan, GIAN, *MHRD, New Delhi, 7th – 11th September, 2019, Debabrata Karmakar & Prof. Arkal Vittal Hegde.*
- Ocean Wave Energy Conversion Technology and Modelling Techniques, Instructor: Prof. Matt Foley, UK, *GIAN, MoE, 2023, (Approved).*
- Reliability Based Design Procedure of Offshore Wind Turbine Foundation, Instructor: Prof. P.K. Das, UK, *GIAN, MoE, 2023, (Approved).*

10. Publications:

(a) Journal papers published/accepted:

1. D. Karmakar & T. Sahoo, (2005). Scattering of surface waves by an articulated floating elastic plate in water of infinite depth, *Marine Structures*, Vol.18 (5-6) pp. 451-471.

2. D. Karmakar, J. Bhattacharjee & T. Sahoo, (2007). Expansion formulae for wave structure interaction problems with applications in hydroelasticity, *International Journal of Engineering Science*, Vol. 45 (10), pp. 807-828.
3. J. Bhattacharjee, D. Karmakar & T. Sahoo, (2007). Transformation of flexural gravity waves by heterogeneous boundaries, *Journal of Engineering Mathematics*, Vol. 62 (2), pp. 173-188.
4. D. Karmakar & T. Sahoo, (2007). Scattering of flexural gravity waves by abrupt change in water depth, *Proceedings of Applied Mathematics and Mechanics*, Vol. 7(1), pp 2050021-2050022.
5. D. Karmakar & T. Sahoo, (2008). Gravity wave interaction with floating membrane due to change in water depth, *Ocean Engineering*, Vol. 35(7), pp. 598-615.
6. D. Karmakar, J. Bhattacharjee & T. Sahoo, (2009). Wave interaction with multiple articulated floating elastic plates, *Journal of Fluids and Structures*, Vol. 25(6), pp.1065-78.
7. D. Karmakar, J. Bhattacharjee & T. Sahoo, (2010). Oblique flexural gravity wave scattering due to changes in bottom topography, *Journal of Engineering Mathematics*, Vol. 66, pp.325–341.
8. S.C Mohapatra, D. Karmakar & T. Sahoo, (2011). On capillary gravity wave motion in two-layer fluids, *Journal of Engineering Mathematics*, Vol. 71(3), pp. 253-277,
9. D. Karmakar & C. Guedes Soares, (2012). Wave scattering by moored floating elastic plate, *Applied Ocean Research*, Vol. 34(1), pp. 135-149.
10. D. Karmakar & C. Guedes Soares, (2012). Oblique wave scattering by moored floating membrane due to heterogeneous bottom topography, *Ocean Engineering*, Vol. 54, pp. 87-100.
11. D. Karmakar, J. Bhattacharjee & C. Guedes Soares, (2013). Scattering of gravity waves by multiple surface-piercing floating membrane, *Applied Ocean Research*, Vol. 39(1), pp. 40-52.
12. D. Karmakar & C. Guedes Soares, (2014). Wave transformation due to multiple bottom-standing porous barriers, *Ocean Engineering*, Vol. 80, pp. 50-63.
13. C. Guedes Soares, J. Bhattacharjee & D. Karmakar, (2014). Overview and prospects for offshore wave and wind energy, *Brodogradnja*, Vol. 65(2), pp. 91-113.
14. D. Karmakar & C. Guedes Soares, (2015). Propagation of gravity waves past multiple bottom standing barriers, *Journal of Offshore Mechanics and Arctic Engineering (ASME)*, Vol-137(1), pp. 01101-1 - 01101-10.
15. H. Bagbanci, D. Karmakar & C. Guedes Soares, (2015). Comparison of spar-type and semi-submersible type floaters concepts of offshore wind turbines using long-term analysis, *Journal of Offshore Mechanics and Arctic Engineering (ASME)*, Vol-137(4), pp. 061601-01-10.
16. Shan Wang, D. Karmakar & C. Guedes Soares, (2016). Hydroelastic impact of a horizontal floating plate with forward speed, *Journal of Fluids and Structures*, Vol 60, pp 97 -113.
17. D. Karmakar, H. Bagbanci & C. Guedes Soares, (2016). Long-term extreme load prediction of spar and semi-submersible floating wind turbines using the Environmental Contour method, *Journal of Offshore Mechanics and Arctic Engineering (ASME)*, Vol-138(2), pp. 021601.
18. Ashank Sinha, D. Karmakar & C. Guedes Soares, (2016). Performance of optimally tuned arrays of heaving point absorbers, *Renewable Energy*, 92, 517-531.

19. Ashank Sinha, D. Karmakar & C. Guedes Soares, (2016). Shallow water effects on a hydraulic power take-off WEC with reactive control, *International Journal of Ocean and Climate Systems (Sage Publisher)*, 7(3), 108-117.
20. Ashank Sinha, D. Karmakar & C. Guedes Soares, (2016). Hydrodynamic behaviour of concentric arrays of point absorbers attached to a bottom-mounted platform, *International Journal of Ocean and Climate Systems (Sage Publisher)*, 7(3), 88-94.
21. Praveen, K.M., D. Karmakar & T. Nasar, (2016). Hydroelastic analysis of floating elastic thick plate in shallow water depth, *Perspective in Science (Elsevier)*, 8, 770-772.
22. Anoop Shirklol., T. Nasar & D. Karmakar, (2016). Wave interaction with very large floating structures (VLFS) using BEM approach – revisited, *Perspective in Science (Elsevier)*, 8, 533-535.
23. D. Karmakar & C. Guedes Soares, (2018). Wave motion control over submerged horizontal plates, *Journal of Offshore Mechanics and Arctic Engineering*, 140, 031101-1-10.
24. Praveen, K.M., D. Karmakar & C. Guedes Soares, (2018). Hydroelastic analysis of articulated floating elastic plate based on Timoshenko-Mindlin plate theory, *Ships and Offshore Structures (Taylor and Francis)*, 13(S1), 287-301.
25. Praveen, K.M., D. Karmakar & C. Guedes Soares, (2019). Influence of different support conditions on the hydroelastic behaviour of floating thick elastic plate, *Journal of Marine Science and Application (Springer)*, 18(3), 295-313.
26. V. Venkateshwarlu & D. Karmakar, (2019). Wave scattering by vertical porous block placed over flat and elevated seabed, *Marine Systems and Ocean Technology (Springer)*, 14(2-3), 85-109.
27. Somasundram S., Panneer Selvam R. and D. Karmakar, (2019), Hydroelastic analysis of a truss pontoon mobile offshore base, *Ocean Systems Engineering*, 9(4), 423-448.
28. Praveen, K.M., D. Karmakar & C. Guedes Soares, (2020). Wave Interaction with floating elastic plate based on Timoshenko-Mindlin plate theory, *Journal of Offshore Mechanics and Arctic Engineering (ASME)*, 142(1), 011601-1-15.
29. V. Venkateshwarlu & D. Karmakar, (2020). Influence of impermeable elevated bottom on the wave scattering due to multiple submerged porous structure, *Journal of Applied Fluid Mechanics*, 13(1), 371 – 385.
30. Vijay, K.G., D. Karmakar & C. Guedes Soares, (2020). Long-term response analysis of TLP-type offshore floating wind turbine, *ISH Journal of Hydraulic Engineering (Taylor and Francis)*, 26(1), 31-43.
31. V. Venkateshwarlu & D. Karmakar, (2020), Significance of seabed characteristics in the presence of submerged stratified porous block, *Coastal Engineering Journal (Springer)*, 62(1), 1-22.
32. Praveen, K.M., D. Karmakar & C. Guedes Soares, (2020), Hydroelastic analysis of periodic arrays of multiple articulated floating elastic plate, *Ships and Offshore Structures (Taylor and Francis)*, 15(3), 280-295.

33. V. Venkateswarlu & D. Karmakar, (2020), Wave transformation due to barrier-rock porous structure placed on step-bottom, *Ships and Offshore Structures (Taylor and Francis)*, 15(8), 895-909.
34. V. Venkateswarlu & D. Karmakar, (2020), Wave motion over stratified porous absorber combined with seaward vertical barrier, *Journal of Engineering for Maritime Environment-Part-M*, 234(4), 830-845.
35. V. Venkateswarlu & D. Karmakar, (2020), Gravity wave trapping by series of horizontally-stratified wave absorbers away from various seawall, *Journal of Offshore Mechanics and Arctic Engineering (ASME)*, 142(6), 061201.
36. Vijay, K.G., V. Venkateswarlu, D. Karmakar (2020), Scattering of gravity waves by multiple submerged rubble-mound breakwaters, *Arabian Journal of Science and Engineering*, 45, 8529-8550.
37. V. Venkateswarlu, Praveen, K.M. & D. Karmakar, (2020), Surface gravity wave scattering by multiple energy absorbing structures of variable horizontal porosity, *Coastal Engineering Journal*, 62(4), 504-526.
38. V. Venkateswarlu & D. Karmakar, (2021), Numerical investigation on the wave dissipating performance due to multiple porous structures, *ISH Journal of Hydraulic Engineering, (Taylor and Francis)*, 26(Sup-1), 202-219.
39. Shivakumar B. Patil & D. Karmakar (2021), Performance evaluation of submerged breakwater using Multi-domain Boundary Element Method, *Applied Ocean Research*, 114, 102760.
40. Rony, J.S. & D. Karmakar, (2021), Coupled dynamic analysis of spar-type floating wind turbine under different wind and wave loading, *Marine Systems and Ocean Technology*, 16, 169-198.
41. Praveen, K.M., V. Venkateswarlu & D. Karmakar, (2022), Hydroelastic response of floating elastic plate in the presence of vertical porous barriers, *Ships and Offshore Structures*, 17(2), 457-471.
42. V. Venkateswarlu, Praveen K.M, Vijay, K.G., K. Anil & D. Karmakar (2022), Oblique wave motion through two-layer barrier-rock breakwater placed on elevated bottom, *Ships and Offshore Structures (Taylor and Francis)*, 17(4), 852-865.
43. Rony, J.S. & D. Karmakar, (2022), Coupled dynamic analysis of hybrid offshore wind turbine and wave energy converter, *Journal of Offshore Mechanics & Arctic Engineering*, 144(3), 032002-1-13.
44. Praveen, K.M., V. Venkateswarlu & D. Karmakar, (2022), Wave transformation due to finite floating elastic plate with abrupt change in bottom topography, *Ships and Offshore Structures (Taylor and Francis)*, 17(8), 1824-1842.
45. Sreebhadra, M.N., K.R. Athul Krishna, & D. Karmakar (2022), Gravity wave dissipation due to pile-rock porous structure with barrier, *Journal of Engineering for Maritime Environment-Part-M*, 237(1), 54-73.
46. Shivakumar B. Patil & D. Karmakar (2022), Hydrodynamic performance of submerged breakwaters in tandem with thin-walled submerged reef structure, *Journal of Engineering for Maritime Environment-Part-M*, 237(2), 322-343.

47. K.R. Athul Krishna, Khansa Abdullah & D. Karmakar (2022), Dissipation of gravity waves due to submerged porous plate coupled with porous structures, *Journal of Offshore Mechanics & Arctic Engineering*, 145(1), 011201.
48. Shivakumar B. Patil & D. Karmakar (2022), Hydrodynamic analysis of floating tunnel with submerged rubble mound breakwater, *Ocean Engineering*, 264, 112460.
49. K.R. Athul Krishna, Abhishek G. Karaseeri & D. Karmakar (2023), Oblique wave propagation through composite permeable porous structures, *Marine Systems and Ocean Technology*, 17(3-4), 164-187.
50. Shivakumar B. Patil & D. Karmakar (2023), Hydrodynamic performance of fixed floating structure coupled with submerged breakwaters using Multi-domain Boundary Element Method, *Journal of Waterway, Port, Ocean and Coastal Engineering*, 149(4), 04023009.
51. Rony, J.S. & D. Karmakar, (2023), Performance of hybrid TLP floating wind turbine combined with arrays of heaving point absorber, *Ocean Engineering*, 282, 114939.
52. Shivakumar B. Patil & D. Karmakar (2023), Hydrodynamic performance of wave energy converter integrated with pile restrained floating structure near a partially seawall, *Ocean Engineering*, 285(1), 115254.
53. Roystan V. Castelino, Pankaj Kumar, Y. Kashyap, A Karthikeyan, M. K. Sharma, D. Karmakar & Panagiotis Kosmopoulos (2023). Exploring the potential of kite-based wind power generation: an emulation-based approach, *Energies*, 16(13), 5213.
54. Rony, J.S. & D. Karmakar, (2023), Dynamic analysis of Frustum TLP- type wind turbine multi-purpose floating platform, *Ships and Offshore Structures (Taylor and Francis)*, (Accepted).
55. K.R. Athul Krishna, Khansa Abdullah & D. Karmakar (2023), Wave energy damping due to coupled porous structure and submerged porous plate, *Journal of Marine Science and Application*, (Accepted).
56. Rony, J.S. & D. Karmakar, (2023), Coupled dynamic analysis of hybrid STLP-WEC offshore floating wind turbine with different mooring configurations, *Journal of Ocean Engineering and Marine Energy (Springer)*, (Accepted).
57. R.R. Vidyabhushan & D. Karmakar, (2023), Numerical investigation of Edinburgh Duck wave energy converter integrated to floating breakwater, *Marine Systems and Ocean Technology*, (Accepted).
58. Rony, J.S. K. Chaitanya Sai & D. Karmakar, (2023), Numerical investigation of offshore wind turbine combined with Wave Energy Converter, *Marine Systems and Ocean Technology*, (Accepted).

(b) Technical Reports:

1. Z. Gao, H.B. Bingham, R. Nicholls-Lee, F. Adam, D. Karmakar, D.G. Karr, I. Catipovic, G. Colicchio, W. Sheng, P-F Liu, Y. Takaoka, J. Slätte, H-K Shin, S.A. Mavrakos, Y.T. Jhan, H. Ren, (2015), Offshore Renewable Energy, Committee V.4, 19th International Ship and Offshore Structure Congress, Guedes Soares, C & Garvatov, Y. (Eds), Taylor and Francis Group, London, UK, Vol 2, pp. 670-722, (ISBN 978-1-138-02895-1).
2. Z. Gao, H.B. Bingham, D. Ingram, A. Kolios, D. Karmakar, T. Utsunomiya, I. Catipovic, G. Colicchio, J.M. Rodrigues, F. Adam, D.G. Karr, C. Fang, H-K Shin, J. Slätte, C. Ji, W. Sheng, P-F Liu and L. Stoev, (2018), Offshore Renewable Energy, Committee V.4, 20th International

Ship and Offshore Structure Congress, Mirek Kaminski, Phillipe Rigo (Eds), IOS Press, The Netherlands, Vol-2, pp. 193-278.

3. S. Schreier, F. Arena, H. Bingham, N. Fonseca, Z. Hu, D. Karmakar, E. Kim, H. Li, P. Liu, M. Murai, S. J. Pahos, C. Tian and G. Wang, (2022), Ocean Space Utilization, Committee V.6, 21st International Ship and Offshore Structure Congress, *Xiaozhi (Christina) Wang and Neil Pegg (Eds.)*, The Society of Naval Architects & Marine Engineers (SNAME), Vol-2, pp. 379-444.

(c) Book Chapters:

1. D. Karmakar & T. Sahoo, (2006), Flexural gravity wavemaker problem-revisited, *Fluid Mechanics in Industry and Environment*, B.S Dandapat & B.S Majumder (Eds.), Research Publishing Services, Singapore, pp 285-291.
2. D. Karmakar & T. Sahoo, (2006), The effect of articulation on very large floating structures in water of finite depth, *Recent Advances in Computational Mechanics and Simulation*, S. K. Dwivedy, D. Maity (Eds.), I.K. International Publishing House, India, ISBN 81-898661-6-8, Vol II, pp 1240-1247.
3. D. Karmakar, J. Bhattacharjee & T. Sahoo, (2011), Contemporary approaches in the hydroelastic analysis of floating and submerged structures, *Marine Technology and Engineering*, C. Guedes Soares et al., (Eds), London, UK: Taylor & Francis Group, Vol – 1, pp 461-478.
4. D. Karmakar & C. Guedes Soares, (2012), Interaction of gravity waves with moored floating membrane, *Maritime Technology and Engineering*, C. Guedes Soares et al., (Eds), London, UK: Taylor & Francis Group, Vol-1, pp. 181-187.
5. H. Bagbanci, D. Karmakar, & C. Guedes Soares, (2011), Review of offshore wind turbines concepts, *Maritime Technology and Engineering*, C. Guedes Soares et al., (Eds), London, UK: Taylor & Francis Group, Vol-2, pp. 553-562.
6. H. Bagbanci, D. Karmakar & C. Guedes Soares, (2011), Effect of the environment on the design loads on behavior offshore wind turbine, *Maritime Technology and Engineering*, C. Guedes Soares et al., (Eds), London, UK: Taylor & Francis Group, Vol-2, pp. 547-552.
7. D. Karmakar & C. Guedes Soares, (2014), Reliability based design loads of an offshore semi-submersible floating wind turbine, *Developments in Maritime Transportation and Exploitation of Sea Resource –C. Guedes Soares & López Peña (Eds)*, Taylor & Francis Group, London, ISBN 978-1-138-00124-4, Vol-2, pp. 919-926.
8. D. Karmakar & C. Guedes Soares, (2015), Hydrodynamic analysis of vertical flapping thin plate in oblique incident waves, *Maritime Technology and Engineering*, Guedes Soares, C. & Santos T.A. (Eds.), Taylor & Francis Group, London, UK, Vol-2, pp. 1251-1258.
9. S. Wang, D. Karmakar & C. Guedes Soares, (2015), Hydroelastic impact due to longitudinal compression on transient vibration of a horizontal elastic plate, *Maritime Technology and Engineering*, Guedes Soares, C. & Santos T.A. (Eds.), Taylor & Francis Group, London, UK, Vol-2, pp. 1073-1080.
10. Ashank Sinha, D. Karmakar & C. Guedes Soares, (2015), Effect of floater shapes on the power take-off of wave energy converters, *Renewable Energies Offshore*, Guedes Soares, C.(Ed.), Taylor & Francis Group, London, UK, pp. 375-382.

11. Ashank Sinha, D. Karmakar & C. Guedes Soares, (2015), Numerical modelling of an array of heaving point absorbers, *Renewable Energies Offshore*, Guedes Soares, C.(Ed.), Taylor & Francis Group, London, UK, pp. 383-391.
12. N.T. Bozo, D. Karmakar & C. Guedes Soares, (2015), Numerical investigation of a submerged surging plate wave energy converter, *Renewable Energies Offshore*, Guedes Soares, C.(Ed.), Taylor & Francis Group, London, UK, pp. 515-522.
13. J.F.M. Gadelho, D. Karmakar, A. Lavrov & C. Guedes Soares, (2015), CFD analysis of a rigid bottom fixed submerged plates, *Renewable Energies Offshore*, Guedes Soares, C. (Ed.), Taylor & Francis Group, London, UK, pp. 531-537.
14. D. Karmakar & C. Guedes Soares, (2015), Review of the present concepts of multi-use offshore platforms, *Renewable Energies Offshore*, Guedes Soares, C.(Ed.), Taylor & Francis Group, London, UK, pp. 867-875.
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81. V. Venkateswarlu, K.M. Praveen & D. Karmakar (2019), Analytical study on wave trapping performance of horizontal multi-layered porous breakwater away from vertical wall, International Conference on Hydraulics, Water Resource and Coastal Engineering (HYDRO), 18th – 20th December, 2019, University College of Engineering, Osmania University, Hyderabad.
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83. Suraj Nayak U. & D. Karmakar (2020), Long-term response analysis of V-shaped semi-submersible type offshore floating wind turbine, International Conference on “Recent Advances on Renewable Energy (RARE-2020)” 7th – 9th February, 2020, NITK Surathkal, Mangalore, India.
84. K. Kalyan Kumar, Rony J.S. & D. Karmakar (2020), Response analysis of spar type platform with different mooring line configuration, International Conference on “Recent Advances on Renewable Energy (RARE-2020)” 7th – 9th February, 2020, NITK Surathkal, Mangalore, India.
85. Rony J.S., D. Karmakar & C. Guedes Soares (2020), Dynamic analysis of submerged Tension-Leg-Platform combined with heaving wave energy converter, 5th International Conference on Maritime Technology and Engineering, 16th – 18th November 2020, Lisbon, Portugal.
86. T.S. Hallak, D. Karmakar & C. Guedes Soares (2020), Hydrodynamic performance of semi-submersible FOWT combined with point-absorber WECs, 5th International Conference on Maritime Technology and Engineering, 16th – 18th November 2020, Lisbon, Portugal.
87. Rony J.S. & D. Karmakar (2021). Hydrodynamic performance of array of heaving point absorbers combined with STLP-type floating wind turbine, 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021, NIT Rourkella, Odisha, India.
88. Merlin Varghese & D. Karmakar (2021). Wave transformation due to composite breakwater system, 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021, NIT Rourkella, Odisha, India.
89. Khansa Abdullah & D. Karmakar (2021). Dissipation of gravity waves due to submerged porous plate and bottom standing porous structure, 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021, NIT Rourkella, Odisha, India.
90. Abhishek G. Karraseri & D. Karmakar (2021). Gravity wave trapping by stratified porous structures combined with submerged porous plate, 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021, NIT Rourkella, Odisha, India.
91. Athul Krishna K.R. & D. Karmakar (2021). Gravity wave dissipation due to multiple porous structures, 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021, NIT Rourkella, Odisha, India.

92. Reeti R., Rony J.S. & D. Karmakar (2021). Dynamic analysis of array of heaving point absorbers combined with semi-submersible floating wind turbine, 25th International Conference on Hydraulics, Water Resources and Coastal Engineering, March 26-28, 2021, NIT Rourkella, Odisha, India.
93. Abhishek G. Karaseeri, Athul Krishna K.R. & D. Karmakar (2021). Wave transformation due to stratified porous structure and vertical barrier, 2nd International Conference on Recent Advances in Fluid and Thermal Sciences, 19th -21st March 2021, Birla Institute of Technology, Dubai.
94. Rony J.S. & D. Karmakar (2021). Dynamic analysis of submerged tension leg platform combined wave energy converters under different mooring configuration, 2nd International Conference on Recent Advances in Fluid and Thermal Sciences, 19th -21st March 2021, Birla Institute of Technology, Dubai.
95. Rony J.S. & D. Karmakar (2021). Long-term response analysis of combined wave and wind energy converter floating platform, 5th International Conference on Offshore Renewable Energy, 26th – 27th August, 2021, Glasgow, UK, pp. 87-93. ISBN 978-1-8383226-1-8.
96. Rony J.S. K. Chaitanya Sai & D. Karmakar (2021). Dynamic analysis of combined wave and wind energy device, 5th International Conference on Offshore Renewable Energy, 26th – 26th August, 2021, Glasgow, UK, pp. 104 -111. ISBN 978-1-8383226-1-8.
97. Abhishek Gupta, Shilna K. and D. Karmakar (2022). Prediction of hydrodynamic coefficients of stratified porous structure using Artificial Neural Network (ANN), International Conference on Advances in Data-driven Computing and Intelligent Systems (ADCIS-2022), 23rd – 25th September, 2022, BITS Pilani, Goa, India.
98. Ronit Muduli, Shivakumar B. Patil and D. Karmakar (2022). Hydrodynamic analysis of floating U-shaped Oscillating Water Column device integrated with breakwater using Boundary Element Method, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India
99. Aparna Panda, Shivakumar B. Patil, Manu and D. Karmakar (2022). Hydrodynamic study of a pile restrained H-shaped stratified porous breakwater, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
100. S. Hemanth, Ronit Muduli and D. Karmakar (2022). Hydroelastic analysis of floating VLFS with fixed floating breakwater using Multi-domain Boundary Element Method, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
101. 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, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
102. Rony J.S. and D. Karmakar (2022). Dynamic response of combined Tension Leg-Platform floating wind turbine and point absorber wave energy converter, 27th International Conference

- on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
103. Abhishek Gupta, Saquib Jawed and D. Karmakar (2022). Prediction of hydrodynamics performance of submerged composite porous breakwater using soft computing techniques, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
 104. Saquib Jawed, Abhishek Gupta and D. Karmakar (2022). Experimental investigation on hydrodynamic performance of stratified porous breakwater combined with floating structure and submerged porous plate, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
 105. Austin Joju, Binoy Sebastian and D. Karmakar (2022). Coupled dynamic analysis of TLP-type floating wind turbine combined with OWC wave energy converter, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
 106. Rantidev Vishwakarma, Rahul Ray V., Shivakumar B. Patil and D. Karmakar (2022). Hydrodynamic performance of floating breakwater combined with wave energy converter, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
 107. Rahul Ray V. and D. Karmakar (2022). Numerical investigation of floating breakwater system combined with Edinburgh Duck wave energy converter, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering (HYDRO-2022), 22nd – 24th December, 2022, Punjab Engineering College, Chandigarh, India.
 108. Abhishek Gupta and D. Karmakar (2023). Prediction of hydrodynamic performance of submerged composite porous breakwater using Support Vector Machine, 5th International Conference on Communication and Computational Technologies (ICCCT-2023), 28th – 29th January 2023, Rajasthan Institute of Engineering and Technology, Jaipur, Rajasthan, India.

(e) Invited talk and research paper presented in Conference/Symposium:

1. D. Karmakar & T. Sahoo, (2005), Wave scattering by a semi-infinite articulated floating elastic plate, National Seminar on recent advances in Fluid Dynamics and Application, *Utkal University, Bhubaneswar, India, 19th -21st March, 2005.*
2. D. Karmakar & T. Sahoo, (2005), Hydroelastic analysis of an articulated floating elastic plate, 50th Congress of Indian Society for Theoretical and Applied Mechanics, *Indian Institute of Technology, Kharagpur, India, pp 103-104, 14th -17th Dec, 2005.*
3. D. Karmakar & T. Sahoo, (2006), Expansion formulae for flexural gravity wave problems, National conference on Fluid Dynamics and Computation, *Utkal University, Bhubaneswar, India, 29th -30th July, 2006.*
4. J. Bhattacharjee, D. Karmakar & T. Sahoo, (2007), Transformation of flexural gravity waves due to heterogeneous boundaries, 94th Indian Science Congress, *Annamalai University, Annamalai Nagar, Tamil Nadu, India, 2nd-7th Jan, 2007.*

5. D. Karmakar, (2010), Hydroelastic analysis of flexible floating structures, *Centre for Marine Technology and Ocean Engineering, Instituto Superior Técnico, Lisboa, Portugal, 22nd Feb, 2010.*
6. C. Guedes Soares, J. Bhattacharjee & D. Karmakar, (2012), Overview and Prospects for Wave and Wind Energy Offshore, 20th Symposium on Theory and Practice of Shipbuilding, *Faculty of Mechanical Engineering and Naval Architecture, Brodarski Institute, Zagreb, Croatia, 27th – 29th Sept 2012.*
7. D. Karmakar (2013), Wave attenuation by floating and submerged breakwater, *Indian Maritime University (IMU), Visakhapatnam, 6th April 2013.*
8. D. Karmakar, (2017), Techniques in water wave mechanics, National Workshop on Topics in Partial Differential Equation, 24th – 28th July, 2017, National Institute of Technology Karnataka Surathkal, India.
9. D. Karmakar and Sheba N. Rajan (2017). Hydrodynamic analysis of oscillating water column wave energy converter with breakwater, *3rd Indian Conference on Applied Mechanics, INCAM 2017, MNNIT Allahabad, 5th – 7th July 2017.*
10. D. Karmakar (2021). Offshore Renewable Energy Devices, *Online FDP Program, Department of Civil Engineering, Bapatla, Engineering College, Andhra Pradesh, 28th -30th June, 2021.*

11. Awards/Fellowships:

- N.C.E.R.T-MCM Scholarship, RIE, Bhubaneswar, India, 1999 – 2001.
- CSIR-Foreign Travel Grant Award, July 2007.
- IIT Kharagpur- Foreign Travel Grant Award, July 2007.
- CSIR-Senior Research Fellowship (SRF), India, April, 2008-Nov, 2009.
- NBHM, Department of Atomic Energy, Post-Doctoral Fellowship, August 2009.
- Lady-Davis Post-Doctoral Fellowship, Technion, Israel, Nov 2009.
- IST-CENTEC, Lisbon, Portugal, Post-Doctoral Fellowship, Jan, 2010 – Dec, 2011.
- Portuguese Foundation for Science and Technology (FCT), Post-Doctoral Fellowship, 2012.
- DST-Foreign Travel Grant Award, August 2015.
- CICS- Foreign Travel Grant Award, August 2015.
- Excellent contribution to Specialist Committee Report V.4, Offshore Renewable Energy, International Ship and Offshore Structure Congress (ISSC-2015), Lisbon, Portugal.
- DST Young Scientist Research Grant, 2015.
- Best Paper Award in Ocean Engineering at NfiCE-2018, IIT Bombay.
- Best Poster Award in Ocean Engineering at NfiCE-2018, IIT Bombay.
- Best Paper Award by Springer at TMSF-2019, Goa.
- Best Paper Award at HYDRO-2019, Osmania University, Hyderabad.
- Best Paper Award at iCRAFT-2020, Birla Institute of Technology, Dubai.
- Best Paper Award at HYDRO-2020, NIT Rourkela, Odisha.

12. Academic Achievements:

- UNESCO Information Test Award, 1994, KV Dum Dum, Kolkata, India.
- Regional Science Exhibition, 1996, KV Fort Williams, Kolkata, India.

- 23rd Jawaharlal Nehru National Science Exhibition, 1996, Ahmedabad, India
- Graduate, 1st Class with Distinction in Regional Institute of Education, Bhubaneswar, 2001.

13. Conference Chair:

- Chaired the session in 1st International Conference in Maritime Technology and Engineering, MARTECH 2011, Lisboa, Portugal.
- Chaired the session (Oscillating Water Column) in 2nd International Conference in Maritime Technology and Engineering, MARTECH 2014, Lisboa, Portugal.
- Chaired the session (Ocean Energy Devices) in 1st International Conference on Renewable Energies Offshore, RENEW 2014, Lisboa, Portugal.
- Chaired the session in INCAM-2017, MNNIT Allahabad
- Chaired the session (Renewable Energy) in 5th International Conference in Maritime Technology and Engineering, MARTECH 2020, 16th -19th November,2020, Lisboa, Portugal
- Chaired the session in 2nd International Conference on Recent Advances in Fluid and Thermal Sciences, 19th -21st March 2021, Birla Institute of Technology, Dubai.
- Committee Member, 5th International Conference in Maritime Technology and Engineering (MARTECH-2020), Lisboa, Portugal.
- Committee Member, 5th International Conference on Offshore Renewable Energy (CORE-2021), 26th – 26th August, 2021, Glasgow, UK.
- Committee Member, 6th International Conference in Maritime Technology and Engineering (MARTECH-2022), Lisboa, Portugal.
- Committee Member, 7th International Conference in Maritime Technology and Engineering (MARTECH-2024), Lisboa, Portugal.

14. Affiliations/Membership:

- Life Member, - L11637, 2006, Indian Science Congress Association
- Alumni Member, 2009, Indian Institute of Technology, Kharagpur
- Technical Committee Member for Offshore Renewable Energy-V.4, ISSC (2012-2015)
- Technical Committee Member for Offshore Renewable Energy-V.4, ISSC (2015-2018)
- Technical Committee Member for Ocean Space Utilization-V.6, ISSC (2018-2022)
- Technical Committee Member for Ocean Space Utilization-V.6, ISSC (2022-2025)
- Life Member, Indian Society of Theoretical and Applied Mechanics (ISTAM), IIT Kharagpur
- Life Member, Ocean Society of India-LM-357
- Associate Member – 00361355, The Royal Institution of Naval Architects, London, UK
- Life Member, Indian Society of Hydraulics
- Life Member, Indian Society for Applied Mechanics-LM-41

15. Consultancy Works:

- Routine testing of materials (Tension, Compression, Bending, Re-bending and Hardness)
- Routine pressure gauge calibration
- Routine water meter calibration

16. PhD Thesis Examiner/Evaluation:

<i>S.No</i>	<i>Author</i>	<i>Thesis Title</i>	<i>Institute</i>	<i>Year</i>
1.	Karim Raed	Probabilistic wave load models for floating offshore wind turbines	CENTEC, Instituto Superior Tecnico, Lisbon, Portugal	2021

17. Administrative Activities:

<i>S.No</i>	<i>Position Held</i>	<i>Organization</i>	<i>Period</i>
1.	Warden, P.G Hostel	NITK Surathkal	1 st January 2018 – 31 st August 2021
2.	Member, Hindi Rajbhasa Bibhag	NITK Surathkal	10 th March 2022 – Till date
3.	Warden, Aravali Hostel	NITK Surathkal	20 th September 2022 – Till date

18. Supervision of PhD:

<i>S.No</i>	<i>Name of Student</i>	<i>Thesis Title</i>	<i>Year</i>	<i>Status</i>
1.	Praveen K.M.	Hydroelastic analysis of floating and submerged flexible structures	2015	PhD Awarded on 5 th Feb 2020
2.	V. Venkateswarlu	Gravity wave damping by stratified porous structures	2016	PhD Awarded on 14 th Aug 2020
3.	Athul Krishna K.R.	Studies on wave interaction with composite breakwater system	2017	PhD Awarded on 28 th April 2023
4.	Shivkumar Patil	Wave interaction with floating and submerged structures	2019	Thesis submitted on May 2023
5.	Rony J.S.	Dynamic analysis of offshore floating wind turbine combined with wave energy converter	2019	Pre-synopsis submitted on Aug 2023

19. Supervision of M.Tech (Research) Project:

1.	Ajay H. Patil	Dynamic analysis of TLP-type wind turbine combined with wave energy converters	2021	Awarded
2.	Abhishek Karraseri	Studies on wave interaction with submerged porous structures	2022	Awarded
3.	Abhishek Gupta	Prediction of hydrodynamic performance of composite porous breakwater using soft computing techniques	2023	Submitted

20. Supervision of M.Tech Project:

<i>S.No</i>	<i>Name of Student</i>	<i>Project Title</i>	<i>Year</i>	<i>Status</i>
1.	Hasan Bagbanci	Dynamic analysis of offshore floating wind	2011	Completed

		turbine, IST Lisbon, Portugal		
2.	Naveen Korra	Numerical analysis of inviscid and boundary layer flow over 2D aerofoil section, IMU Visakhapatnam	2013	Completed
3.	Jose Prasobh	Study on the fully coupled dynamic analysis of spar-type offshore floating wind turbine, IMU Visakhapatnam	2014	Completed
4.	Ashank Sinha	Hydrodynamics of arrays of point absorbers, IST Lisbon, Portugal	2015	Completed
5.	Ines Furtado Marques Mendes	Hydrodynamical analysis of bottom-hinged ocean wave surge converters, IST Lisbon, Portugal	2016	Completed
6.	Anvesh V	Numerical study on the performance of the integrated oscillating water column wave energy converter with breakwater	2016	Completed
7.	Ismail P.C.P.	Hydrodynamic modelling and analysis of TLP-type offshore floating wind turbine		Completed
8.	Akhila Dharanikota	Comparative study on the dynamic response analysis of offshore floating wind turbine	2017	Completed
9.	Sheba N. Rajan	Influence of damping on the integrated oscillating water column wave energy converter in breakwater		Completed
10.	M. Priyadarshini	Dynamic analysis of TLP-type offshore wind turbine	2018	Completed
11.	Akshay K. Kumawat	Numerical investigation of semi-submersible floating wind turbine combined with flap-type wave energy converter		Completed
12.	Rony J.S.	Load and response analysis of offshore floating wind turbine		Completed
13.	K. Chaitanya Sai	Numerical investigation of combined wave and offshore wind energy systems	2019	Completed
14.	K. Kalyan Kumar	Mooring analysis of Spar, TLP and semi-submersible offshore floating wind turbine		Completed
15.	Injeti Balaji	Hydrodynamic performance of concentric arrays of point absorbers		Completed
16.	Harekishan T.A.	Performance of Oscillating Water Column WEC with projecting walls		Completed
17.	Jitendra Goyal	Wave interaction with submerged porous structure and multiple barriers	2020	Completed
18.	Santosh Kamble	Numerical and experimental investigation on		Completed

		wave interaction with submerged porous plate		
19.	Khansa Abdulla	Wave interaction with submerged porous structure and submerged plate breakwater	2021	Completed
20.	Merlin R. Varghese	Hydrodynamic performance of composite submerged breakwater		Completed
21.	R. Reeti	Dynamic analysis of semi-submersible floating wind turbine combined with wave energy converter		Completed
22.	U Rohith Kumar	Performance analysis of submerged breakwater system		Completed
23.	Hareeshkumara L.	Wave transformation due to combined porous structures		Completed
24.	Ashna Varghese	Wave attenuation due to stratified porous structure combined with porous block in changing bottom topography	2022	Completed
25.	Hemadri Kurukuti	Numerical investigation of combined wave & wind-powered reverse-osmosis system		Completed
26.	Pranav Srinidhi B.	Desalination of seawater using point absorber type wave energy converter		Completed
27.	Shilna K.	Prediction of hydrodynamic performance of stratified porous structure using physical model study and soft computing techniques		Completed
28.	Sreebhadra M.N.	Extreme response analysis of combined wave and wind energy device using environmental contour method		Completed
29.	Ranti Dev Vishwakarma	Hydrodynamic performance of floating breakwater integrated with OWC WEC	2023	Completed
30.	Rahul Ray Vidyabhusan	Numerical investigation of Edinburgh Duck WEC integrated with floating breakwater		Completed
31.	Abhishek K.P.	Numerical analysis on the motion response of floating breakwater connected with submerged plate		Completed
32.	Austin Joju	Coupled dynamic analysis of TLP-type floating wind turbine combined with OWC WEC		Completed
33.	Saquib Jawed	Computational Intelligence techniques in the		Completed

		prediction of hydrodynamic responses of submerged breakwater		
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21. Supervision of BTech Major Research Project:

S.No	Name of Student	Project Title	Year	Status
1.	Amin Abid Ali	Numerical investigation of U-shaped oscillating water column wave energy converter	2017	Completed
	Anas Abdul Rahiman			
2.	Vivek	Numerical investigation of wave surge WEC	2017	Completed
	Nagendra			
3.	Pralay Shankar Maitra	Dynamic analysis of semi-submersible offshore floating wind turbine	2018	Completed
4.	Ashish Raj Porwal	Spar Platform	2019	Completed
	Praveen Kumar Salvi	Design and analysis of modified spar, TLP-type and Semi-submersible FWT platform		
	Rahul Das			
	Jai Vats			
5.	Ayush Anbhore	Design and analysis of advanced-spar FWT	2020	Completed
	Kundan Mehata			
6.	Aman Chowdhary	Desalination of sea-water using wave-wind power	2022	Completed
	Anil Kumar Yadav			
	Nishagra Patel			
7.	Abhishek Sihara	Hydrodynamic analysis of WEC using WECSim	2023	Completed
	Tarun Bishnoi			
	Keshav Kumar Meena			
	Rishu Kumar			

22. Supervision of Summer Internship Program (SIP):

S.No	Name of Student	Project Title	Year	Status
1.	Rajeev Ranjan	Hydrothermal alteration mapping using ASTER data in the part of Cuddapah region of Andhra Pradesh	2015	Completed
2.	Chandana P. Dev	Comparative study on different configuration of wave surge converter	2016	Completed
3.	Nivedita Priyadarshini	Wind and wave modelling along the Malpe Port	2017	Completed

23. Research Collaboration:

<i>Joint PhD Guidance</i>	✓ IIT Kharagpur, IIT Madras
<i>Joint Project</i>	✓ Centre for Marine Technology and Ocean Engineering (CENTEC), IST Lisbon, Portugal
<i>Member of National/International Organization</i>	✓ International Ship and Offshore Structure Congress (ISSC) ✓ Royal Institute of Naval Architect (RINA), London, UK ✓ Indian Society of Theoretical and Applied Mechanics (ISTAM), ✓ Indian Science Congress Association ✓ Indian Society of Hydraulics ✓ Ocean Society of India ✓ Indian Society for Applied Mechanics
<i>Industry Linkage</i>	✓ Indian Register of Shipping (IRS), Mumbai ✓ DHI New Delhi ✓ GICON, Germany
<i>Memorandum of Understanding (MoU)</i>	✓ Centre for Marine Technology and Ocean Engineering (CENTEC), IST Lisbon, Portugal
<i>Research Interaction</i>	✓ Department of Naval Architecture and Marine Engineering, University of Michigan, USA ✓ Centre for Marine Technology and Ocean Engineering (CENTEC), IST Lisbon, Portugal