

DR. BEENA MARY JOHN

Assistant Professor
Department of Ship Technology
Cochin University of Science and Technology
Kochi – 682 022, Kerala
91-9497276435 | beena.marie.john@gmail.com

PROFESSIONAL/ RESEARCH EXPERIENCE

Cochin University of Science and Technology

Assistant Professor, July 2023 – Till date

Cochin University of Science and Technology

Assistant Professor (on Contract), December 2019 – January 2023

Kerala University of Fisheries and Ocean Studies

Post-Doctoral Fellow, August 2018 – December 2019

Rajagiri School of Engineering & Technology

Assistant Professor, July 2012 – July 2013

Tata Consultancy Services Ltd.

Systems Engineer, August 2008 – September 2010

EDUCATION

Ph.D - Marine Structures (Applied Mechanics and Hydraulics) (2013-2018)

National Institute of Technology Karnataka, 9.0 CGPA (Distinction)

M.Tech - Computer Aided Structural Analysis and Design (2010-2012)

Dept. of Ship Technology, Cochin University of Science and Technology, 8.53 CGPA (Distinction)

B.Tech - Civil Engineering (2004-2008)

School of Engineering, Cochin University of Science and Technology, 74% (First class)

AUTHOR DETAILS

- **Web of Science/ Publons profile**
<https://www.webofscience.com/wos/author/record/AAH-9813-2021?edit=edit-profile>
- **SCOPUS ID: 56828892300**
(<https://www.scopus.com/authid/detail.uri?authorId=56828892300>)
- **ORCID ID: 0000-0001-9751-9199**
- **Google Scholar profile:**
<https://scholar.google.com/citations?user=2OWfA3sAAAAJ&hl=en>

AREAS OF RESEARCH INTEREST

- Wave structure interaction
- Computational Fluid Dynamics
- Marine structures
- Finite Element Methods
- Coastal engineering
- Wave hydrodynamics

KEY SKILLS – ANALYSIS & MODELLING

- ANSYS Workbench
- MATLAB
- OpenFOAM
- AutoCAD
- MIKE - 21
- STAAD Pro

PUBLICATIONS

1. N R Reshma, D Anu, Beena Mary John and P A Akram, 'Numerical investigation of wave structure interaction over a vertical wall using OpenFOAM', International Conference on Structural Engineering and Construction Management, SECON '22, 1-3 June 2022.
2. P A Akram, Beena Mary John, Teresa Siby Madathil, C Shija, P Abhirami, A Mathiazhagan, P S Tide, D D Ebenezer, 'Numerical model of a Multi-Layer Shock and Vibration Isolator', Oceans 2022, jointly sponsored by the IEEE Oceanic Engineering Society (IEEE/OES) and the Marine Technology Society (MTS), 21-24 February 2022, Chennai, pp. 1-6, doi: 10.1109/OCEANSSChennai45887.2022.9775499
3. Binoy Sebastian, Beena Mary John, Manoj T Issac, 'Numerical Study on the Effect of Embedment Length of Monopiles Supporting Offshore Wind Turbines in Indian Marine Soil', In Proceedings of International Conference on Advances in Naval and Ocean Engineering (iCANOE '21), ISBN No: 978-81-952577-5-1
4. V. J. Farhana, Beena Mary John, Rajesh P Nair, 'Finite Element Analysis of OGrid Lateral Bracing System'. In Recent Advances in Applied Mechanics (pp. 613-623). Springer, Singapore, 2022.
5. Jasna P H, Beena Mary John, Rajesh P Nair, 'Comparative Study of Monopod and Tripod Suction Caisson Foundation for an Offshore Wind Turbine'. In International Conference on Structural Engineering and Construction Management (pp. 355-363). Springer, Cham, 2021, DOI: 10.1007/978-3-030-80312-4_31
6. Beena Mary John, Kiran G Shirlal and Subba Rao, 'Wave attenuation characteristics of simulated heterogeneous vegetation', Current Science, 119(8), pp 1322-1332, 2020. DOI: 10.18520/cs/v119/i8/1322-1332
7. Kiran G. Shirlal, Beena Mary John and Subba Rao, "Laboratory Investigations on the Effect of Fragmentation and Heterogeneity of Coastal Vegetation in Wave Height Attenuation.", In: Murali K., Sriram V., Samad A., Saha N. (eds) Proceedings of the Fourth International Conference in Ocean Engineering (ICOE2018). Lecture Notes in Civil Engineering, 23, 13-23 (2019). Springer, Singapore. DOI: 10.1007/978-981-13-3134-3_2.
8. Beena Mary John, Kiran G. Shirlal and Subba Rao, "Laboratory investigations of wave attenuation by simulated vegetation of varying densities", ISH Journal of Hydraulic

- Engineering, 25:2, 203-213 (2019). Taylor and Francis. DOI: 10.1080/09715010.2017.1398112.
9. Beena Mary John, Mohit Babu I, Kiran G. Shirlal and Subba Rao, "Experimental Investigations of Wave Height Attenuation by Submerged Artificial Vegetation". In: Singh V., Yadav S., Yadava R. (eds). Hydrologic Modelling, Water Science and Technology Library, 81 (2018). Springer, Singapore. DOI: 10.1007/978-981-10-5801-1_34, ISBN (Hardcover) 978-981-10-5800-4.
 10. Beena Mary John, R.T. Arun Vignesh, Kiran G. Shirlal and Subba Rao, "Experimental Study on Role of Emergent Artificial Coastal Vegetation in Controlling Wave Runup". In: Singh V., Yadav S., Yadava R. (eds). Hydrologic Modelling, Water Science and Technology Library, 81 (2018). Springer, Singapore. DOI: 10.1007/978-981-10-5801-1_37, ISBN (Hardcover) 978-981-10-5800-4.
 11. Beena Mary John, Kiran G. Shirlal and Subba Rao, "Experimental Investigation of Wave Attenuation through Artificial Vegetation Meadow", In: Proceedings of the 21st International Conference on Hydraulics, Water Resources and Coastal Engineering (Hydro 2016 International), Pune, 263-270, December 2016.
 12. Beena Mary John, Kiran G. Shirlal and Subba Rao, "Experimental Investigations of Wave Height Attenuation by Different Types of Artificial Vegetation", In: Proceedings of the 3rd International Conference on Coastal Zone Engineering and Management in the Middle East (Arabian Coast 2016), Dubai, UAE, 163-164, November 2016.
 13. Beena Mary John, Kiran G. Shirlal, Subba Rao and Rajasekaran C, "Effect of Artificial Seagrass on Wave Attenuation and Wave Run-up", International Journal of Ocean and Climate Systems, 7(1), 14-19 (2016), Sage Publications. DOI: 10.1177/1759313115623163.
 14. Beena Mary John, Kiran G. Shirlal and Subba Rao, "Effect of Artificial Vegetation on Wave Attenuation – An Experimental Investigation", Procedia Engineering 116, 600-606 (2015), Elsevier. DOI: 10.1016/j.proeng.2015.08.331.
 15. Beena Mary John, Kiran G. Shirlal and Subba Rao, "Effect of Artificial Sea grass on Wave Attenuation – An Experimental Investigation", Aquatic Procedia 4, 221-226 (2015), Elsevier. DOI: 10.1016/j.aqpro.2015.02.030.
 16. Beena Mary John and D.D. Ebenezer, "Acoustic Cloaks for Plates and Cylinders", Sea Tech 9(2), 33-38 (2012).
 17. Beena Mary John and D.D. Ebenezer, "Acoustic Cloaks for Plates and Cylinders", In: Proceedings of National Symposium on Acoustics, Tiruchengode, December 2012, 33-38 (2012).

TEACHING EXPERIENCE - SUBJECTS HANDLED

Sl.No:	B.Tech (UG programme)	M.Tech (PG programme)
1.	Engineering Mechanics	Advanced Structural Analysis
2.	Fluid Mechanics I	Dynamics of Structures
3.	Fluid Mechanics II (Advanced Fluid Mechanics)	Analysis of Structures

OTHER ACADEMIC AND ADMINISTRATIVE RESPONSIBILITIES

- **Criteria co-ordinator:** Academic Committee for **NBA Accreditation 2021-2022** for the B.Tech Naval Architecture and Ship Building programme
- **Co-convenor** of the International Conference on Advances in Naval and Ocean Engineering (iCANOE '21), 19-20 November 2021 organized by Department of Ship Technology, CUSAT.
- **Editor of the 'Proceedings of the International Conference on Advances in Naval and Ocean Engineering'** (ISBN No: 978-81-952577-5-1)
- **Outcome Based Syllabus Revision 2020** – for the M.Tech Course in Computer Aided Structural Analysis and Design, Dept. of Ship Technology, CUSAT.
- **Guided 10 M.Tech CASAD project students** in the area of fluid structure interaction and structural analysis using the soft wares OpenFOAM, ANSYS Workbench.
- **Criteria co-ordinator (Criteria 5)** – Dept. of Ship Technology for **NAAC Accreditation 2021-2022** at CUSAT
- **AICTE approval process 2020-21**, of B.Tech and M.Tech programmes of Dept. of Ship Technology, CUSAT.
- **Faculty-in-charge: Student Feedback Collection** the academic years 2020-2021, 2021-2022.

CONFERENCES/WORKSHOPS ATTENDED

- **International Conference on Structural Engineering and Construction Management SECON '22**, 1-3 June 2022 organized by Department of Civil Engineering, Federal Institute of Science And Technology (FISAT), Kerala, India
- **International Conference on Advances in Naval and Ocean Engineering (iCANOE '21)**, 19-20 November 2021 organized by Department of Ship Technology, Cochin University of Science and Technology, Kerala, India
- 5-Day Online Short-Term Training Programme (STTP) on "**Recent Advances in Marine Vehicles and Structures (RAMVS)**", 4-8 October 2021, Department of Civil Engineering, National Institute of Technology Calicut.
- **Second International Conference on Structural Engineering and Construction Management (SECON'21)**, 12-15 May 2021 organized by Department of Civil Engineering, Federal Institute of Science And Technology (FISAT), Kerala, India
- AICTE Training And Learning (ATAL) Academy Online FDP on "**Sensors Technology**", 23-27 November 2020, School of Ocean Engineering and Underwater Technology, KUFOS, Kochi.
- 6-day Global Faculty Development Program on **Recent Research Advances in Geotechnical and Geological Engineering**, 17-22 August 2020, Dept. of Civil Engineering, Rajagiri School of Engineering and Technology, Kochi.

- **International Conference on Frontiers in Marine Science Challenges and Prospects – MARICON 2019**, 16-20 December 2019, School of Marine Sciences, Cochin University of Science and Technology, Kochi.
- Workshop on **Past, Present and Future Scenario of Marine Structures**, 20 February 2017, Dept. of Applied Mechanics and Hydraulics, NITK Surathkal, Mangalore.
- **Workshop on Computational Marine Hydrodynamics**, 19-20 January 2017, Dept. of Applied Mechanics and Hydraulics, NITK Surathkal, Mangalore.
- **21st International Conference on Hydraulics, Water Resources and Coastal Engineering (Hydro 2016 International)**, 8-10 December 2016, CWPRS Khadakwasla, Pune.
- **3rd International Conference on Coastal Zone Engineering and Management in the Middle East (Arabian Coast 2016)**, 20-23 November 2016, Government of Dubai & Dubai Municipality, Dubai, UAE.
- Workshop on **Coastal Hydrodynamics and Modelling**, 7 October 2016, Dept. of Applied Mechanics and Hydraulics, NITK Surathkal, Mangalore.
- Training course on **Hydraulic Model Studies for Port Development**, 14-15 September 2016, CWPRS, Khadakwasla, Pune
- Training course on **Coastal and Marine Modelling using MIKE 21**, 22-26 August 2016, NITK Surathkal, Mangalore.
- Workshop on **Tsunami Threat and its Mitigation Along Indian Coast**, 2 November 2015, Dept. of Applied Mechanics and Hydraulics, NITK Surathkal, Mangalore.
- **8th International Conference on Asian and Pacific Coasts**, 6-10 September 2015, IIT Madras, India.
- **International Conference on Water Resources, Coastal and Ocean Engineering**, 12-14 March 2015, NITK Surathkal, Mangalore.
- Pre-conference workshop on **Past, Present and Future Scenarios in Water Resources, Coastal and Ocean Engineering**, 11 March 2015, NITK Surathkal, Mangalore.
- Workshop on **Recent trends in system application as applied to Civil Engineering**, 9 January 2015, NITK Surathkal, Mangalore.
- **International Conference on Indian Ocean Tsunami: Status and Experiences**, 10-13 December 2014, Organized by Pondicherry Engineering College & CSIR- National Institute of Oceanography, Puducherry.
- **Fifth Indian National Conference on Harbour and Ocean Engineering**, 5-7 February 2014, CSIR- National Institute of Oceanography, Goa.
- Workshop on **Climate Change and Coastal Processes**, 4 February 2014, CSIR- National Institute of Oceanography, Goa.
- Symposium on **Outstanding Issues for Hydrological Research in India**, 21 October 2013, Dept. of Applied Mechanics and Hydraulics, NITK Surathkal, Mangalore.
- National Conference on Emerging Trends in Environment and Energy Management, 18-19 October 2013, Udupi, Karnataka.
- **National Symposium on Acoustics**, 5-7 December 2012, Organised by KSR Institute for Engineering and Technology & Acoustical Society of India at **Tiruchengode, Tamil Nadu**.