

Chungkuk Jin

Assistant Professor
Civil and Environmental Engineering
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A. Education

- 2019, Doctor of Philosophy, Department of Ocean Engineering, *Texas A&M University*, USA
- 2012, Master of Engineering, Division of Marine System Engineering, *Korea Maritime and Ocean University*, South Korea
- 2008, Bachelor of Engineering, Division of Marine System Engineering, *Korea Maritime and Ocean University*, South Korea

B. Research Interests

- Hydrodynamics and hydro-elasticity of moored coastal floating structures
- Structural dynamics and finite element analysis
- Marine renewable energy system: wave energy converters, floating offshore wind turbines, floating photovoltaics
- Ocean infrastructure: floating bridges, submerged floating tunnels, floating cities & airport, floating breakwater
- Metocean and structural health monitoring
- Machine learning application to Ocean Engineering

C. Appointments

- 08/2026–Present **Assistant Professor**, Department of Civil and Environmental Engineering, *FAMU-FSU College of Engineering*, Florida State University, Tallahassee, FL, USA
- 08/2022–07/2026 **Assistant Professor**, Department of Ocean Engineering and Marine Sciences, *Florida Institute of Technology*, Melbourne, FL, USA
- 10/2020–07/2022 **Research Assistant Professor**, Department of Ocean Engineering, *Texas A&M University*, College Station, TX, USA
- 06/2019–09/2020 **Postdoctoral Research Associate**, Department of Ocean Engineering, *Texas A&M University*, College Station, TX, USA
- 09/2019–07/2022 **Part-time Engineer/Consultant**, *VL Offshore LLC*, Houston, TX, USA
- 05/2014–08/2014 **Graduate Engineering Intern**, *American Bureau of Shipping*, Houston, TX, USA
- 03/2008–02/2010 **Military Service** (Lieutenant Junior Grade), *Korean Navy*, South Korea

D. Awards and Scholarships

- 2024 **Commendation in the Paper Award category**, *IABSE Young Engineers Colloquium in East Asia*
- 2024 **Best Paper Award in Young Engineer Session**, *2024 KIBSE Technical Conference*
- 2024 **WEIK Award for Conference**, *27th WEIK Symposium*

- 2024 **Departmental Faculty Excellence Award for Research**, Florida Institute of Technology
- 2024 **Best Paper Award**, 29th SNAME Offshore Symposium
- 2023 **Early-Career Research Fellowship**, Offshore Energy Safety Track, the Gulf Research Program at the National Academy of Sciences, Engineering, and Medicine
- 2023 **Best Paper Award**, Technical Conference of Korean Institute of Bridge and Structural Engineers
- 2020 **Best Paper Award**, International Conference on Fluid Mechanics
- 2018 **Outstanding Graduate Student Award**, Texas A&M University (1st recipient since the Department of Ocean Engineering was established)
- 2018 **ISOPE Scholarship for Outstanding Students**, 28th International Ocean and Polar Engineering (ISOPE) Conference
- **Merit-based scholarships**, Texas A&M University
 - (2018–2019) Western Dredging Association Scholarship
 - (2017–2018) Barrett G. Hindes Merit Scholarship/Dredging Studies Fund
 - (2014–2017) Barrett and Margaret Hindes Foundation Scholarship
 - (2013–2014) American Bureau of Shipping Scholarship

E. Sponsored Research Projects

- **19 research projects** have been performed with total award amount of **\$532,215** as PI/Co-PI.
- **Trends in regulations and technology for domestic and international liquid hydrogen and ammonia carriers**
Korea Maritime and Ocean University | **PI** | 09/2024–04/2026 | \$45,000.
- **Early-Career Research Fellowship in Offshore Energy Safety Track**
National Academy of Sciences of Engineering, and Medicine | **PI** | 01/2024–12/2025 | \$76,000.
- **Inverse wave and current estimation and complete mooring integrity monitoring by using machine learning—Phase II**
DeepStar Consortium | **Co-PI** | 01/2024–12/2024 | \$50,000.
- **Wave drift force analysis for the unmanned fire fighting vessel**
Sejong University | 10/2023–11/2023 | \$8,250.
- **Development of a high-performance wave-powered desalination plant**
Florida Institute of Technology | **PI** | 12/2022–06/2023 | \$33,600.
- **Inverse wave field estimation and mooring integrity by using machine learning**
DeepStar Consortium | **Co-PI** | 10/2022–12/2023 | \$50,000.
- **Real-time inverse wave estimations from platform motions**
ExxonMobil | **Co-PI** | 08/2022–03/2023 | \$40,000.
- **Global response monitoring of lazy wave riser based on digital twin technology**
ExxonMobil | **Co-PI** | 12/2021–07/2022 | \$50,000.
- **Dynamic responses and mooring tensions on a moored FSU by storms and tsunami**
Daewoo Shipbuilding & Marine Engineering (DSME) | **Co-PI** | 08/2021–08/2022 | \$36,000.
- **Development of the sewer-pipe sediment-monitoring system to prevent urban flooding**

Texas A&M Engineering Experiment Station | **PI** | 06/2021–08/2022 | \$40,000.

- **Smart submerged floating tunnel system**
- Ministry of Science, ICT and Future Planning, Korea (KAIST is recipient) | **Co-PI** & Researcher | 06/2017–07/2022 | \$111,650 during 03/2021–07/2022.
- **Motion Simulations of E-fishing Gears in Near Korea Peninsula Ocean**
Ministry of Oceans and Fisheries, Korea (GIST is recipient) | **Co-PI** & Researcher | 07/2017–11/2020 | \$13,000 during 08/2020–11/2020.
- **An innovative SR-WEC (surface riding wave energy converter) for a market-disruptive LCOE**
Department of Energy (DOE EERE WPTO) | Researcher | 09/2019–07/2022
- **Digital twin solution for offshore structure integrity monitoring**
- Korean Federation of Science & Technology Societies, Korea | **PI** | 06/2018–11/2018 | \$4,700.
- **Dynamic behavior of floating bridges with pontoons**
Hyundai E&C | Researcher | 04/2019–09/2019
- **Review of current dredged material management practices for environmental dredging**
ExxonMobil | Researcher | 01/2017–06/2017.
- **Development of corrosion auto-monitoring system with multi-functional sensors for concrete structures**
Ministry of Land, Transport, and Maritime Affairs, Korea | Researcher | 12/2011–12/2013.
- **Anti-corrosion and electrochemical property evaluation of seawater corrosion-resisting steel exposed to natural seawater conditions**
Ministry of Land, Transport, and Maritime Affairs, Korea | Researcher | 03/2011–02/2013
- **A study on the hybrid system of cathodic protection for complex concrete structures**
Hwaseung R&A, Korea | Researcher | 04/2010–04/2011

F. Peer-Reviewed Journal Papers

- J90. S.W. Song, S. Li, N.K. Cho, **C. Jin**, D.K. Kim, PCA-seeded Bayesian optimisation for real-time hull response reconstruction. *International Journal of Mechanical Sciences*, 318: 111533, 2026.
- J89. G.J. Kim, **C. Jin**, M.H. Kim, H.G. Kwak, Experimental and numerical investigation of transient responses and mooring tensions of SFT induced by sudden mooring failure, *Applied Ocean Research*, 170: 105020, 2026.
- J88. O. Jebari, **C. Jin**, B. Kang, S.H. Hong, C. Lee, Y.H. Jeon, Motion prediction of moored platform using CNN–LSTM for eco-friendly operation. *Journal of Marine Science and Engineering*, 14: 531, 2026.
- J87. T. Yoon, **C. Jin**, Y.I. Park, M. Chun, J.-H. Kim, Practical considerations in directional decomposition of response spectra from time-domain measurements using relative RAO method, *Ocean Engineering*, 351: 124436, 2026.
- J86. D.-S. Kwon, **C. Jin**, M.H. Kim, S.-J. Kim, Transformers and neural networks for estimation of parameters of multi-directional waves from rich statistics of FPSO motion signals, *Applied Ocean Research*, 166: 104927, 2026.

- J85. F. Gavin, **C. Jin**, S. Kim, W.C. Chung, M.H. Kim, Performance Evaluation of a 15 MW Semi-Submersible Floating Offshore Wind Turbine with a Synthetic Fiber Mooring System, *International Journal of Naval Architecture and Ocean Engineering*, 18: 100734, 2026.
- J84. K. Jeong, **C. Jin**, Y. Noh, J. Kim, J. Moon, S. Kim, Optimizing mooring tethers to minimize wave-induced structural responses in submerged floating tunnel, *Marine Structures*, 105: 103923, 2026.
- J83. **C. Jin**, J.H. Choi, C. Lee, M.H. Kim, Sustainable maritime decarbonization: a review of hydrogen and ammonia as future clean marine energies, *Sustainability*, 17: 11364, 2025.
- J.82. J.Y. Park, I. Lee, M.H. Kim, **C. Jin**, I. Mishra, D.T. Griffith, M. Rotea, Automatic mooring-line-failure detection using hull motion sensors and machine learning (ML) for 15mw floating offshore wind turbines (FOWTs), *Applied Ocean Research*, 165: 104844, 2025.
- J81. J. Song, C. Jin, D. Jung, S. Kim, Mooring tension estimation for multi-connected floating photovoltaic arrays via LSTM networks, *Advances in Engineering Software*, 211: 104037, 2025.
- J.80. D.-S. Kwon, **C. Jin**, M.H. Kim, A. Guha, O.E. Esenkoy, S. Ryu, Data-driven inverse estimation of ocean wave parameters using field-measured FPSO motion and environmental data, *Ocean Engineering*, 341: 122683, 2025.
- J79. P.Y.A. Loe, M.H. Kim, **C. Jin**, F.P. Bakti, D.K. Kim, Recent advances in Discrete-Module-Beam-based hydroelasticity method as an efficient tool approach for continuous very large floating structures, *Ocean Engineering*, 340: 122229, 2025.
- J78. O. Jebari, D.-S. Kwon, S.-J. Kim, **C. Jin**, M.H. Kim, Machine learning-based mooring failure detection for FPSOs: a two-Step ANN Approach, *Journal of Marine Science and Engineering*, 13: 791, 2025.
- J77. O. Jebari, S.H. Hong, T. Hunsucker, D.K. Kim, **C. Jin**, Wave-field reconstruction using stereo cameras on a floating platform in a synthetic environment, *Ocean Engineering*, 327: 120958, 2025.
- J76. J. Song, H. Shin, **C. Jin**, S. Kim, Simplified analysis method for pontoon-supported floating bridges under waves, *Ocean Engineering*, 324: 120758, 2025.
- J75. **C. Jin**, I. Lee, F. Bakti, D.K. Kim, S. Kim, M.H. Kim, Multi-Body-Based 2D Hydro-Elasticity Simulations in Time Domain for Moored Floating Structure, *Engineering Structures*, 329: 119789, 2025.
- J74. S. Kim, J.-G. Kim, **C. Jin**, H.-K. Kim, Parametric excitation of submerged floating tunnel caused by nonlinear tether stiffness, *Ocean Engineering*, 321: 120327, 2025.
- J73. I. Lee, C. Jin, S.-J. Kim, M.H. Kim, On the static stability and seakeeping performance of a submerged floating tunnel module in wet tow, *Journal of Marine Science and Engineering*, 13: 77, 2025.
- J72. D.-S. Kwon, S.-J. Kim, **C. Jin**, M.H. Kim, Parametric estimation of directional wave spectra from moored FPSO motion data using optimized artificial neural networks, *Journal of Marine Science and Engineering*, 13: 69, 2025 (**Selected as an issue cover**).
- J71. I. Lee, M.H. Kim, **C. Jin**, Impact of hull flexibility on the global performance of a 15 MW concrete-spar floating offshore wind turbine, *Marine Structures*, 100: 103724, 2025.
- J70. **C. Jin**, I. Lee, M.H. Kim, S.H. Hong, Global behavior monitoring of underwater lines using generalized coordinate based polynomial equations and sensor fusion, *Ocean Systems Engineering*, 4: 405–420, 2024.
- J69. **C. Jin**, S.H. Hong, Underwater line monitoring using optimally placed inclinometers, *Journal of Marine Science and Engineering*, 12: 1939, 2024.

- J68. I. Lee, J.Y. Park, **C. Jin**, M.H. Kim, On the correction of hydrostatic stiffness for discrete-module-based hydroelasticity analysis of vertically arrayed modules, *Engineering Structures*, 318: 118710, 2024.
- J67. **C. Jin**, S.-J. Kim, M.H. Kim, Y.S. Lee, A. Guha, S. Ryu, W. Xu, Real-time dynamic and structural behavior estimation of a steel lazy wave riser through finite-element-based digital twin and hull-motion sensor, *Applied Ocean Research*, 150: 104137, 2024.
- J66. Y. Lee, **C. Jin**, M.H. Kim, W. Xu, Digital twin approach with minimal sensors for riser's fatigue-damage estimation, *International Journal of Naval Architecture and Ocean Engineering*, 16: 100603, 2024.
- J65. **C. Jin**, S. Kim, W.C. Chung, B. Kang, S. Kim, Feasibility investigation of tuned mass damper for vibration control of curved floating bridge in winds and waves, *Applied Ocean Research*, 148: 104013, 2024.
- J64. J.-M. Ha, J.-A. Jeong, **C. Jin**, Development of conductive mortar for efficient sacrificial anode cathodic protection of reinforced concrete structures—Part 2: four-year performance evaluation in bridges, *Applied Sciences*, 14: 1797, 2024.
- J63. S.-J. Kim, **C. Jin**, M.H. Kim, Dynamics of a moored submerged floating tunnel under tsunami waves, *Ocean Engineering*, 291: 116333, 2024.
- J62. S.-J. Kim, **C. Jin**, M.H. Kim, Time-dependent responses and mooring tensions of a moored floating structure in tsunami waves, *Marine Structures*, 93: 103538, 2024.
- J61. M.Z. Zainuddin, M.H. Kim, **C. Jin**, Fully coupled multi-hull/mooring/riser/hawser time domain simulation of TLP-TAD system with MR damper, *Ocean Systems Engineering*, 13: 401–421, 2023.
- J60. W.C. Chung, **C. Jin**, M.H. Kim, S. Kim, Parametric study on mooring system design of submerged floating tunnel under extreme wave and seismic excitation, *Journal of Marine Science and Engineering*, 11: 2357, 2023.
- J59. **C. Jin**, I. Lee, J.Y. Park, M.H. Kim, Dynamic behavior assessment of OC4 semi-submersible FOWT platform through Morison equation, *Journal of Ocean Engineering and Technology*, 37: 238–246, 2023.
- J58. **C. Jin**, A. Meduri, H.Y. Kang, Multivariable design optimization for adaptive resonance of a surface riding wave energy converter, *Ocean Engineering*, 286: 115576, 2023.
- J57. D.-S. Kwon, S.-J. Kim, **C. Jin**, M.H. Kim, A. Guha, O.E. Esenkov, S. Ryu, Inverse estimation of a vertical current velocity profile using motions of an FPSO and artificial neural network, *Ocean Engineering*, 285: 115343, 2023.
- J56. J. Chen, **C. Jin**, M.H. Kim, Systematic comparisons among OpenFAST, Charm3D-FAST simulations and DeepCWind model test for 5 MW OC4 semisubmersible offshore wind turbine, *Ocean Systems Engineering*, 13: 173–193, 2023.
- J55. H.S. Kim, J.Y. Park, **C. Jin**, M.H. Kim, D.Y. Lee, Real-time inverse estimation of multi-directional random waves from vessel-motion sensors using Kalman filter, *Ocean Engineering*, 280: 114501, 2023.
- J54. W.C. Chung, **C. Jin**, M.H. Kim, J.-Y. Hwang, Comparison study and forensic analysis between experiment and coupled dynamics simulation for submerged floating tunnel segment with free ends under wave excitations, *Computer Modeling in Engineering & Sciences*, 137: 155–174, 2023.
- J53. S.-J. Kim, **C. Jin**, I. Lee, G.-J. Kim, M.H. Kim, H.G. Kwak, Efficient time-domain approach for hydroelastic-structural analysis including hydrodynamic pressure distribution on a moored SFT, *Marine Structures*, 90: 103402, 2023.
- J52. M.R. Lekkala, L. Mohamed, J.H. Jung, **C.K. Jin**, B. Li, B. Jeong, D.K. Kim, Numerical investigations of flow over wavy cylinders at sub-critical Reynolds number, *Ocean Engineering*, 269: 113501, 2023.

- J51. H. Sivaprasad, M.R. Lekkala, M. Latheef, J. Seo, K. Yoo, **C. Jin**, D.K Kim, Fatigue damage prediction of top tensioned riser subjected to vortex-induced vibrations using artificial neural networks, *Ocean Engineering*, 268: 113393, 2023.
- J50. **C. Jin**, G.-J. Kim, S.-J. Kim, M.H. Kim, H.-G. Kwak, Discrete-module-beam-based hydro-elasticity simulations for moored submerged floating tunnel under regular and random wave excitations, *Engineering Structures*, 275: 115198, 2023.
- J49. W.C. Chung, **C. Jin**, M.H. Kim, Dual-algorithm hybrid method for riser structural health monitoring using the fewest sensors, *Journal of Marine Science and Engineering*, 10: 1994, 2022.
- J48. J.-M. Ha, J.-A. Jeong, **C. Jin**, Development of conductive mortar for efficient sacrificial anode cathodic protection of reinforced concrete structures—part 1: laboratory experiments, *Applied Sciences*, 12: 12056, 2022.
- J47. **C. Jin**, S.-J. Kim, M.H. Kim, Optimization of tuned mass damper for submerged floating tunnel with frequency-domain dynamics simulation, *Journal of Advances in Applied & Computational Mathematics*, 9: 147–156, 2022.
- J46. **C. Jin**, S.-J. Kim, M.H. Kim, Vibration control of submerged floating tunnel in waves and earthquakes through tuned mass damper, *International Journal of Naval Architecture and Ocean Engineering*, 14: 100483, 2022.
- J45. **C. Jin**, Comparison of potential theory and Morison equation for deformable horizontal cylinders, *Sustainable Marine Structures*, 4: 1–10, 2022.
- J44. D.-S. Kwon, **C. Jin**, M.H. Kim, Prediction of dynamic and structural responses of submerged floating tunnel using artificial neural network and minimum sensors, *Ocean Engineering*, 244: 110402, 2022.
- J43. G.-J. Kim, H.-G. Kwak, **C. Jin**, H.Y. Kang, W.C. Chung, 3-dimensional equivalent static analysis for design of SFT, *Marine Structures*, 80: 103080, 2021.
- J42. W.C. Chung, M.H. Kim, **C. Jin**, Real-time trace of riser profile and stress with inclinometers, *Ocean Engineering*, 234: 109292, 2021.
- J41. **C. Jin**, M.H. Kim, The effect of key design parameters on the global performance of submerged floating tunnel under target wave and earthquake excitations, *Computer Modeling in Engineering & Sciences*, 128: 315–337, 2021.
- J40. **C. Jin**, W.C. Chung, D.-S. Kwon, M.H. Kim, Optimization of tuned mass damper for seismic control of submerged floating tunnel, *Engineering Structures*, 241: 112460, 2021.
- J39. H.S. Kim, **C. Jin**, M.H. Kim, Real-time estimation of riser's deformed shape using inclinometers and extended Kalman filter, *Marine Structures*, 77: 102933, 2021.
- J38. F.P. Bakti, **C. Jin**, M.H. Kim, Practical approach of linear hydro-elasticity effect on vessel with forward speed in the frequency domain, *Journal of Fluids and Structures*, 101: 103204, 2021.
- J37. **C. Jin**, F.P. Bakti, M.H. Kim, Time-domain coupled dynamic simulation for SFT-mooring-train interaction in waves and earthquakes, *Marine Structures*, 75: 102883, 2021.
- J36. **C. Jin**, M.H. Kim, W.C. Chung, D.-S. Kwon, Time-domain coupled analysis of curved floating bridge under wind and wave excitations, *Ocean Systems Engineering*, 10: 399–414, 2020.
- J35. **C. Jin**, H.Y. Kang, M.H. Kim, F.P. Bakti, Performance evaluation of surface riding wave energy converter with linear electric generator, *Ocean Engineering*, 218: 108141, 2020.
- J34. D.-S. Kwon, **C. Jin**, M.H. Kim, W. Koo, Mooring-failure monitoring of submerged floating tunnel using deep neural network, *Applied Sciences*, 10: 6591, 2020.

- J33. **C. Jin**, H.Y. Kang, M.H. Kim, I. Cho, Performance estimation of resonance-enhanced dual-buoy wave energy converter using coupled time-domain simulation, *Renewable Energy*, 160: 1445–1457, 2020.
- J32. **C. Jin**, F.P. Bakti, M.H. Kim, Multi-floater-mooring coupled time-domain hydro-elastic analysis in regular and irregular waves, *Applied Ocean Research*, 101: 102276, 2020.
- J31. **C. Jin**, M. Kim, W.C. Chung, Dynamic behaviors of a floating bridge with mooring lines under wind and wave excitations, *International Journal of Mechanical and Mechatronics Engineering*, 14: 240–245, 2020 (**Awarded with Best Paper Award**).
- J30. H.S. Kim, **C. Jin**, M.H. Kim, K. Kim, Damage detection of bottom-set gillnet using artificial neural network, *Ocean Engineering*, 208: 107423, 2020.
- J29. **C. Jin**, M.-H. Kim, Tunnel-mooring-train coupled dynamic analysis for submerged floating tunnel under wave excitations, *Applied Ocean Research*, 94: 102008, 2020.
- J28. **C. Jin**, M.-H. Kim, H.Y. Kang, Time-domain simulations of the coupled dynamics of surface riding wave energy converter, *International Journal of Energy and Power Engineering*, 13: 445–448, 2019.
- J27. **C. Jin**, H.S. Kim, M.-H. Kim, K. Kim, Monitoring-system development for a bottom-set gillnet through time-domain dynamic simulations, *Applied Sciences*, 9: 1210, 2019.
- J26. **C. Jin**, M.-H. Kim, Time-domain hydro-elastic analysis of a SFT (submerged floating tunnel) with mooring lines under extreme wave and seismic excitations, *Applied Sciences*, 8: 2386, 2018.
- J25. **C. Jin**, J. Choi, M.-H. Kim, Response prediction and monitoring feasibility of a stow net system using measured environmental data in the southwest coast of Korea, *Applied Sciences*, 8: 1517, 2018.
- J24. **C. Jin**, R.E. Randall, The estimation of production and location of pumps for a cutter suction dredge using a long distance pipeline, *Journal of Dredging*, 16: 24–42, 2018.
- J23. **C. Jin**, M.H. Kim, Dynamic and structural responses of a submerged floating tunnel under extreme wave conditions, *Ocean Systems Engineering*, 7: 413–433, 2017.
- J22. J. Lee, **C. Jin**, M. Kim, Dynamic response analysis of submerged floating tunnels by wave and seismic excitations, *Ocean Systems Engineering*, 7: 1–19, 2017.
- J21. J.-A. Jeong, **C.-K. Jin**, E.-S. Jeong, Corrosion behaviors of cement mortar specimens with different cover thickness in natural sea water, *Journal of the Korean Society of Marine Engineering*, 40: 107–111, 2016.
- J20. J.-A. Jeong, **C.-K. Jin**, J.U. Lee, A study on the corrosion evaluation and lifetime prediction of fire extinguishing pipeline in residential buildings, *Journal of the Korean Society of Marine Engineering*, 39: 828–832, 2015.
- J19. J.-A. Jeong, **C.-K. Jin**, Utilization of variable resistor for improvement of impressed current cathodic protection system on reinforced concrete structures, *Advanced Materials Research*, 1125: 365–369, 2015.
- J18. J.-A. Jeong, **C.-K. Jin**, The experimental measurement on the throwing power of sacrificial anode cathodic protection for concrete piles in natural sea water, *Advanced Materials Research*, 1125: 350–354, 2015.
- J17. J.-A. Jeong, **C.-K. Jin**, The effect of cathodic protection system by means of zinc sacrificial anode on pier in Korea, *Journal of the Korean Society of Marine Engineering*, 38: 1206–1211, 2014.
- J16. J.-A. Jeong, Y.-G. Choo, **C.-K. Jin**, K.-W. Park, Numerical analysis results of the cathodic protection for the underground steel pipe by anode installation method, *Journal of the Korean Society of Marine Engineering*, 38: 1212–1216, 2014.
- J15. J.A. Jeong, **C.K. Jin**, Experimental studies of effectiveness of hybrid cathodic protection system on the steel in concrete, *Science of Advanced Materials*, 6: 2165–2170, 2014.

- J14. J.-A. Jeong, **C.-K. Jin**, The study on the cathodic protection effect of the ICCP anodes with exposed conditions, *Applied Mechanics and Materials*, 681: 218–221, 2014.
- J13. J.-A. Jeong, **C.-K. Jin**, Experimental study on the effect of cathodic protection system for concrete slab specimens with Zn-mesh sacrificial anode in marine environment, *Advanced Materials Research*, 785-786: 264–272, 2013.
- J12. J.-A. Jeong, **C.-K. Jin**, Effect of cathodic protection systems with Zn-mesh sacrificial anodes on reinforced concrete structures in an accelerated marine environment, *Advanced Materials Research*, 800: 365–374, 2013.
- J11. C.-K. Jin, J.-A. Jeong, Multifunctional sensors for monitoring corrosion of mortar specimens, *Advanced Materials Research*, 753-755: 2107–2112, 2013.
- J10. J.-A. Jeong, **C.-K. Jin**, Three year performance of sacrificial anode cathodic protection system in the reinforced concrete bridge structures, *Advanced Materials Research*, 753-755: 467–475, 2013.
- J9. J.-A. Jeong, **C.-K. Jin**, Lifetime prediction of fire extinguishing pipeline by means of extreme value statistics, *Applied Mechanics and Materials*, 376: 60–64, 2013.
- J8. J.-A. Jeong, **C.-K. Jin**, Improvements in the performance of impressed current cathodic protection system with variable resistor at various environmental conditions, *Applied Mechanics and Materials*, 376: 288–293, 2013.
- J7. **C.-K. Jin**, J.-A. Jeong, Distribution of cathodic protection potential for concrete slab specimens at diverse environmental conditions, *International Journal of Ocean System Engineering*, 3: 90–94, 2013.
- J6. J.-A. Jeong, **C.-K. Jin**, The effect of temperature and relative humidity on concrete slab specimens with impressed current cathodic protection system, *Journal of the Korean Society of Marine Engineering*, 37: 260–265, 2013.
- J5. J.-A. Jeong, **C.-K. Jin**, Characteristic of CP potential for concrete pile specimen with hybrid CP, *Advanced Materials Research*, 685: 3–7, 2013.
- J4. J.-A. Jeong, **C.-K. Jin**, Y.-H. Kim, W.-S. Chung, Electrochemical performance evaluation of corrosion monitoring sensor for reinforced concrete structures, *Journal of Advanced Concrete Technology*, 11: 1–6, 2013.
- J3. J.-A. Jeong, **C.-K. Jin**, W.-S. Chung, Tidal water effect on the hybrid cathodic protection systems for marine concrete structures, *Journal of Advanced Concrete Technology*, 10: 389–394, 2012.
- J2. **C.-K. Jin**, J.-A. Jeong, E.-J. Kyoung, A study on the corrosion monitoring of multi-functional sensors for reinforced concrete structures: Part 1, *Corrosion Science and Technology*, 11: 270–274, 2012 (In Korean).
- J1. J.-M. Ha, **C.-K. Jin**, J.-A. Jeong, Cathodic protection behavior of coastal bridge structure with sacrificial anode cathodic protection system, *Corrosion Science and Technology*, 11: 242–246, 2012 (In Korean).

G. Peer-Reviewed Conference Papers

- C43. S. Kim, Y. Hwang, J.-G. Kim, C. Jin, H.-K. Kim, Second-order wave load effects on a floating bridge using frequency-domain multimode spectral analysis, IABSE 2026, Incheon, Korea, September 2026.
- C42. C. Jin, I. Lee, M.H. Kim, 3D Extension of discrete module based method for hydroelastic behavior assessment of bottom-mounted vertical cylinder, IABSE 2026, Incheon, Korea, September 2026.

- C41. S.W. Song, W.J. Kim, C. Jin, J.K. Paik, D.K. Kim, Enhancing FPSO digitalization: real-time stress error correction via similarity-based weighted ensemble RNN integrated with a convolution model, OMAE 2026, Tokyo, Japan, June 2026.
- C40. P.Y.A. Loe, C. Jin, F.P. Bakti, M.H. Kim, M.R. Lekkala, D.K. Kim, A data-driven framework with Bayesian optimization for mooring fatigue prediction of hydroelastic VLFS using neural network approach, OMAE 2026, Tokyo, Japan, June 2026.
- C39. F.P. Bakti, A.H. Lie, M.A. Naiborhu, C. Jin, D.K. Kim, A.M. Firdaus, A preliminary calibration of hydroelasticity parameters for a discrete-module-beam simulation of an offshore FPV system using experimental data, ISOPE 2026, Orlando, USA, June 2026.
- C38. C. Jin, S.H. Hong, D.K. Kim, S.J. Kim, Efficient hydroelastic response reconstruction of floating structures using surrogate-based optimization and 2D DMB models, ISOPE 2026, Orlando, USA, June 2026.
- C37. D.-S. Kwon, **C. Jin**, M.H. Kim, Transformer-based ensemble method for parametric estimation of directional ocean wave spectra from FPSO vessel motions, OCEANS 2025, Chicago, USA, September 2025.
- C36. O. Jebari, D.-S. Kwon, S.-J. Kim, **C. Jin**, M.H. Kim, Detection of failed mooring lines of spread-moored FPSO using platform motions and artificial neural networks, OMAE 2025, Vancouver, Canada, June 2025.
- C35. E.-H. Min, I. Lee, M.H. Kim, **C. Jin**, S.-J. Kim, Nonlinear wave-body interactions for arbitrarily shaped body using 3D numerical wave tank, OMAE 2025, Vancouver, Canada, June 2025.
- C34. S. Kim, Y. Hwang, J.-G. Kim, **C. Jin**, H.-K. Kim, Influence of the Coupling Effect of Hydrodynamic and Aeroelastic Loads on a Floating Long-Span Bridge, ISOPE 2025, Goyang, Korea, June 2025.
- C33. **C. Jin**, S.H. Hong, Stress monitoring of underwater lines using optimally placed inclinometers, ISOPE 2025, Goyang, Korea, June 2025.
- C32. J. Song, **C. Jin**, S. Kim, Numerical investigation of hydrodynamic responses of straight floating bridge with pontoons, WCFS 2024, Hong Kong, China, December 2024.
- C31. S. Kim, Y. Hwang, J.-G. Kim, **C. Jin**, H.-K. Kim, Time-domain aero-hydrodynamic coupled analysis of a floating long-span bridge, IABSE Young Engineers Colloquium in East Asia, November 2024.
- C30. S.W. Song, **C. Jin**, D.K. Kim, Optimisation of stress measurements and mode selection for effective conversion models in floating structures, ICES2024, Guangzhou, China, November 2024.
- C29. S. Kim, Y. Hwang, J.-G. Kim, H.-K. Kim, **C. Jin**, Development of time-domain aero-hydrodynamic coupled analysis module by ABAQUS user subroutine for floating bridges, IABSE Congress 2024, San Jose, Costa Rica, September 2024.
- C28. F.G. Surjadi, F.P. Bakti, **C. Jin**, P.K.P. Simamora, Global response performance of HDPE based offshore floating solar farm by using beam-floater model, OMAE 2024, Singapore, June 2024.
- C27. S.W. Song, **C. Jin**, D.K. Kim, A novel approach for ship digital twin optimisation: principal component analysis-driven distortion base mode selection and utilisation, OMAE 2024, Singapore, June 2024.
- C26. O. Jebari, S.H. Hong, T. Hunsucker, D.K. Kim, **C. Jin**, Wave-Field Reconstruction from Moored Floating Structure Using Deep Stereo, ISOPE 2024, Rhodes, Greece, June 2024.
- C25. D.-S. Kwon, **C. Jin**, M.H. Kim, A. Guha, O. E. Esenkov, S. Ryu, Inverse wave estimation from measured FPSO motions through artificial neural networks, 29th SNAME Offshore Symposium, Houston, USA, 1–12, February 2024.

- C24. D.-S. Kwon, **C. Jin**, S.-J. Kim, M.H. Kim, A. Guha, G. Gosain, S. Ryu, M.D. Ferreira, E. Auburtin, J. Minnebo, J. Chen, Inverse ocean wave estimation from FPSO motions by artificial neural network, *ISOPE 2023*, Ottawa, Canada, 1005–1011, June 2023.
- C23. I. Lee, **C. Jin**, M. Kim, A Consistent-module-based (CMB) method for hydroelasticity analysis, *ISOPE 2023*, Ottawa, Canada, 3176–3182, June 2023
- C22. **C. Jin**, B. Bakti, D.K. Kim, S. Kim, I. Lee, M.H. Kim, Time-domain discrete-module-beam method for hydro-elastic behavior analysis of moored box barge, *ISOPE 2023*, Ottawa, Canada, 2361–2365, June 2023.
- C21. J.Y. Park, J. Lee, **C. Jin**, H.S. Kim, M.H. Kim, Development of the sewer-pipe sediment-monitoring system to prevent urban flooding, *OCEANS 2022*, Hampton Roads, USA, 1–4, October 2022.
- C20. **C. Jin**, S.-J. Kim, M.H. Kim, A. Guha, D. Lee, O.E. Esenkov, W. Xu, B. Smith, S. Ryu, Digital twin method for global motion and stress monitoring of a steel lazy wave riser, *OCEANS 2022*, Hampton Roads, USA, 1–7, October 2022.
- C19. I. Lee, **C. Jin**, M. Kim, Static stability of a submerged floating tunnel module in wet tow, The *2022 Structures Congress (Structures22)*, Seoul, Korea, August 2022.
- C18. **C. Jin**, S.J. Kim, M.H. Kim, Tuned mass damper application for submerged floating tunnel under wave and seismic excitations, *IABMAS 2022*, Barcelona, Spain, July 2022.
- C17. S.J. Kim, **C. Jin**, M.H. Kim, Assessment of total hydrodynamic pressure distribution on the submerged floating tunnels, *IABMAS 2022*, Barcelona, Spain, July 2022.
- C16. F. Bakti, **C. Jin**, M.H. Kim, 2D discrete module beam (DMB) method formulation to simulate hydro-elastic structures with two horizontal bending axis, *OMAE 2022*, Hamburg, Germany, June 2022.
- C15. J.Y. Park, **C. Jin**, D.-S. Kwon, M.H. Kim, K. Kim, Fishing net underwater localization using acoustic signals, *ISOPE 2021*, Rhodes, Greece, 142–147, June 2021.
- C14. **C. Jin**, S.-J. Kim, M.H. Kim, Coupled time-domain hydro-elastic simulation for submerged floating tunnel under wave excitations, *OMAE 2021*, Virtual, Online, OMAE2021-62969, June 2021.
- C13. **C. Jin**, D. Kwon, W.C. Chung, M.H. Kim, W. Koo, Numerical analysis of a curved floating bridge, *OCEANS 2020*, Virtual, Online, 1–6, October 2020.
- C12. **C. Jin**, H.S. Kim, J.Y. Park, M.H. Kim, K. Kim, Monitoring-system development of gillnet using artificial neural network, *OMAE 2020*, Virtual, Online, OMAE2020-19011, August 2020.
- C11. W.C. Chung, **C. Jin**, M.H. Kim, Dynamic response comparison of mono and dual submerged floating tunnels, *OMAE 2020*, Virtual, Online, OMAE2020-18882, August 2020.
- C10. **C. Jin**, W.C. Chung, M.-H. Kim, Effects of submergence depth of submerged floating tunnel on global behaviors under wave and earthquakes, *OCEANS 2019*, Seattle, USA, 1–7, October 2019.
- C9. **C. Jin**, M.-H. Kim, Tunnel-mooring-line-vehicle coupled time-domain dynamic analysis for a submerged floating tunnel in wave and seismic conditions, *ISOPE 2019*, Honolulu, USA, 3108–3113, June 2019.
- C8. **C. Jin**, M.-H. Kim, K. Kim, Development of monitoring system for a bottom-set gillnet through dynamic-response analysis, *2018 Fall Conference of the Korean Society of Ocean Engineers*, Incheon, Korea, 331–334, November 2018 (In Korean).
- C7. **C. Jin**, J. Choi, M.-H. Kim, K. Kim, Dynamic responses of a bottom-set gillnet anchored to seafloor using measured environmental data in the southwest coast of Korea, *OCEANS 2018*, Charleston, USA, 1–6, October 2018.

- C6. **C. Jin**, M.H. Kim, Dynamic responses of a moored submerged floating tunnel under moving loads and wave excitations, ISOPE 2018, Sapporo, Japan, 278–283, June 2018.
- C5. **C. Jin**, J.M.-H. Kim, J. Choi, W.-S. Park, Coupled dynamics simulation of submerged floating tunnel for various system parameters and wave conditions, OMAE 2018, Madrid, Spain, OMAE2018-78687, June 2018.
- C4. **C.K. Jin**, J.Y. Lee, H.S. Kim, M.H. Kim, Dynamic responses of a submerged floating tunnel in survival wave and seismic excitations, ISOPE 2017, San Francisco, USA, 547–551, June 2017.
- C3. **C. Jin**, J. Choi, M. Kim, K. Kim, Dynamic responses of a stow net using measured environmental data in the southwest coast of Korea, 2017 Fall Conference of the Korean Society of Ocean Engineers, Geoje, Korea, 262–265, October 2017 (In Korean).
- C2. H.Y. Kang, **C.K. Jin**, M.H. Kim, J.R. Kim, I.H. Cho, Comparative study of dual-cylinder system with permanent magnet linear generator for wave energy conversion, ISOPE 2016, Rhodes, Greece, 597–601, June 2016.
- C1. R.E. Randall, **C.K. Jin**, Challenges of dredging in the Arctic and other deep ocean locations, Western Dredging Association and Texas A&M University Center for Dredging Studies, Houston, USA, 345–359, October 2015.

H. Conference Abstracts

- A12. **C. Jin**, J.H. Choi, C. Lee, M.H. Kim, Toward net-zero shipping: a review of hydrogen and ammonia fuels, IMST2025, Busan, Korea, October 2025.
- A11. S. Kim, Y. Hwang, J.-G. Kim, C. Jin, H.-K. Kim, Aerodynamic and hydrodynamic coupled analysis of a floating bridge, KSCE 2024 CONVENTION, Jeju, Korea, October 2024.
- A10. S. Kim, Y. Hwang, J.-G. Kim, **C. Jin**, H.-K. Kim, Aero-hydrodynamic coupled analysis of a floating long-span bridge, KIBSE, Seoul, Korea, August 2024.
- A9. S. Kim, Y. Hwang, J.-G. Kim, **C. Jin**, H.-K. Kim, Development of aero-hydrodynamic coupled analysis method for floating bridge, 27th WEIK Symposium, Chuncheon, Korea, May 2024.
- A8. J. Song, **C. Jin**, S. Kim, Numerical analysis of hydrodynamic responses of a straight floating bridge under inhomogeneous waves, KSSC, Jeju, Korea, June 2024.
- A7. S. Kim, Y. Hwang, J.-G. Kim, **C. Jin**, H.-K. Kim, Development of time-domain hydrodynamic analysis module for floating structures using ABAQUS user subroutine, KSSC, Jeju, Korea, June 2024.
- A6. J. Song, K. Jeong, H. Shin, **C. Jin**, S. Kim, A study of dynamic behaviors of floating bridge supported by pontoons under waves, KSCE 2023 Convention, Yeosu, Korea, October 2023.
- A5. C. Jin, Hydroelasticity analysis of box barge with vertical mooring line under regular and random wave excitations, ISMT 2023, Busan, Korea, October 2023.
- A4. O. Jebari, **C. Jin**, A framework for synthetic stereo sea surface reconstruction, ISMT 2023, Busan, Korea, October 2023.
- A3. **C. Jin**, S. Kim, W.C. Chung, Vibration control of curved floating bridge, ISMT 2023, Busan, Korea, October 2023.
- A2. S. Kim, J.-G. Kim, **C. Jin**, H.-K. Kim, Parametric excitation of submerged floating tunnel due to geometric nonlinearity, KIBSE 2023, Seoul, Korea, September 2023.
- A1. **C. Jin**, M. Kim, Global behavior prediction of underwater lines with polynomial equations and boundary conditions, ISMT 2021, Busan, Korea, October 2021.

I. Books

- B1. C.H. Lee, S.H. Park, W.J. Choi, J.H. Choi, C. Jin, 국내외 액체수소 및 암모니아 해상운송관련 법제도 사례분석론, 2025 (In Korean).

J. Patents

- P4. *Apparatus and method for a real-time-monitoring of a riser and mooring of floating platforms*, US12280859B2, 2025.
 P3. *Vibration-control device for offshore structures using smart material*, KR 10-2423694 B1, 2022.
 P2. *Vibration-control device for offshore structures*, KR 10-1923851 B1, 2022.
 P1. *Sludge height measuring apparatus and monitoring system of sewer pipe using stress measuring method*, KR 10-1923851 B1, 2018.

K. Invited Lectures & Talk

- Invited speaker at ISMT 2025, Toward net-zero shipping: a review of hydrogen and ammonia fuels, October 23, 2025.
- Invited speaker at 2025 Future-Shaping ACE (Architecture, Civil and Environment) Congress, Recent advances in discrete-module-beam-based hydroelasticity analysis, August 26, 2025.
- Invited speaker to the Floating Infrastructure Research Center, South Korea, Discrete-module-beam-based hydro-elasticity simulations for moored floating structures, May 10, 2024.
- Invited speaker in the Department of Naval Architecture and Ocean Engineering at Seoul National University, Coupled hydrodynamics simulation for moored floating structures, March 6, 2024.
- Invited speaker at ISMT (the International Symposium on Marine Engineering and Technology) 2023, Hydroelasticity analysis of box barge with vertical mooring line under regular and random wave excitations, October 26, 2023.
- Invited speaker at Korea University, Platform hydroelasticity analysis with mooring line under regular and random wave excitations, October 25, 2023.
- Invited lecturer at 2022 Future-Shaping ACE (Architecture, Civil and Environment) Congress, Hydroelastic simulation of the moored floating structure, November 23, 2022.
- Guest lecturer at Institut Teknologi Bandung, Machine learning application to ocean engineering, November 17, 2022.
- Invited speaker at Seoul National University, Overview and structural feasibility study of floating photovoltaics, June 30, 2022.
- Invited speaker at Korea University, Coupled dynamics simulation for moored floating structures, June 30, 2022.
- Invited speaker at Seminar in Department of Ocean Engineering at Texas A&M University, Time-domain dynamics simulation of submerged floating tunnel, October 13, 2021.
- Invited speaker at SNAME (Society of Naval Architects and Marine Engineers) Webinar, Coupled dynamics simulation of submerged floating tunnel: a new solution for deep-water crossing, March 12, 2021.

L. Services

- Editorial Board Member, International Journal of Naval Architecture and Ocean Engineering (07/2026–Present); SCI-E Q1
- Editorial Board Member, Journal of Marine Science and Engineering (01/2026–Present); SCI-E Q2.
- Associate Editor (01/2023–Present) / Editorial Board Member (01/2021–12/2022), Journal of Advanced Marine Engineering and Technology (01/2021–Present)
- Editorial Board Member, Ocean Systems Engineering (09/2022–Present)
- Editorial Board Member, Sustainable Marine Structures (12/2020–Present)
- Editorial Board Member, Journal of Ocean Engineering and Technology (01/2023–Present)
- Editorial Board Member, Journal of Advances in Applied & Computational Mathematics (08/2021–12/2022)
- Guest Editor, Numerical Analysis and Modeling of Floating Structures (2nd Edition), Journal of Marine Science and Engineering (2026–Present)
- Leading Topic Editor, Maritime Transportation in the Blue Economy and Green Shipping Technology, MDPI (participating journals: Sustainability, Energies, Journal of Marine Sciences and Engineering, Future Transportation, Coasts) (2025–Present)
- Guest Editor, Autonomous Ship and Harbor Maneuvering: Modeling and Control, Journal of Marine Science and Engineering (2025–Present)
- Guest Editor, Numerical Analysis and Modeling of Floating Structures, Journal of Marine Science and Engineering (2024–2025)
- Reviewed numerous journal/conference papers in the following journals/conferences.
 - Nature Sustainability
 - Marine Structures
 - Engineering Structures
 - Ocean Engineering
 - Applied Ocean Research
 - Construction & Building Materials
 - Tunnelling and Underground Space Technology
 - Computers and Concrete
 - Corrosion Science
 - Journal of Fluids and Structures Energies
 - International Journal of Naval Architecture and Ocean Engineering
 - Ships and Offshore Structures
 - Journal of Marine Science and Technology
 - Journal of Engineering for the Maritime Environment
 - Ocean Systems Engineering
 - Journal of Marine Science and Engineering
 - SN Applied Sciences
 - Sustainable Marine Structures
 - Journal of Advances in Applied & Computational Mathematics
 - Journal of Ocean Engineering and Technology
 - Journal of the Korean Society of Marine Engineering
 - Journal of Advanced Marine Engineering and Technology
 - Asian Journal of Fisheries and Aquatic Research
 - 45th International Ocean Offshore and Arctic Engineering Conference

- 29th International Offshore and Polar Engineering Conference
- 2nd International Conference on Physics, Mathematics and Statistics
- The 9th International Multi-Conference on Engineering and Technology Innovation 2020
- Reviewed 1 U.S. DOE's TEAMER proposal.
- Session Chair: ISOPE 2023 & 2026 Conference, ISMT 2023 Conference
- Organizing Committee at ISMT 2023 Conference and ISMT 2025 Conference
- Event Committee at the 2nd International Online Conference on Marine Science and Engineering (IOCMSE 2026)

M. Voluntary Activities

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|------------------|---|
| <i>2021–2022</i> | <ul style="list-style-type: none">• Communication manager, KOEA (Korean American Oil & Gas Engineers Association) |
| <i>2015–2016</i> | <ul style="list-style-type: none">• Leader of Korean Ocean Engineering Students, Texas A&M University |