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I have been a Lecturer in the Department of Naval Architecture, Ocean and Marine Engineering (NAOME) at the University of Strathclyde (UoS) since 2015. My research activity mainly focused on the hydrodynamic interaction between multiple floating bodies. Over the last 5 years, I have published 39 journal articles and 24 refereed conference proceedings on marine hydrodynamics. I was invited by Ronald Yeung to visit and carry out joint research in UC Berkeley (03/2017 – 09/2017) under Sir David Anderson Bequest Award. I was appointed as the committee member of International Towing Tank Conference (ITTC) and 1st and 2nd International Conference on Naval Architecture, Ocean & Marine Engineering (NAOME). I am a Member of the Royal Institution of Naval Architects (RINA), and I have been invited to review papers for more than 20 international journals. I am leading a research group consisting of 10 Ph.D students at UoS and 1 D.Eng student in IDCORE (Industrial Doctoral Centre for Offshore Renewable Energy).

Journal Publications:

1. L. Li, Z. Gao, **Z. M. Yuan***, (2019) On the sensitivity and uncertainty of wave energy conversion with an artificial neural-network-based controller. *Ocean Engineering*, 183. pp. 282-293. <https://doi.org/10.1016/j.oceaneng.2019.05.003>.
2. L., Li, Z. M., Yuan, C-Y., Ji, Y., Gao, (2019). Resonant waves in the gap between two advancing barges. *European Journal of Mechanics-B/Fluids*, 77. pp. 108-117. <https://doi.org/10.1016/j.euromechflu.2019.04.015>.
3. Dai, S., Day, S., Yuan, Z., & Wang, H. (2019). Investigation on the hydrodynamic scaling effect of an OWC type wave energy device using experiment and CFD simulation. *Renewable Energy*, 142, 184-194. <https://doi.org/10.1016/j.renene.2019.04.066>.
4. **Yuan, Z-M.**, Li, L., R. W., Yeung, (2019). Free-Surface Effects on Interaction of Multiple Ships Moving at Different Speeds. *Journal of Ship Research*, DOI: 10.5957/JOSR.10180089.
5. W. Qiu, X. Song, K. Shi, X. Zhang, **Z.-M. Yuan**, Y. You, 2019. Multi-objective optimization of semi-submersible platforms using particle swarm optimization algorithm based on surrogate model. *Ocean Engineering* 178:388-409. DOI: 10.1016/j.oceaneng.2019.02.039.
6. L., Li, Y., Liu, **Z. M., Yuan***, Gao, Y. Dynamic and structural performances of offshore floating wind turbines in turbulent wind flow. *Ocean Engineering* 176 (2019) 92-103. DOI: 10.1016/j.oceaneng.2019.03.028.
7. **Yuan, Z-M.**, Li, M., Ji, C-Y., Li, L., Jia, L., & Incecik, A. (2019). Steady hydrodynamic interaction between human swimmers. *Journal of the Royal Society Interface*, 16(150). <https://doi.org/10.1098/rsif.2018.0768>.
8. **Yuan, Z.** (2018). Ship hydrodynamics in confined waterways. *Journal of Ship Research*, 63(1), pp. 16-29, <https://doi.org/10.5957/JOSR.04170020>.
9. L. Li, X. Zhang, **Z. Yuan*** and Y. Gao, "Multi-stable mechanism of an oscillating-body wave energy converter," in *IEEE Transactions on Sustainable Energy*. Doi: 10.1109/TSTE.2019.2896991.

10. Xu, X., Song, X., Zhang, X., & **Yuan, Z.** (2019). On wave diffraction of two-dimensional moonpools in a two-layer fluid with finite depth. *Ocean Engineering*, 173, 571-586. <https://doi.org/10.1016/j.oceaneng.2018.12.037>.
11. H.-F. Xu, L. Zou, Z.-J. Zou, **Z.-M. Yuan**, (2018). Numerical study on hydrodynamic interaction between two tankers in shallow water based on high-order panel method, *European Journal of Mechanics-B/Fluids*, 74, 139-151, <https://doi.org/10.1016/j.euromechflu.2018.11.009>.
12. W. Liu, Y. K. Demirel, E. B. Djatmiko, S. Nugroho, T. Tezdogan, R. E. Kurt, H. Supomo, I. Baihaqi, **Z.M. Yuan**, Atilla Incecik, (2019). Bilge keel design for the traditional fishing boats of Indonesia's East Java, *International Journal of Naval Architecture and Ocean Engineering*, 11(1), 380-395, <https://doi.org/10.1016/j.ijnaoe.2018.07.004>.
13. Ji, C., Yang, K., Cheng, Y., **Yuan, Z.** (2019). Numerical and Experimental Investigation of Interactions between Free-Surface Waves and a Floating Breakwater with Cylindrical-Dual/Rectangular-Single Pontoon, *China Ocean Eng.*, 32 (4): 388-399. <https://doi.org/10.1007/s13344-018-0041-x>.
14. L., Li, **Z. M., Yuan**, C., Ji, Gao, Y., 2018. Ultimate structural and fatigue damage loads of a spar-type floating wind turbine. *Ships and Offshore Structures*, DOI: 10.1080/17445302.2018.1532867.
15. L., Li, **Z. M., Yuan***, Y., Gao, 2018. Maximization of energy absorption for a wave energy converter using the deep machine learning. *Energy* 165, pp 340-349. DOI: 10.1016/j.energy.2018.09.093.
16. L., Li, **Z. M., Yuan***, Y., Gao, Y., X., Zhang, T., Tezdogan, 2019. Investigation on long-term extreme response of an integrated offshore renewable energy device with a modified environmental contour method. *Renewable Energy* 132, pp 33-42. DOI: 10.1016/j.renene.2018.07.138.
17. L., Li, **Z. M., Yuan**, C., Ji, M., Li, Gao, Y., 2018. Investigation on the unsteady hydrodynamic loads of ship passing by bridge piers by a 3-D boundary element method. *Engineering Analysis with Boundary Elements* Vol 94 (2018), pp. 122-133. DOI: 10.1016/j.enganabound.2018.06.010.
18. L., Li, **Z. M., Yuan***, Gao, Y., 2018. Wash wave effects on ships moored in ports. *Applied Ocean Research* Vol 77 (2018), pp. 89-105. DOI: 10.1016/j.apor.2018.06.001.
19. L., Li, Y., Liu, **Z. M., Yuan***, Gao, Y. Wind field effect on the power generation and aerodynamic performance of offshore floating wind turbines. *Energy* 157 (2018) 379-390. DOI: 10.1016/j.energy.2018.05.183.
20. L., Li, **Z. M., Yuan***, Gao, Y., Zhang, X. (2019) Wave force prediction effect on the energy absorption of a wave energy converter with real-time control. *IEEE Transactions on Sustainable Energy* Vol 10 (2), 615 – 624. DOI: 10.1109/TSTE.2018.2841886.
21. L., Li, Cheng, Z., **Z. M., Yuan***, Gao, Y., 2018. Short-term extreme response and fatigue damage of an integrated offshore renewable energy system. *Renewable Energy* Vol 126, pp. 617-629. DOI: 10.1016/j.renene.2018.03.087.
22. C. Ji, Y. Cheng, J. Cui, **Z.M. Yuan**, O. Gaidai, 2018. Hydrodynamic performance of floating breakwaters in long wave regime: an experimental study. *Ocean Engineering* Vol 152, pp. 154-166. DOI: [10.1016/j.oceaneng.2018.01.055](https://doi.org/10.1016/j.oceaneng.2018.01.055).
23. L., Li, Gao, Y., **Z. M., Yuan***, S., Day, Z., Hu, 2018. Dynamic response and power production of a floating integrated wind, wave and tidal energy system. *Renewable Energy* Vol 116, pp. 412-422. DOI: 10.1016/j.renene.2017.09.080.
24. L., Li, Gao, Y., Z., Hu, **Z. M., Yuan**, S., Day, Li, H., 2018. Model test research of a semisubmersible floating wind turbine with an improved deficient thrust force correction approach. *Renewable Energy*

- Vol 119, pp. 95-105. DOI: 10.1016/j.renene.2017.12.019.
25. **Z. M., Yuan**, X., Zhang, C., Ji, L., Jia, H., Wang, A., Incecik, 2018. Side wall effects on ship model testing in a towing tank. *Ocean Engineering* Vol 147, pp. 447-457. DOI: 10.1016/j.oceaneng.2017.10.042.
 26. Zhang, X., Song, X., **Yuan Z.M.**, You Y., 2017. Global motion and airgap computations for semi-submersible floating production unit in waves. *Ocean Engineering* Vol 141, pp. 176-204. DOI: 10.1016/j.oceaneng.2017.06.004.
 27. X., Zhang, X., Song, W., Qiu, **Z.-M.**, **Yuan**, Y., You, N., Deng, 2018. Multi-objective optimization of Tension Leg Platform using evolutionary algorithm based on surrogate model. *Ocean Engineering* Vol 148, pp. 612-631. DOI: 10.1016/j.oceaneng.2017.06.004.
 28. Wang, H., Sheng, X., Wang, S., Chen, L., **Yuan Z. M.**, Wu, Q., 2017. Numerical study on water depth effects on hydrodynamic forces acting on berthing ships. *Journal of Shanghai Jiao Tong University (Science)* Vol 22, pp. 198–205. DOI: 10.1007/s12204-017-1822-8.
 29. Ji, C.-Y., Guo, Y.-C., Cui, J., **Yuan, Z. M. ***, Ma, X.-J., 2016. 3D experimental study on a cylindrical floating breakwater system. *Ocean Engineering*, 2016. 125: p. 38-50. DOI: 10.1016/j.oceaneng.2016.07.051.
 30. **Yuan, Z. M. ***, Incecik, A., Day, S., Ji, C.Y., 2016. Theoretical and numerical estimation of ship-to-ship hydrodynamic interaction effects. *Ocean Engineering* 121, 239-253. DOI: 10.1016/j.oceaneng.2016.05.032.
 31. He, S., Kellett, P., **Yuan, Z.M.**, Incecik, A., Turan, O., Boulougouris, E., 2016. Manoeuvring prediction based on CFD generated derivatives, *Journal of Hydrodynamics* 28 (2), 284-292. DOI: 10.1016/S1001-6058(16)60630-3.
 32. **Yuan, Z.M. ***, He, S., Paula, K., Incecik, A., Turan, O., Boulougouris, E., 2015. Ship-to-Ship Interaction during Overtaking Operation in Shallow Water. *Journal of Ship Research* 59 (3), 1-16. DOI: 10.5957/JOSR.59.3.150004.
 33. **Yuan, Z. M. ***, Incecik, A., Dai, S., Day, S., Ji, C. Y., Zhang, X., 2015. Hydrodynamic interactions between two ships travelling or stationary in shallow waters. *Ocean Engineering* 108 (2015) 620–635.
 34. Ji, C.-Y., Chen, X., Cui, J., **Yuan, Z.M. ***, Incecik, A., 2015. Experimental study of a new type of floating breakwater. *Ocean Engineering* 105, 295-303. DOI: 10.1016/j.oceaneng.2015.08.058.
 35. **Yuan, Z. M. ***, Incecik, A., Day, S., 2014. Verification of a new radiation condition for two ships advancing in waves. *Applied Ocean Research* 48(2014), 186-201. DOI: 10.1016/j.apor.2014.08.007.
 36. Ji, C. Y., **Yuan, Z. M. ***, 2015. Experimental study of a hybrid mooring system. *Journal of Marine Science and Technology* (2015), 20: 213–225. DOI: 10.1007/s00773-014-0260-7.
 37. **Yuan, Z. M. ***, Incecik, A., Jia, L., 2014. A New Radiation Condition for Ships Travelling with Very Low Forward Speed. *Ocean Engineering* 88(2014), 298-309. DOI: 10.1016/j.oceaneng.2014.05.019.
 38. **Yuan, Z. M. ***, Incecik, A., Ji, C. Y., 2014. Numerical study of a hybrid mooring system with clump weights and buoys. *Ocean Engineering* 88(2014), 1-11. DOI: 10.1016/j.oceaneng.2014.06.002.
 39. Ji, C. Y., **Yuan, Z. M. ***, Chen, M. L., 2011. Study on a new mooring system integrating catenary with taut mooring. *China Ocean Engineering*, 25(3), 427-440. DOI: 10.1007/s13344-011-0035-4.

Conference proceedings:

1. **Z.M., Yuan**. Prediction of Ship-lock Interaction by Using a Modified Potential Flow Solver. *5th MASHCON*, 19-23 May, Ostend, Belgium.

2. L., Li, **Z. M., Yuan**. Transient Response of a Moored Vessel Induced by a Passing Ship. . *5th MASHCON*, 19-23 May, Ostend, Belgium.
3. L. Wamba, Z.M., Yuan. A Simple Conceptual Methodology for the Operability Analysis of a Floating Liquefied Natural Gas (FLNG). *OMAE2019*, Glasgow, UK.
4. Y. Luo, Q. Xiao, G. Shi, L. Li, Z.M. Yuan. A Fluid-structure Interaction Study on a Passively Deformed Fish Fin Unit in Small Production Fields. *OMAE2019*, Glasgow, UK.
5. S. He, A. Incecik, Z.M. Yuan, P. Kellett. System Based Prediction of Ship's Manoeuvrability in Varying Water Depth Area. *OMAE2019*, Glasgow, UK.
6. **Z.M., Yuan**, M., Li. Steady wave interference between human swimmers. *34th Intl Workshop on Water Waves and Floating Bodies*, 7th–10th April, 2019, Newcastle, Australia.
7. **Z.M., Yuan**, R.W., Yeung. Unsteady Interactions among Multiple Ships with Free-Surface Effects. 32nd Symposium on Naval Hydrodynamics, Hamburg, Germany 5-10 August 2018.
8. L., Li, Gao, Y., **Z. M., Yuan**. Real-time latching control of wave energy converter with consideration of wave force prediction. 2018 OCEANS - MTS/IEEE Kobe Techno-Oceans (OTO).
9. C. Hodge, W. Bateman, **Z. M., Yuan**, P.R. Thiew, T. Bruce. Coupled Modelling of a Non-linear Wave Energy Converter and Hydraulic PTO. *The 28th International Ocean and Polar Engineering Conference (ISOPE 2018)*, Sapporo, Hokkaido, Japan.
10. David Ogden, Remy Pascal, Adrien Combourieu, David Forehand, Lars Johanning, Zhi-Ming Yuan. New Mechanical Features for Time-Domain WEC Modelling in InWave. 7th International Conference on Ocean Energy 2018, Cherbourg, France.
11. L., Li, **Z. M., Yuan**, Dynamic Response and Power Production of an Integrated Offshore Renewable Energy System, *The 28th International Ocean and Polar Engineering Conference (ISOPE 2018)*, Sapporo, Hokkaido, Japan.
12. **Yuan, Z-M.**, Yeung, R.W., 2018. Unsteady waves generated by two ships with different speeds. *The 33rd Intl Workshop on Water Waves and Floating Bodies*, April 4 to 7, 2018, Guidel-Plages, FRANCE.
13. Hodge, C. W., Bateman, W., **Yuan, Z-M.**, et al., 2017. Performance analysis of the CCell Wave Energy Device. *EWTEC 2017*, Cork, Ireland.
14. **Yuan, Z-M.**, Incecik, A., 2016. Investigation of side wall and ship model interaction, ICMT 2016, 16-Harbin, China.
15. **Yuan, Z-M., 2016.** Wave interference effects on two advancing ships. *31st Intl Workshop on Water Waves and Floating Bodies*, April 3-6, 2016, Plymouth, Michigan, USA.
16. **Yuan, Z-M.**, Incecik, A., 2016. Investigation of ship-bank, ship-bottom and ship-ship interactions by using potential flow method, 4th MASHCON, Hamburg, Germany.
17. **Yuan, Z-M.**, Incecik, A. & Day, S., 2015. Optimum distance between two advancing ships arranged side by side. *34th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2015-41151*, St. John's, Newfoundland, Canada.
18. **Yuan, Z.M.**, Paula, K., 2015. Numerical study on a KVLCC2 model advancing in shallow water. *IWSH 2015*, Glasgow, UK.
19. **Yuan, Z-M.**, Incecik, A., Day, A. & Jia, L., 2015. Double Doppler shift theory on water waves generated by the translating and oscillating source. *30th Intl Workshop on Water Waves and Floating Bodies*, Bristol, UK.
20. Hizir, O.G., **Yuan, Z-M.**, Incecik, A., Turan, O., 2015. The effect of forward speed on nonlinear ship motion responses. *18th International Conference on Ships and Shipping Research*, Lecco, Italy.

21. **Yuan, Z-M.**, Incecik, A., He, S., 2014. Hydrodynamic Interaction between Two Ships Arranged Side by Side in Shallow Water. *33th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2014-23325, San Francisco, California, USA.*
22. **Yuan, Z-M.**, Incecik, A., Day, S., 2014. Numerical study on the hydrodynamic interactions between two ships arranged side by side. *2nd International Conference on Maritime Technology, Glasgow, UK.*
23. **Yuan, Z-M.**, Incecik, A., 2013. The radiation problem of vessels advancing in waves by using a new radiation condition. *TEAM2013 Conference, Keelung, Taiwan.*
24. **Yuan, Z-M.**, Ji, C. Y., Chen, M. L., Zhang, Y., 2011. Coupled analysis of floating structures with a new mooring system. *30th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2011-49597, Rotterdam, The Netherlands.*