

Haibin Wang
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Naval Architecture, Ocean And Marine Engineering
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Personal Statement

Haibin Wang works as a Research Associate at the Maritime Safety Research Centre of the University of Strathclyde. His main duty is focused on the project of **Transport: Advanced and Modular** (TrAM, Horizon 2020 project) to develop and validate of modular design and production methods mainly on electrically-powered vessels operating in protected waters with zero emissions.

Haibin achieved his MEng degree in Naval Architecture and Marine Engineering in University of Strathclyde in 2012, with a sound understanding of naval architecture, marine engineering and environment protection regulations, and undertook a series of naval architecture and marine engineering course. In 2017, he obtained the PhD degree in Naval Architecture and Marine Engineering in this university by experimental testing and CFD simulating a carbon capture method to reduce the CO₂ emission onboard ship in order to meet the IMO's carbon emission reduction target by 2020. Before joining MRSC, he worked on an EU Horizon 2020 project for ship life cycle analysis including cost analysis and environment analysis in response to needs of SME naval architects, shipbuilders and ship-owners, who in order to survive in the world market.

Qualifications

Doctor of Philosophy, University Of Strathclyde
1 Oct 2012 → 30 Jun 2017

Master of Engineering, University of Strathclyde
1 Oct 2009 → 12 Jul 2012

Bachelor of Engineering, Harbin Engineering University
1 Sep 2007 → 11 Jul 2011

Employment

Research Fellow

Naval Architecture, Ocean And Marine Engineering
University Of Strathclyde
United Kingdom
1 Sep 2016 → present

Projects

Ship Lifecycle Software Solutions (SHIPLYS) H2020 SC3

Zhou, P., Yuan, Z., Oguz, E., Wang, H. & Jeong, B.
European Commission - Horizon 2020
1/09/16 → 31/08/19

Research output

- Investigation on the hydrodynamic scaling effect of an OWC type wave energy device using experiment and CFD simulation**
Dai, S., Day, S., Yuan, Z. & Wang, H., 30 Nov 2019, In : Renewable Energy. 142, p. 184-194 11 p.
- Configurations optimization of a tug ship propulsion system: a life cycle assessment case study**
Wang, H., Liang, Y., Jeong, B., Mesbahi, A. & Zhou, P., 5 Jun 2019, p. 1-17. 17 p.
- Life cycle and economic assessment of a solar panel array applied to a short route ferry**
Wang, H., Oguz, E., Jeong, B. & Zhou, P., 10 May 2019, In : Journal of Cleaner Production. 219, p. 471-484 14 p.
- Multi-criteria decision-making for marine propulsion: hybrid, diesel electric and diesel mechanical systems from cost-environment-risk perspectives**
Jeong, B., Oguz, E., Wang, H. & Zhou, P., 15 Nov 2018, In : Applied Energy. 230, p. 1065-1081 17 p.

5. **Systematic evaluation approach for carbon reduction method assessment – a life cycle assessment case study on carbon solidification method**
Wang, H. & Zhou, P., 1 Oct 2018, In : Ocean Engineering. 165, p. 480-487 8 p.
6. **Evaluation on the energy efficiency and emissions reduction of a short-route hybrid ferry**
Yu, W., Zhou, P. & Wang, H., 15 Aug 2018, In : Ocean Engineering. 162, p. 34-42 9 p.
7. **Life cycle cost and environmental impact analysis of ship hull maintenance strategies for a short route hybrid ferry**
Wang, H., Oguz, E., Jeong, B. & Zhou, P., 1 Aug 2018, In : Ocean Engineering. 161, p. 20-28 9 p.
8. **An effective framework for life cycle and cost assessment for marine vessels aiming to select optimal propulsion systems**
Jeong, B., Wang, H., Oguz, E. & Zhou, P., 20 Jun 2018, In : Journal of Cleaner Production. 187, p. 111-130 20 p.
9. **Life cycle and cost assessment on engine selection for an offshore tug vessel**
Oguz, E., Jeong, B., Wang, H. & Zhou, P., 9 Oct 2017, *Maritime Transportation and Harvesting of Sea Resources: Proceedings of the 17th International Congress of the International Maritime Association of the Mediterranean (IMAM 2017), October 9-11, 2017, Lisbon, Portugal*. Guedes Soares, C. & Teixeira, A. P. (eds.). Vol. 2. p. 943-951 9 p.
10. **Optimisation of operational modes of short-route ferry: a life cycle assessment case study**
Wang, H., Oguz, E., Jeong, B. & Zhou, P., 9 Oct 2017, *Maritime Transportation and Harvesting Sea Resources: Proceedings of the 17th International Congress of the International Maritime Association of the Mediterranean (IMAM 2017), October 9-11, 2017, Lisbon, Portugal*. Guedes Soares, C. & Teixeira, A. P. (eds.). [SI], Vol. 2. p. 961-970 10 p.
11. **Reviews on current carbon emission reduction technologies and projects and their feasibilities on ships**
Wang, H., Zhou, P. & Wang, Z., 30 Jun 2017, In : Journal of Marine Science and Application. 16, 2, p. 129-136 8 p.
12. **Solidification and storage of CO₂ captured on ships - feasibility analysis through experiment, simulation and case studies**
Wang, H., Zhou, P. & Wang, Z., 18 Jul 2016. 11 p.
13. **Experimental and numerical analysis on impacts of significant factors on carbon dioxide absorption efficiency in the carbon solidification process**
Wang, H., Zhou, P. & Wang, Z., 1 Feb 2016, In : Ocean Engineering. 113, p. 133-143 11 p.
14. **A case ship study on practical design and installation of carbon absorption and solidification system**
Zhou, P. & Wang, H., 24 Nov 2015. 12 p.
15. **Analysis on numerical simulations of CO₂ absorption process of carbon solidification system**
Zhou, P. & Wang, H., 8 Jul 2015, *Proceedings of the 6th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization*. Athens, 9 p.
16. **Carbon capture and storage - Solidification and storage of carbon dioxide captured on ships**
Zhou, P. & Wang, H., 15 Nov 2014, In : Ocean Engineering. 91, p. 172-180 9 p.
17. **CFD simulations of absorption reaction in carbon solidification processes**
Zhou, P. & Wang, H., 23 Oct 2014, *Transport Means 2014 Proceedings of the 18th International Conference, October 23 - 24, 2014, Kaunas University of Technology, Lithuania*. Ostaševičius, V. (ed.). Kaunas, p. 165-168 4 p. (Transport Means, Proceedings).
18. **Carbon capture and storage - solidification and storage of CO₂ captured on ships**
Wang, H. & Zhou, P., 7 Oct 2013, *Developments in Maritime Transportation and Exploitation of Sea Resources: Proceedings of IMAM 2013, 15th International Congress of the International Maritime Association of the Mediterranean (IMAM), A Coruña, Spain, 14-17 October 2013*. Guedes Soares, C. & López Peña, F. (eds.). Boca Raton, FL., p. 609-618 9 p.