

Curriculum Vitae of Professor Jin Wang

Professor of Marine Technology, Associate Dean (Research), Faculty of Engineering and Technology, Director of Liverpool Offshore, Logistics and Marine (LOOM) Research Institute, Liverpool John Moores University (LJMU), United Kingdom

Gender: Male

Nationality: British

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MAJOR RESEARCH ACHIEVEMENTS AND RECOGNITION

- The annual winner of the prestigious “Award for Risk Reduction in Mechanical Engineering” for outstanding contribution in risk reduction of maritime/mechanical systems from the Institute of Mechanical Engineers (IMEchE) in 2018.
- Recipient of prestigious 2017 RINA – Lloyd’s Register Maritime Safety Award for Lifetime Achievement for improvement of the safety of life at sea, from Royal Institution of Naval Architects (one award from the global marine community each year).
- Recipient of prestigious ‘Outstanding Contribution to Marine Safety’ award for 2017 from the IMarEST - Institute of Marine Engineering, Science and Technology (one award from the global marine community each year).
- Recipient of two Denny Medals for maritime safety research work from the IMarEST in 2004 and 2017.
- Globally ranked within top 70 in Civil Engineering (including Maritime Engineering and Naval Architecture) in the World Ranking of Scientists, based on publications and citations, annually since 2021 (<https://elsevier.digitalcommonsdata.com/v1/datasets/compare/btchxktzyw/3/4>).
- Competitive funding as PI from the UK’s Engineering and Physical Sciences Research Council (7 RCUK grants as PI) or EU (4 EU grants as coordinator and 4 EU grants as LJMU’s PI) since 1998.

ACADEMIC QUALIFICATIONS

PhD in Marine and Offshore Safety (via staff registration), *MSc in Marine Engineering*, Newcastle University, *BEng in Marine Automation*, Dalian Maritime University, PRC, China.

PROFESSIONAL QUALIFICATIONS

CEng, 1996-date; Fellow of the Institute of Marine Engineering, Science and Technology (FIMarEST), 1999 - date

Fellow of the Royal Institution of Naval Architects (FRINA), 2005 - date

Fellow of the UK Safety and Reliability Society (FSaRS), 2011 - date

Elected Member of European Academy of Sciences and Arts, 2022 - date).

EMPLOYMENT HISTORY

9/2002 – Date <i>Job title</i>	Faculty of Engineering and Technology, LJMU, UK <i>Professor of Marine Technology, Director of LOOM (since 2002) and Associate Dean of Faculty of Engineering and Technology (since 2015)</i>
9/2006 – 3/2007 <i>Job title</i>	ABS Consulting Ltd, Warrington, UK <i>Safety Consultant.</i>
4/2003 <i>Job title</i>	Department of Civil and Environmental Engineering, UC Berkeley, USA <i>Senior Visiting Scholar (funded by the UK EPSRC)</i>
10/1999 – 8/2002 <i>Job title</i>	School of Engineering, LJMU, UK <i>Reader in Marine Engineering</i>
9/1995 – 9/1999 <i>Job title</i>	School of Engineering, LJMU, UK <i>Lecturer in Marine and Offshore Technology</i>
4/1995 - 8/1995 <i>Job title</i>	Department of Computing Science, University of Newcastle upon Tyne, UK <i>Research Associate (IA)</i>
2/1991-2/1995 <i>Job title</i>	Engineering Design Centre, University of Newcastle upon Tyne, UK <i>Research Associate (IA)</i>
3/1990 - 10/1990 <i>Job title</i>	Loughborough University, UK <i>Scientific Researcher</i>

SCHOLARLY ACTIVITIES

Government agencies/funding bodies

- Member of sub-panel 12 (Engineering) in Research Excellence Framework (REF) 2014 and 2021 in the UK.
- Review panel member (one of five) of the UK’s Subglacial Lake Ellsworth exploration project failure (2013).
- [UK Malaysia University Consortium](#) Chair since 2022.

Professional bodies

- Chairman of the Maritime and Offshore technology Committee of the European Safety and Reliability Society (since 2010).
- Member of Formal Safety Assessment Experts Group at IMO (since 2009).
- Member of the Council of the Maritime Security & Safety Group at the Society of Maritime Industries (since 2013).

Editorial Board/Editor of National and International Journals

- Editor-in-Chief of Journal of Marine Engineering and Technology (Q1 in Scopus).

Keynote presentations at reputable international conferences

- More than 10 keynote addresses such as “Opening keynote address, “Developments and challenges in maritime and port security assessment”, Annual European Safety and Reliability (ESREL), Wroclaw, 14-18 Sept. 2014” and “keynote address “Effects of offshore safety case regulations on vessel/platform collision incidents”, at ESREL 2023, Southampton, 2023.

Involvement in organisation of conferences and workshops

- Involved in organising more than 60 international conferences including “Chairman of the Academic Committee of the 5th International Conference on Transportation Information and Safety (ICTIS 2019), Liverpool, UK, July 14-17, 2019”.

AWARDS AND FELLOWSHIPS

- More than 20 prestigious awards received from RINA, IMarEST, Society for Reliability Engineering, Quality and Operations Management, Leverhulme Trust, etc..

SUPERVISION OF RESEARCH PROJECTS (all based at LJMU)

- Completed supervision of: 30 postdoctoral researchers, 70 PhD researchers, 2 MPhil researchers, and 30 international visitor scholars.
- Currently supervising 6 doctoral and postdoctoral researchers.

RESEARCH GRANTS

External grants have been obtained from a number of funding sources including Research Councils UK, EU, HSE, Leverhulme Trust, Royal Society, DTI, Nippon Foundation, TSB, overseas governments and industry. Prof. Wang has led or co-led over 100 externally funded projects of multi-million pounds/euros.

RESEARCH INTERESTS

Design and operation of large maritime engineering systems such as ships, offshore installations, offshore renewable energy installations and port terminals. This includes 1) Safety, security, reliability and maintainability assessment; 2) Multiple Criteria Decision Making; 3) Cost benefit analysis and techno-economic analysis; and 4) Design and modelling.

PUBLISHED PUBLICATIONS

Over 550 technical publications have been published (10,000 citations and *h*-index 50 in ISI Web of Science; [17,000 citations and h-index 66 in Google Scholar](#)). Most SCI-cited papers are published in top quality research journals such as Reliability Engineering & System Safety, IEEE Transactions, Risk Analysis and Ocean Engineering (as the leading author or corresponding author).

Refereed long academic SCI cited papers (a selected list)

1. Wang J., Yang J.B., Sen P., "Safety analysis using fuzzy sets and evidential reasoning", *Rel. Eng. & Sys. Saf.*, Vol.47(2), 1996, 103-118.
2. Wang J., "A subjective methodology for safety analysis of safety specs", *IEEE Trans. on Fuzzy Systems*, Vol.5(3), 1997, 418-430.
3. Wang J., Ruxton T., "A design for safety methodology of large engineering systems", *J. of Engineering Design*, Vol.9(2), 1998, 159-170.
4. Wang J., "A review of design for safety methodology for large marine and offshore engineering products", Proceedings of the Institution of Mechanical Engineers Part E, *IMEchE Journal of Process Mechanical Engineering*, Vol. 212, 1999, 251-261.
5. Wang J., O. Kieran "Offshore safety assessment and safety based decision making – the current status and future aspects", *Journal of Offshore Mechanics and Arctic Engineering*, Vol.122, No. 2, 2000, 63-69.
6. Pillay A., Wang J., Wall A., "Optimal inspection period for fishing vessel equipment: a cost and down time model using delay time analysis", *Marine Technology and SNAME News*, Vol. 38, No.2, 2001, 122-129.
7. Loughran C., Pillay A., Wang J., Wall A., Ruxton T., "A preliminary study of fishing vessels", *J. of Risk Res.*, Vol.5(1), 2002, 3-21.
8. Sii H.S., Ruxton T., Wang J., "A fuzzy-logic-based approach to qualitative safety modelling for marine systems", *Engineering Reliability & System Safety*, Vol.73, No.1, July 2001, 19-34.
9. Mokashi A. J., Wang J., Verma A. K., "A study of reliability centred maintenance", *Inter. J. of Mar. Policy*, Vol.26(5), 2002, 325-335.
10. Pillay A., Wang J., "Modified failure mode and effects analysis using approx. reasoning", *Rel. Eng. & Sys. Saf.*, Vol.79(1), 2003, 69-95.
11. Lois P., Wang J., Wall A.D., Ruxton T., "Formal safety assessment of cruise ships", *Tourism Management*, Vol.25(1), 2004, 93-109.
12. Wang J., et al., "An analysis of fishing vessel accidents", *Accident Analysis and Prevention*, Vol.39, 2005, 1019-1024.
13. Yang J.B., Liu J., Wang J., Sii H.S., Wang H.W., "Belief rule-base inference methodology using the evidential reasoning approach", *IEEE Transactions on SMC – Part A: Systems and Humans*, Vol.36, No.2, 2006, 266-285.
14. Yang J.B., Liu J., Xu D.L., Wang J., Wang H.W., "Optimization models for training belief-rule-based systems", *IEEE Transactions on Systems, Man, and Cybernetics – Part A: Systems and Humans*, Vol. 37, No. 4, July 2007, 569-585.
15. Yang Z., Bonsall S., Wang J., "Fuzzy rule-based Bayesian reasoning approach for prioritisation of failures in FMEA", *IEEE Transactions on Reliability*, Vol.57, No.3, 2008, 517-528.
16. Jones B., Jenkinson I., Wang J., "Methodology of using delay-time analysis", *Rel. Eng. & Sys. Saf.*, Vol.94(1), 2009, 111-124.
17. Yang Z., Wang J., Bonsall S., "Facilitating uncertainty treatment in the risk assessment of container supply chains", *Journal of Marine Engineering and Technology*, Vol.A17, 2010, 23-36.
18. Yang Z., Wang J., Bonsall S., "Approximate TOPSIS for vessel selection under uncertain environment", *Expert Systems with Applications*, Vol.38, Issue 12, 2011, 14523-14534.
19. Yang Z.L., Zhang D., Caglayan O., Jenkinson I.D., Bonsall S., Wang J., Huang M., Yan X.P., "Selection of techniques for reducing shipping NOx and SOx emissions", *Transportation Research Part D-Transport And Environment*, Vol.17, Issue 6, 2012, 478-486.
20. Zhang D., Yan X.P., Yang Z.L., Wall A., Wang J., "Incorporation of formal safety assessment and Bayesian network in navigational risk estimation of the Yangtze River", *Reliability Engineering & System Safety*, Vol.118, 2013, 93-105.
21. John A., Paraskevadakis D., Bury A., Yang A.L., Riahi R., Wang J., "An integrated fuzzy risk assessment for seaport operations", *Safety Science*, Vol. 68, 2014, 180-194.
22. Babader A., Ren R., Wang J., Jones K., "A system dynamics approach for enhancing social behaviours regarding the reuse of packaging", *Expert Systems with Applications*, Vol.46, 2016, 417-425.
23. Ma F., Chen Y.W., Huang Z.C., Yan X.P., Wang J., "A novel approach of collision assessment for coastal radar surveillance", *Reliability Engineering & System Safety*, Vol.155, 2016, 179-195.
24. Xi Y.T., Yang Z.L., Fang Q.G., Chen W.J., Wang J., "A new hybrid approach to human error probability quantification-applications in maritime operations", *Ocean Engineering*, 2017, Vol.138, 45-54.
25. Matellini D.B., Wall A.D., Jenkinson I.D., Wang J., Pritchard R., "A three-part Bayesian network for modelling dwelling fires and their impact upon people and property", *Risk Analysis*, 2018, Vol. 38, No. 10, 2018, 2087-2104.
26. Al-Yami H., Yang Z., Ramin R., Bonsall S., Wang J., "Advanced uncertainty modelling for container port risk analysis", *Accident Analysis and Prevention*, 2019, Vol.123, 411-421.
27. Yazdani D., Omidvar M.N., Deplano I., Lersteau C., Makki A., Wang J., Nguyen T.T., "Real-time seat allocation for improving quality of service and safety for passengers", *Transportation Research Part C: Emerging Technologies*, 2019, Vol.18, 158-173.
28. Yang Y., Bashir M., Li C., Michailides C., Wang J., "Mitigation of coupled wind-wave-earthquake responses of a 10 MW fixed-bottom offshore wind turbine", *Renewable Energy*, 2020, Vol.157, 1171-1184, doi.org/10.1016/j.renene.2020.05.077.
29. Sakaris C.S., Bashir M., Yang Y., Michailides C., Wang J., Sakellariou J.S., "Diagnosis of damaged tendons on a 10 MW multibody floating offshore wind turbine platform via a response-only Functional Model Based Method", *Engineering Structures*, Vol.21, 2021.
30. Hassan H., Wang J., Kontovas C., Bashir M., "An assessment of Causes and Failure Likelihood of Cross-Country Pipelines under Uncertainty using Bayesian Networks", *Rel. Eng. & Sys. Saf.*, Vol.218, Part A, 2021, Doi: 10.1016/j.res.2021.108171.
31. Yan Y., Yang Y., Bashir M., Li Chun, Wang J., "Dynamic analysis of 10MW offshore wind turbines with different support structures subjected to earthquake loadings", *Renewable Energy*, 2022, PII: S0960-1481(22)00686-3, doi: 10.1016/j.renene.2022.05.045.
32. Xin X., Liu K., Loughney S., Wang J., Li H., Yang Z., "Graph-based ship traffic partitioning for intelligent maritime surveillance in complex port waters", *Expert Systems with Applications*, Vol.231, 2023.
33. Ma F., Kang Z., Chen C., Sun J., Xu X.B., Wang J., "Identifying ships from radar blips like humans using a customized neural network", *IEEE Intelligent Transportation Systems Transactions*, 2024 doi: 10.1109/TITS.2023.3347761.