

Contact details

Professor Jin Wang
Professor of Marine Technology
Director of LOOM Research Institute
Faculty of Engineering and Technology
Liverpool John Moores University
Byrom Street, L3 3AF, UK
Tel. +44 151 231 2445
Email: j.wang@ljmu.ac.uk

Professor Zaili Yang
Professor of Maritime Transport
Co-director of LOOM Research Institute
Faculty of Engineering and Technology
Liverpool John Moores University
Byrom Street, L3 3AF, UK
Tel. +44 151 231 2531
Email: z.yang@ljmu.ac.uk

Professor Trung Thanh Nguyen
Professor of Operational Research in
Transportation, Co-director of LOOM
Faculty of Engineering and Technology
Liverpool John Moores University
Byrom Street, L3 3AF, UK
Tel. +44 151 231 2006
Email: t.t.nguyen@ljmu.ac.uk

LOOM Website: <https://www.ljmu.ac.uk/research/centres-and-institutes/faculty-of-engineering-and-technology-research-institute/loom> **Email:** loom@ljmu.ac.uk

LOOM members in 2023

Dr. Milad Armin (MA)
Dr. Ariyan Ashkanfar (AA)
Dr. Musa Bashir (MB)
Dr. Eddie Blanco-Davis (EBD)
Dr. Alan Bury (AB)
Dr. Chia-Hsun Chang (CHC)
Dr. Robert Darlington (RD)
Prof. Stephen Fairclough (SF)
Dr. Fang Bin Guo (FBG)
Prof. Ian Jenkinson (IJ)
Dr. Karl Jones (KJ)
Abdul Khaliq (AK)
Dr. Mohamed Kara-Mohamed (MKM)
Dr. Christos Kontovas (CK)
Dr. Sean Loughney (SL)
Dr. Sean Malkeson (SM)
Dr. Dante Ben Matellini (DBM)
Dr. Christian Matthews (CM)
Dr. Marco Messina (MM)
Prof. Trung Thanh Nguyen (TTN)
Dr George Nikitas (GN)
Dr. Dimitrios Paraskevadakis (DP)
Dr. Robyn Pyne (RP)
Prof. Jun Ren (JR)
Dr. Mehdi Seddighi (MS)
Dr. Ava Shahrokhi (AS)
Prof. Jin Wang (JW)
Prof. Zaili Yang (ZY)
Dr. Qian Zhang (QZ)

Other members involved in PhD supervision at LOOM

Prof. T. Bektas, University of Liverpool (TB)
Prof. Juergen Branke (JB), Warwick University
Dr. A Bras (AB), LJMU
Mr. P. Davies (PD), LJMU
Dr. C. Iris, University of Liverpool
Prof. Y. Jin (YJ), Surrey University
Prof. A. Ng (AN), United International College, Beijing Normal University and Hong Kong Baptist University
Prof. Roland Larek (RL), Univ. of Applied Sciences, Germany
Dr. Simon Peter Nadeem, University of Derby
Prof. S. Nazir (SN), University College of Southeast Norway
Prof. A. Ng (AN), University of Manitoba, Canada
Dr. Z. Qu (ZQ), LJMU
Dr. R. Riahi (RR), Columbia Shipmanagement, Germany
Prof. S. Yang (SY), De Montford University
Prof. Y. Yang (YY), Ningbo University, China

LOOM researchers (doctoral/postdoctoral) in 2023

I. Adebayo
R. Abdulkadir
A. Albastaki
Dr R. Boulderado
A. Burgess
S. Caldwell
S. Campbell
J. Canas
C. Celik
S. Charkoutsis
J. Chen
O. Chukwuka
T. Cottage
J. Cutler
J. Divers
Dr. S.Q. Fan
J. Ford
S. Gbako
Ms X. Ge
A. Habib
H. Hamoud
D. Hitchmough
H. Horne
B. Ishaya
M. Jenkins
K. Ji
C. Jones
B.S. Jones
S. Jones
L. Kamalian
N. Karimalis
A. Khaliq
H. Khansaheb
T. Larsen
Dr H. Li
Miss X. Liang
M. Mohsendokhtamlashi

Dr. A. Makki
Dr. O. Maklad
M. Moammer
Miss K. Morrison
P. Mostafazadeh
L.C. Newton
T. Onasanya
P. Oo
M. Oregbeyiwa
C. Park
C. Pitt
Dr Chingpong (Mark) Poo
Z. Rashed
J. Reed-Jones
R. Ren
O. Salih
M. Sanousi
M. Sanousi
Dr E. Shaw
H. Sivori
L. Speed
A. Spiteri
M. Stringfellow
Dr. S. Symes
Dr P. Taylor
O.O. Tobora
S. Toh
P. Ugedi
S. Waddington
Dr. R. Wang
Dr. X.R. Xin
Dr. Z. Xu
V. Yalagala
B. Yu
Miss X. Zhan
J.L. Zhang

Visiting researchers

L. Cai
Y. Cao
S.M. Fang
A. Gugusa
T.N. Khanh
Q. Liu
Y. Liu
X.F. Ma
Dr C.S. Mihailovici
K. Shi
Ms S. Srisakunwan
Ms T. Thongboonpian

C. Wang
J.G. Wang
Prof. T.T. Xu
Y.T. Yan
Ms P. Yodsurang
Dr R.L. Zhang
Prof. M. Ziaei-Rad

Visiting professor

RAEng Visiting Professor
T. Graham, Blueportfolio

It has been identified that the LOOM's research emphasis in 2023 is:

1. To further develop national and international collaboration.
2. To ensure sustainable research income growth.
3. To enhance on research output quality and research impact generation.
4. To enhance research infrastructure.

1. Research publications (published in 2023)

The following are the outputs published in 2023 (for the details, see Appendix 1):

- 4 book chapters.
- 66 SCI-cited refereed journal papers (incl. ESCI).
- 3 other journal papers.
- 20 refereed conference papers.
- 2 other publications.

2. Doctoral, postdoctoral and international research visiting projects (completed, on-going and started in 2022)

2.1 Research projects completed in 2023

PhD projects

1. Dr R. Abdulkadir, “Supply chain integration: empirical evidence from Kaduna State public health supply chains” (2020-2023). (DBM, *et al.*)
2. Dr O. Chukwuka, “Risk analysis for emergency supply chain with particular focus on intermodal transport” (2019-2023), funded by Nigeria. (JR, *et al.*)
3. Dr H. Khansaheb, “Solutions to the sedimentation and maintenance of semi-enclosed channels (2019-2022). (IJ, *et al.*)
4. Dr. A. Spiteri, “An investigation of the hydrodynamics of air lubrication systems and the development of a scaling technique for different designs and operational conditions using CFD” (2019-2023). (MA, *et al.*)
5. S. Toh, “Computational wear prediction for orthopaedic applications” (2019-2023). (AA *et al.*)
6. Dr X. Xin, “Traffic partition in complex waters”, funded by LJMU and Wuhan University of Technology” (2018-2023), funded by LJMU and Wuhan University of Technology. (ZY, *et al.*)

Postdoctoral projects

5. N. Horne “Mobile application development and application on active travel” (2022-23), funded by DfT via LCR CA. (TTN, *et al.*)
6. C. Jones, “Analysing sensor data for promoting active travel in the LCR” (2021-2023), funded by DfT via LCR CA. (TTN, *et al.*)
7. Dr A. Makki, “Generating impact from LJMU research on optimisation, simulation and sensors” & “Analysing data from LJMU sensor networks” (2022-23), funded by UKRI. (TTN, *et al.*)
8. Dr O. Maklad, “On the Development of a Novel Approach in Modelling of Turbulent Pulsating Flows” (2020-2023), funded by EPSRC. (MS, *et al.*)
9. Dr M. Poo, “Enhancing Blue Economy”, (2022-2023), funded by EU Interreg AA. (ZY, *et al.*)
10. Dr S. Symes, “Reducing Maritime Emissions” (2022-2023), funded by Innovate UK Smart Grants. (EBD, *et al.*)
11. Dr R. Wang “Back-end development and data analysis for LJMU Smart Green Dashboard” (2022-23), funded by DfT via LCR CA. (TTN, *et al.*)
12. V. Yalagala “Sensor development and maintenance, with an application on active travel” (2022-23), funded by DfT via LCR CA. (TTN, *et al.*)
13. Prof. D.V. Dinh “Digital framework for healthcare, aquaculture and inter-disciplinary research” (December 2023), funded by EU. (JR, TTN, *et al.*)

Visiting research projects

7. B. Gürevin, “Metaheuristic-based path planning algorithms for autonomous mobile robots” (2023), funded by Turkish Research Council. (TTN)
8. Q. Liu, “Investigation of aero-hydro-elastic-mooring behavior of a H-type floating vertical axis wind turbine using coupled CFD-FEM method” (9/2022-9/2023), funded by China Scholarship Council. (MB, *et al.*)
9. K. Shi, “Modelling and evaluation of seafarer’s unsafe state during navigation” (2022-2023), funded by the China Scholarship Council (CSC). (EBD, *et al.*)
10. Ms S. Srisakunwan, “Research on Railway safety and risk analysis in Thailand” (3-5/2023), funded by EU. (JR, *et al.*)
14. C. Wang, “A novel integrated risk assessment and collision avoidance decision-making for MASSs using reinforcement learning (6/2022-6/2023), funded by China Scholarship Council. (MB, *et al.*)
11. Ms T. Thongboonpian, “Railway timetable optimisation models and case study of the Suwannaphoom airport in Thailand” (10/2022-4/2023), funded by EU REMESH project. (JR)
15. Ms P. Yodsurang, “Research on the SRT freight and station information systems on the Q-GIS database” (10/2022-4/2023), funded by EU REMESH project. (JR)

2.2 On-going research projects in 2023

Doctoral projects

12. A. Albastaki, “A novel study on the Solar and Nuclear Power Plants in the UAE” (2022-2030). (EBD, *et al.*)
13. A. Burgess, “Computational & Physical Modelling of the Physics of Powder Flow during Additive Manufacturing” (2021-2024). (SM, *et al.*)
14. S. Caldwell, “Integrated decision support for sustainable maritime supply chains: Understanding the harmonisation of big data and industry 4.0” (2019-2024). (RD, *et al.*)
15. J. B. Campbell, “A study of turbulence and heat transfer in pulsating flows” (2019-2024), funded by LJMU FET Scholarship. (MS, *et al.*)
16. J. Canas “Computational finite element and wear analyses for shoulder joint replacements” (2021-2024). (AA, *et al.*)
17. S. Charkoutsis, “A novel nonlinear PID controller for improved performance and robust control of nonlinear systems” (2021-2024). (MKM, *et al.*)
18. T. Cottage, “Novel disruptive mixing strategies for industrial applications” (2021-2024), funded by the faculty. (SM, *et al.*)
19. J. Cutler, “Performance Evaluation of a Combined Floating Offshore Energy System (CFOES) in operational and extreme conditions” (2019-2024), funded by LJMU Scholarship. (MB, *et al.*)
20. J. Ford, “Sustainability in the decommissioning process of UK offshore installations and the management of hazardous waste” (2021-2025). (SL *et al.*)
21. S. Gbako, “Benchmarking the current state of the art of Inland Waterways” (2019-2024). (DP, *et al.*)

22. Ms X. Ge, "The Impact of ethnographic research for urban regeneration, in particular the redevelopment of post-industrial sites in China" (2019-2024). (FBG, *et al.*)
23. A. Gugusa, "Analysis of cold chain logistics performance in the floriculture industry: The case of Ethiopian Floriculture" (2020-2024), funded by Kuhne Foundation. (IJ, *et al.*)
24. A. Habib, "Analysis of Sustainable Supply Chain Management (SSCM) practice in the Ethiopian coffee supply chain" (2020-2024). (JR, *et al.*)
25. M. Hamoud, "A multi-criteria decision analysis for an environmental framework of a hybrid solar-wind-hydrogen power plant" (2022-2026). (EBD, *et al.*)
26. D. Hitchmough, "Hull-Propeller interaction on ships using Air Lubrication: A study into enhancing ship design and construction for an environmentally efficient operation" (2021-2025). (EBD *et al.*)
27. B. Ishaya, "A risk assessment framework on the prevention and management of modern-day slavery in global supply chain" (2020-2024). (DP *et al.*)
28. M. Jenkins, "An investigation and evaluation of workplace substance misuse programmes and compliance with drug and alcohol policy" (2019-2024). (DBM, *et al.*)
29. K. Ji, "Swarm intelligence-based decision-making for many-agent autonomous systems" (2017-2024), funded by LJMU and CSC. (QZ, *et al.*)
30. S. Jones. "Reciprocity and Mutuality: A Study into the Emergence of a New Maritime Economy in the Liverpool City Region (2019-2024). (IJ, *et al.*)
31. N. Karimalis, "The effect of management standards and systems on Greek shipping companies (as an extension of corporate governance practices)" (2021-2028). (SL *et al.*)
32. A. Khalique, "Eliminating instrumental distractions on ship's bridge to improve OOW's situational awareness focus", (2019-2026). (EBD *et al.*)
33. T. Larsen. "Development of framework for reliability and survivability of Wave Energy Converters (WECs)" (2021-2024). (MB *et al.*)
34. X. Liang, "Sustainability Freeports" (2021-2024). (ZY *et al.*)
35. M. Moammer, "An evaluation of risk methodologies and framework for building a smart port" (2021-2024), funded by Libyan Government. (MB *et al.*)
36. Miss K. Morrison, "Voice tampering, alterations and audio deepfakes: standardisation of detection methods" (2019-2024). (KJ, *et al.*)
37. L.C. Newton, "Investigating turbulent-turbulent transition of transient flow over smooth and rough surfaces" (2019-2024), funded by LJMU FET Scholarship. (MS, *et al.*)
38. T. Onasanya, "Investigation of wall shear stress and flow behaviour in pulsating blood flows in large arteries", funded by LJMU FET Scholarship (2021-2025). (MS, *et al.*)
39. M. Oregbeyiwa, "Increasing energy efficiency in ports" (2019-2024). (CHC, *et al.*)
40. C. Park, "Cybersecurity risk assessment in the maritime industry" (2019-2024). (CHC, *et al.*)
41. C. Pitt, "Total Knee replacement; why they fail prematurely and how to increase their lifespan?" (2021-2024). (AA, *et al.*)
42. J. Reed-Jones, "Binaural Sound Localisation for Smart Sensors using Hybrid Neural Networks" (2019-2024), funded by LJMU Scholarship. (KJ, *et al.*)
43. R. Ren, "Development of a novel risk management system for cold chain packaging" (2020-2023). (JR, *et al.*)
44. Z. Saleh, "Unsteady CFD Simulation of Offshore Floating Wind Turbines in Platform Motions" (2021-2024). (AS, *et al.*)
45. O. Salih, "Investigation of an intelligent shunt for Hydrocephalus monitoring" (2018-2024). (MM, *et al.*)
46. M. Sanousi, "Methodologies and framework for developing a smart port" (2021 -2025). (MB *et al.*)
47. Miss H. Sivori, "Maritime Simulation-based stress-induced analysis and mitigating methods while applying functional near-infrared spectroscopy (fNIRS)" (2019-2024), funded by a FET scholarship. (EBD, *et al.*)
48. L. Speed, "Digitally unsmudging fingerprints using forensic software" (2021-2026), Self-funded (part-time). (KJ *et al.*)
49. M. Stringfellow, "An Evaluation of the Attainment of Students Based on the Adjustment of Key Variables Within Technical and Vocational Training (TVET)" (2021-2025), EngD, supported by SkillSea. (IJ, *et al.*)
50. P. Ugedi, "Assessing the effectiveness and implementation of the SOLAS Verified Gross Mass (VGM) Regulation" (2016-2021), funded by the Faculty and the Nigerian Maritime Administration and Safety Agency. (CK, *et al.*)
51. Miss B. Yu, "Interface and Interaction: A Design-Oriented Research for Maritime Service Design" (2021-2024). (FBG, *et al.*)
52. Miss X. Zhan, "A design-led research project in urban regeneration: How environmental psychology can help in restructuring the post-industrial landscape" (2019-2024). (FBG, *et al.*)

On-going postdoctoral project

53. Dr S. Fan, "Human reliability analysis" (2021-2024), funded by ERC. (ZY, *et al.*)
54. Dr H. Li, "Autonomous ship risk analysis" (2021-2024), funded by ERC. (ZY, *et al.*)

On-going visiting research projects

55. Prof. T. Graham, "Marine Technology and Project Management", Visiting Professorship funded by Royal Academy of Engineering (2021-2024). (JW)

2.3 Research projects started in 2023

Postdoctoral projects

56. Dr R. Boulderado, "Digital manufacturing" (2023-24). (Naylor, TTN, IJ)
57. Dr M.C. Poo, "Climate risk and economic analysis" (2023-2024), funded by ERC. (ZY, *et al.*)
58. Dr. E. Shaw, "Developing research impact and capacity" (2023-2025), (JW, *et al.*)
59. Dr A. Spiteri, "RETROFIT55: Retrofit solutions to achieve 55% GHG reduction by 2030" (2023-2026), funded by EU Commission. (MA, *et al.*)
60. Dr. S. Symes, "Developing research impact and capacity" (2023-2025). (JW, *et al.*)
61. Dr P. Taylor, "Impact of Exercise Induced Turbulence on Plaque Formation and Risk Factors" (2023-2024), funded by UKRI & QR-PSF. (MS, *et al.*)
62. Dr X.R. Xin, "Arctic shipping risk analysis" (2023-2025), funded by ERC. (ZY, *et al.*)

63. Dr Z. Xu, “Development of a holistic platform for the rational maintenance of floating wind farms” (2023-2025), funded by EU. (MB, *et al.*)

Doctoral projects

64. I. Adebayo “An analysis of the UK’s Roll-on-Roll-off (Ro-Ro) intermodal freight connectivity with logistics gateways of the Atlantic Europe” (2023-2027). (DP, *et al.*)
65. C. Celik, “MASS anti-collision risk analysis” (2023-2025). (ZY, *et al.*)
66. J. Chen, “Human reliability analysis of MASS” (2023-2025). (ZY *et al.*)
67. J. Divers, “Investigation into the viability of hydrogen fuels in commercial shipping vessels to improve shipping industry sustainability” (2023 - 2026), LJMU VC Bicentenary PhD Scholarship. (SL, *et al.*)
68. G. Gebreigziabher, “Supply chain analysis of honey: impact and determinants of modern beehive technology adoption and market outlet choice decisions of beekeepers” (2023-2026). (JR, *et al.*)
69. Miss B. S. Jones “Robustness of the UK Criminal Justice System to advances in audio/video technology” (2022-2025). (KOJ, *et al.*)
70. L. Kamalian, “Climate risk analysis of container supply chains” (2023-2025). (ZY *et al.*)
71. M. Mohsendokhtamlashi, “Port safety and security co-analysis” (2023-2025). (ZY *et al.*)
72. P. Mostafazadeh, “Optimising routing and scheduling of global LNG vessels”, funded by LJMU PhD scholarship (TTN, BM, *et al.*)
73. P. Oo, “Life cycle assessment of global waste management: regional strategies for enhancing environmental sustainability and mitigating impacts” (2023-2026), Dual PhD programme funded by LJMU and Mahidol University. (JR, *et al.*)
74. Z. Rashed, “Investigating an enhanced in-pipe inspection robot for complex structure” (2023-2026). (MKM, *et al.*)
75. O.O. Tobora, “Research on supply chain resilience and risk uncertainty on the high involvement of HRM practices” (2023-2026). (JR, *et al.*)
76. J. Zhang, “Sustainability of container supply chains” (2023-2025). (ZY *et al.*)

Visiting research projects

77. L. Cai, “Traffic optimisation of U-shape ports” (6/2023-5/2024). (Zhou, *et al.*)
78. Y. Cao, “Resilience of global shipping networks” (8/2023-1/2024). (Xin, *et al.*)
79. Dr S. Fang, “Experimental study on human evacuation on passenger ships considering heeling angle and opposite directions” (2023-24), funded by China Scholarship Council. (DBM, *et al.*)
80. K. T. Nguyen, “Research on the container stack loading problem” (10/2023 to 3/2024), funded by EU. (JR, TTN, *et al.*)
81. H. V. Nguyen “Research on mathematical models for neural networks” (11/2023 to 4/2024), funded by EU. (JR, TTN, *et al.*)
82. Y. Liu, “Research on Port Traffic Simulation and Traffic Organisation Optimisation” (04/2023-04/2024), funded by China Scholarship Council. (QZ, *et al.*)
83. X.F. Ma “Dry bulk carrier collision risk analysis” (8/2023-1/2024). (Fan & EDB)
84. Dr C.S. Mihailovici, “A survey of blue economy study” (5/2023-6/2023), funded by EU Interreg. (CK, *et al.*)
85. J.G. Wang, “Shore based power for green port” (11/2023-10/2024). (Li, *et al.*)
86. R. Zhang, “Technological challenges identification based on MASS degree of autonomy framework” (09/2023-08/2024), supported by China Scholarship Council (CSC). (SL *et al.*)
87. Prof. J.T. Xu, “Study on mine gas monitoring system based on ARM9 CPU and industrial ethernet” (12/2023-12/2024), funded by China Scholarship Council. (JR)
88. Y.T. Yan. "Development of seismic damage prevention mechanism for new offshore wind turbine tower configuration based on bionic and fractal shapes" (3/2023-2/ 2024), funded by China Scholarship Council. (MB, *et al.*)
89. Prof. M. Ziaei-Rad, “Unsteady flow and heat transfer” (commence in 2024), funded by CCP-NTH in 2023. (MS)

3. LOOM monthly seminars in 2023

10 LOOM monthly seminars were organised in 2023. Detailed information about the seminars is given in Appendix 2.

4. Research grants in 2023

4.1 External grants

Grants completed in 2023

• MarRI UK - Lookout Awareness of Distractions (2020-2023)	£170,000	(AK, FBG, <i>et al.</i>)
• ESRC-MOST – MASS: UK-Taiwan joint cooperation (2021-23)	£31,000 (out of £62,000)	(CHC, <i>et al.</i>)
• Mission to Seafarers - Study on seafarers’ recruitment fees (2013)	£18,300	(CK, <i>et al.</i>)
• InnovateUK - Reducing Maritime Emissions £48,028 (2022-23)	£48,028 (out of £498k)	(EBD, <i>et al.</i>)
• AHRC-Newton fund: Urban revitalisation (2018 – 2023)	£249,290	(FBG, <i>et al.</i>)
• LCR - Development funding (Mar. Knowledge Hub) (2021-23)	£97,000	(IJ, <i>et al.</i>)
• H2020 RESET – Rel. and Safety Eng. and Tech. (2017-2023)	€1,471,500	(JW, <i>et al.</i>)
• EU Interreg - ARCWIND - Floating wind energy (2017-2023)	€400,437 (out of €4m)	(JW & MB, <i>et al.</i>)
• NSO (UK) - Academic shipbuilding capacity & capability (2023)	£39,997	(MA <i>et al.</i>)
• MoD (UK) via QinetiQ - MoD battery certification (2021-23)	£71,100	(MB, <i>et al.</i>)
• EU INTERREG – ARCWIND extension (2022-2023)	€33,333	(MB, <i>et al.</i>)
• EPSRC - Modelling of Turbulent Pulsating Flow (2020 – 2023)	£259,481	(MS, <i>et al.</i>)
• Innovate UK – Flexible Manufacturing (2020-2023)	£120,000	(RD, <i>et al.</i>)
• IAMU - Maritime Safety Optimization (2021-2023)	\$20,000	(SL, <i>et al.</i>)
• EU ERDF – LCR Green Sustainable Corridors (2018-2023)	£673,000 (out of £8.35m)	(TTN, <i>et al.</i>)
• DfT - Smart Technologies for active travel (2022-23),	£159,000	(TTN, <i>et al.</i>)
• UK DfT – PopupWatch2 - Emergency popup routes (2021-23)	£17,000	(TTN, <i>et al.</i>)
• EU Interreg - Knowledge transfer for blue economy (2019-2023)	€480,000 (out of €2.43m)	(ZY, <i>et al.</i>)
• EU H2020 – Food Supply Chains (2018-2024)	€189,000	(ZY, <i>et al.</i>)

On-going grants in 2023

• IAMU- Addressing Human Error & Performance (2022-24)	\$60,000	(FBG, <i>et al.</i>)
• EU H2020, REMESH – Emergency Resources Chain (2019-2025)	€1,300,000	(JR, <i>et al.</i>)
• RAEng - Decommissioning of Offshore Structures (2020-2024)	£12,800 (out of £200k)	(JW, <i>et al.</i>)
• British Council – UK-Malaysia University Consortium (2022-24)	£100,000	(JW, <i>et al.</i>)
• RAEng - VP in Marine Tech. & Project Man. (2021-24)	£30,000	(JW, <i>et al.</i>)
• EU Horizon - RETROFIT55 Retrofit Solutions (2023-2026)	€626,319 (out of €6.7)	(MA, <i>et al.</i>)
• UKRI - Modelling of Turbulent Pulsating Flows (2022-2024)	£24,000	(MS, <i>et al.</i>)
• EU Erasmus+, SKILSEA: Futureproof Skills (2019-2023)	€148,860 (out of €4m)	(RP, <i>et al.</i>)
• ERC – Container transport resilience (2020-2025)	€1,990,000	(ZY)
• EU H2020 – Human reliability and training (2019-2024)	€173,000 (out of €1m)	(ZY, <i>et al.</i>)

Grants started in 2023

• IAMU - MASS Maritime Education and Training (2023-24)	\$60,000	(CHC, <i>et al.</i>)
• IAMU - Industry 4.0 on Port Resilience (2023-24, Co-I)	\$4,000 (out of \$60k)	(CHC, <i>et al.</i>)
• Royal Society IEC – Port Clusters Climate Change Risk (2023-25)	£12,000	(CHC, <i>et al.</i>)
• Horizon Europe - ULTIMATE Prognostic maintenance (2023-25)	€236,748/£204,093	(MB, <i>et al.</i>)
• InnovateUK – eSOV Electric Service Operating Vessel (2023-25)	£100,000 (out of £25m)	(MB, TTN, <i>et al.</i>)
• InnovateUK – RESTORE Retrofittable Propulsion (2023-25)	£568,352 (out of £4.6m)	(MB, <i>et al.</i>)
• InnovateUK- Dev. next gen. V. Low Head Turbines (2023-2025)	£30,978	(MS, <i>et al.</i>)
• KTP with Beverston - data mining in manufacturing (2023-2025)	£198,904	(Naylor, JJ, <i>et al.</i>)

Grants awarded in 2023

• KTP Bryken - Real-time monitoring and optimization (2024-2026)	£194,320	(MKM, Naylor, <i>et al.</i>)
• Innovate UK - METTLE - Mobile Energy sTorage (2024-2026)	£397,110 (out of £1.84m)	(MB, <i>et al.</i>)
• InnovateUK – HIGHFLEX: Flexible Energy Storage (2024-2026)	£345,085 (out of £1.47m)	(MB, <i>et al.</i>)
• InnovateUK - REFIT: smart sensors (2024-2026)	£85,000 (out of £365K)	(MB, <i>et al.</i>)
• IAMU - MASS Degree of Autonomy Framework (2024-25)	€6,000 (out of €60,000)	(SL, <i>et al.</i>)
• UK EPSRC - Net Zero Maritime Energy Solutions (2024-2032)	£1,433,416 (out of £4.7m)	(ZY, JW, TTN)

5. Evidence of national and international peer esteem in 2023

a. Invited plenary addresses/keynote paper/presentation at international conferences/research seminar

- Blanco-Davis E., “Retrofit solutions on ships to achieve 55% GHG reduction by 2030”, Invited speaker to the Marine and Ocean Division of the Europe-Korea Conference on Science and Technology, 14-18 August 2023, Munich, Germany.
- Pyne R., “Navigating the future of skills and competencies in maritime education and training”, Nautilus International General Meeting 2023, Liverpool, UK, 23 October 2023.
- Ren J., “Building Resilient Emergency Supply Chain: A Comprehensive Analysis of Strategies and Best Practices”, Plenary lecture, The 7th Inter. Conf. on Transportation Info. and Safety (ICTIS 2023), 3 August 2023, Granada, Spain.
- Wang J., “Effects of offshore safety case regulations on vessel/platform collision incidents”, Annual European Safety and Reliability Conference (ESREL), Southampton, UK, 3-7 Sept. 2023.
- Yang Z., “Data-driven risk analysis in container supply chains”, Keynote speech in 4th International Conference on Intelligent Manufacturing and Automation, Wuhan, China, 3-5 November 2023.

b. Other invited presentations

- Chang C., “Skills requirement for future logistics and maritime”, Multimodal, NEC Birmingham, 13-15 June 2023
- Jones, K.O. “Audio and video forensics: A new area for research and teaching”. Keynote session at the International Research Conference of SLTC, Sri Lanka, 14-15 December, 2023, <https://irc2023.sltc.ac.lk/>.
- Kontovas C., “Changing technologies - Impact on wellbeing”, Panel member discussion, International Seafarers’ Welfare and Assistance Network’s (ISWAN) Annual Seminar, Helsinki, 17/11/2023.
- Nguyen TT, “Using sensor analytics to support decision making in sustainable travel and air quality” (keynote speech), Wirral Air Quality Strategy 2023, Floral Pavilion, June 2023.
- Nguyen TT, “Smart Green Journey - the benefit of walking” (keynote speech), Clean Air Day Conference 2023, Eureka Science & Discovery, June 2023.
- Paraskevadakis D., “Research informed teaching in multimodal freight transport”, MULTIMODAL, Birmingham UK, 15 June 2023
- Pyne R., Paraskevadakis D., Jenkinson I., Stringfellow M., Davies P., Belabyd M., Viveka., “The SkillSea initiative: Navigating future skills via a toolbox approach to curriculum development”, Student at heart conference, Liverpool John Moores University, 8 June 2023.
- Pyne R., “Future of maritime education and training”, invited presentation and panel debate at the Maritime Trends Conference 2023, Kavouri, Greece, 13 May 2023.
- Pyne R., “Toolbox approach to developing educational packages to support - Green skills, digital skills, and other transferable skills”, invited presentation at ‘Generation Logistics’ - Chartered Institute of Logistics and Transport Session, Multimodal, Birmingham NEC, 15 June 2023.
- Ren J., “Analysing strategies and best practices for enhancing resilience in emergency supply chains”, invited presentation at the SouthWest China Petroleum University, 05 November 2023, Chengdu, China
- Seddighi M., Taylor P., “Modelling pulsating flows”, UKFN Special Interest Group in Nuclear Thermal Hydraulics and Collaborative Computational Project for Nuclear Thermal Hydraulics (CCP NTH), Bangor University, 15-16 June 2023.

c. Participation in journal editorships

- Guest Editor, Sustainability. (CHC and CK)
- Associate Editor of International Journal of Systems Assurance Engineering and Management. (DP)
- Review Editor on Advanced Clean fuel Technologies for Frontiers in Energy Research. (EBD)
- Review Editor on Eco-Impact Assessments for Frontiers in Green Chemistry. (EBD)
- Editor in Chief of Journal of Marine Science and Technology. Associate Editor of Journal of Engineering for the Maritime Environment. (JW)

- Topic Editor for Mathematics (KOJ)
- Co-Guest Editor of Novel Maritime Techniques and Technologies, and Their Safety (MA)
- Associate Editor, Nonlinear Engineering. Guest Editor, Journal of Marine Science and Engineering. Guest Editor, Applied Science. (MB)
- Lead Guest Editor of a Special Issue in Mathematical Problems in Engineering. (QZ)
- Guest Editor Sustainability Special Issue: Sustainable Energy Systems and Renewable Generation. Guest Editor Sustainability Special Issue: Risk Management and Accident Analysis. Guest Editor *Journal of Marine Science and Engineering* Special Issue: Novel Maritime Techniques and Technologies, and their Safety. (SL)
- Guest Editor, Mathematical Problems in Engineering. (TTN)
- Associate Editor of Asian Journal of Shipping and Logistics. (ZY)

d. Participation in national or international advisory, review, funding, standards or planning bodies

- Reviewer for MRC (CHC)
- Reviewer for EPSRC. (CHC, LL, MB, MS)
- International Association of Maritime Universities (IAMU), Working Group on Research Projects. (CM)
- Advisor on the Ports and Terminals Advisory Group for UK Trade & Investment (UKTI). (IJ)
- Member of the UK EPSRC peer review college of experts. (JR, JW, ZY, MKM)
- Member of the IMO Formal Safety Assessment Experts Group. (JW)
- Panel member for the Research Council of Norway. (JW, ZY)
- Member of Maritime UK Innovation and Technology working group. (MA)
- Reviewer for Horizon Europe Research and Innovation (RIA). (MB)
- Editorial Advisor, Cambridge Publishing Group; External reviewer, the National Foundation for Science and Technology Development of Vietnam; Member of the IEEE Task Force on Evolutionary Computation in Dynamic and Uncertain Environments. (TTN)
- Advisor of the UK Government for Science on “Future of the Sea” programme; Evaluator/overseas expert/panel member of peer review bodies of Poland, USA, UK, Romania, China, and Hong Kong, Netherland, Canada; Member of the Steering Committee of Liverpool City Region Freeport Project, UK. (ZY)

e. Learned society involvement

- Committee member of the University Transport Study Group. (CHC)
- Chairman of the Chartered Institute of Logistics and Transport (CILT) Merseyside and Warrington group. (DP)
- Committee member of the CILT Logistics Research Network (LRN) Forum. (DP)
- Committee member of the North West Branch of the IMarEST. (EBD)
- Committee member of the Consortium of Manufacturing Engineering Heads. (IJ)
- Chairman of Maritime Transportation Safety, European Safety and Reliability Association (ESRA). (JW)
- Co-Chair of the Intelligent Waterborne Transportation Systems Technical Committee ([IWTS-TC](#)), the IEEE Intelligent Transportation Systems Society (ITSS). (JW)
- Member of Council for the Institute of Measurement and Control. (KJ)
- Member of Maritime UK Technology and Innovation Group; Member of MariRi-UK Working Group. (MA)
- President, YoungShip Liverpool; Member Institute of Marine Engineering, Science and Technology (IMarEST); Fellow Higher Education Academy (FHEA). (SL)
- Member of the Combustion Institute (UK Sector); Member of the UK Consortium on Turbulent Reacting Flows. (SM)
- Founding director of International Association of Transport, Trade and Service Studies (IATTSS). (ZY)

f. External PhD examinership

- 1 PhD examination at Plymouth University (CHC)
- 2 PhD examination at Strathclyde University. (EDB)
- 1 PhD examination at Norwegian University of Science and Technology, Norway. (JW)
- 2 PhD examination at University Castilla-La Mancha (UCLM), Spain (MB)
- 1 PhD examination at the University of Manchester and 1 PhD examination at the University of Isfahan (MS)
- 1 PhD examination at Shanghai Jiaotong University (ZY)

g. Involvement of conference organisation

- Co-chair of the 7th International Conference on Transportation Information and Safety (ICTIS 2023), 03 August-05 August 2023, Granada, Spain. (JR, JW)
- Session Organiser, Floating Photovoltaic Technology, OMAE2023 Melbourne, Australia. (MB)
- PC Co-Chair, IEEE 15th International Conference on Knowledge and Systems Engineering (KSE), Vietnam, 2023. (TTN)

h. Prizes/honours

- LJMU FET Teaching Excellence Awards – Individual Teaching Excellence. (DP)
- Best paper award for “The impacts of personal protective measures on the safety of pilotage operation during the COVID-19 epidemic”, presented in the 7th International Conference on Transportation Information and Safety (ICTIS 2023), Xi’an, China, August 4-6, 2023. (Jenkins, BM, JW, *et al.*)
- LJMU VC Award for Excellence in Research 2023 (University and Faculty Winner). (MB)
- LJMU VC Award for Excellence in the Promotion of EDI in Res. and Knowledge Exchange 2023 (Faculty Winner). (RP)
- LJMU FET Teaching Excellence Awards 2023-Academic Leadership. (RP)
- LJMU VC’s Award for Excellence in Promotion of EDI in Research and Knowledge Exchange-FET 2023. (RP)
- JMSU - Student Experience Awards: Outstanding Teacher- FET. (RP)
- LJMU FET Teaching Excellence Awards 2023-Diversity and Inclusivity Award. (RP, *et al.* - LOOM MSc Programme Team)
- Teaching Excellence Awards 2023-Rising Star – Faculty Winner 2023-Research Informed Teaching. (SL)
- Teaching Excellence Awards 2023-Diversity & Inclusivity - Logistics & Maritime Management Programme Team (Engineering)-Faculty Winners 2023. (SL *et al.*)
- LJMU VC Award for Excellence-Research Impact Story 2023 (University Winner). (TTN)
- LJMU VC Award for Excellence in Knowledge Exchange 2023 (Faculty Winner). (TTN)

i. Consultancy

- Merseyrail, Merseytravel, LCR Combined Authority, Sefton Council, Wirral Council, Public Health Wirral, Merseycare. (TTN)

j. Others

- Working in partnership with Risktec Solutions delivering distance learning and face-to-face modules. (DBM)
- Chair of an IET meeting entitled High Performance Computing, Simulation and Modelling at LJMU, December 2023. (MS)
- LJMU Students at the Heart Conference – ‘Mastering student-led research in the Maritime domain: a partnership approach to solving industry’s problems. (RP)
- Curriculum Enrichment Internship Fund – STAR (Sustainables and Renewables, 240 hours/£5,000). (RP)
- Working in partnership with Lloyds Maritime Academy delivering distance learning. (RP, *et al.*)
- LJMU Students at the Heart Conference – ‘Toolbox approach to developing Educational Packages to support Green Skills, Digital Skills, and other Transferable Skills. (RP *et al.*)
- MA, Academic Practice (Distinction) 2020-2023. Thesis: Understanding Student Perceptions on Postgraduate Taught Maritime and Marine Programmes: A study in Student Motivations, Expectations and Experience. (SL)
- Research evidence accepted and published by UK Parliament on “Air Quality in the UK”. (TTN)
- Research evidence accepted, published by UK Parliament on “Active Travel in England”. (TTN)
- Recommendations accepted and integrated into the official policy recommendations by the Parliament Committee to the DfT (<https://publications.parliament.uk/pa/cm5803/cmselect/cmpublic/1335/report.html>) (Parliament report HC 1335). (TTN)

Appendix 1: Publications published in 2023

Book chapters

1. Al Yami H., Riahi R., Wang J., Yang Z. (2023), "Use of artificial neural networks to enhance container port safety analysis under uncertainty", *Advances in Reliability and Maintainability Methods and Engineering Applications*, edited by Liu, Wang and Mi, He L, Springer, doi: 10.1007/978-3-031-28859-3_1.
2. Lombardi D., Bhattacharya S., Nikitas G. (2023), "Physical modeling of offshore wind turbine model for prediction of prototype response", *Wind Energy Engineering: A Handbook for Onshore and Offshore Wind Turbines (2nd Edition)*, Academic Press, Chapter 16, 353-374, doi: 10.1016/B978-0-323-99353-1.00021-9.
3. Pam E., Wall A., Yang Z., Blanco-Davis E., Wang J. (2023), "Multi-criteria based selection of ship-based ballast water treatment technologies", In *Advances in Reliability and Maintainability Methods and Engineering Applications*, Springer Nature Switzerland, 3-19, doi: 10.1007/978-3-031-28859-3_1.
4. Sinsabvarodom C., Punurai W., Asavadorndecha P., Wang J. (2023), "Long-term fatigue assessment of offshore monopile structure under corrosive environmental condition", *Human-Assisted Intelligent Computing - Modeling, simulations and applications*, IOP Publishing Ltd, Chapter 6, 26-1 to 26-18, doi: iopscience.iop.org/book/edit/978-0-7503-4801-0.

Refereed academic journal papers (SCI cited)*

5. Adams D., Matellini D.B., Kaparaki A. (2023), "Benefits for the bunker industry in adopting blockchain technology for dispute resolution blockchain", *Blockchain-Research and Applications*, Vol.6(2), doi: 10.1016/j.bcra.2023.100128. (IF: 5.2)
6. Abdulkadir R., Matellini D.B., Jenkinson I.D., Pyne R., Nguyen T.T. (2023), "Assessing performance using maturity model: a multiple case study of public health supply chains in Nigeria", *Journal of Humanitarian Logistics and Supply Chain Management*, 10.1108/JHLSCM-05-2022-0053. (IF 4.0)
7. Ahmed U., Malkeson S.P., Pillai A.L., Chakraborty N., Kurose R. (2023), "Flame Self-interaction during turbulent boundary layer flashback of hydrogen-rich premixed combustion", *Physical Review Fluids*, Vol.8(2), doi: 10.1103/PhysRevFluids.8.023202, 023202. (IF: 2.7)
8. Akbar M., Pan H., Ou G., Nikitas G., Ahmad B. (2023), "Seismic response compression of various MSE walls based on 3D modeling", *Buildings*, Vol.13(11), 2773, doi: 10.3390/buildings13112773. (IF: 3.8)
9. Alyami H., Yang Z., Riahi R., Bonsall S., Wang J., Wan C., Qu Z. (2023), "Selection of safety measures in container ports", *International Journal of Shipping and Transport Logistics*, 2023, Vol.16, Nos. 3/4, 425-453. (IF: 1.5)
10. Cao Y., Wang X.J., Fan S., Wang H., Yang Z., Liu Z.J., Wang J., Shi R. (2023), "Analysis of factors affecting the severity of marine accidents using a data-driven Bayesian network", *Ocean Engineering*, Vol.269, 113563, doi: 10.1016/j.oceaneng.2022.113563. (IF: 5)
11. Cao Y., Wang X., Yang Z., Wang J., Wang H., Liu Z. (2023), "Research in marine accidents: A bibliometric analysis, systematic review and future directions", *Ocean Engineering*, 2023, doi: 10.1016/j.oceaneng.2023.115048. (IF: 5)
12. Cao Y., Wang X., Wang Y., Fan S., Wang H., Yang Z., Liu Z., Wang J., Shi R. (2023), "Analysis of factors affecting the severity of marine accidents using a data-driven Bayesian network", *Ocean Engineering*, Vol. 269, 113563. (IF: 5)
13. Chen P.S.L., Fan H., Enshaei H., Zhang W., Shi W., Abdussamie N., Miwa, T., Qu Z., Yang Z. (2023), "A review on ports' readiness to facilitate international hydrogen trade", *Inter. Journal of Hydrogen Energy*, Vol.48, 17351-17369. (IF: 7.2)
14. Chukwuka O.J., Ren J., Wang J., Paraskevadakis D. (2023), "A comprehensive research on analyzing risk factors in emergency supply chains", *Journal of Humanitarian Logistics and Supply Chain Management*, Vol.13(3), 249-292. (IF: 4)
15. Cui R., Liu Z., Wang X., Fuchi M., Konishi T., Zhou Y. Tao J., Yang Z., Fan S., Zhao Z. (2023), "The evaluation of seafarer fatigue as a performance shaping factor in the Maritime-HRA method", *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, Vol.9, 04023034. (IF: 2.5)
16. Fan S., Blanco-Davis E., Fairclough S., Zhang J.F., Yan X.P., Wang J. and Yang Z. (2023), "Incorporation of seafarer psychological factors into maritime safety assessment", *Ocean and Coastal Management*, Vol.237, 106515. (IF: 4.6)
17. Fan S., Yang Z. (2023), "Towards objective human performance measurement for maritime safety: A new psychophysiological data-driven machine learning method", *Reliability Engineering and System Safety*, Vol.233, 109103. (IF: 8.1)
18. Fan S., Yang Z. (2023), "Analysing seafarer competencies in a dynamic human-machine system", *Ocean and Coastal Management*, Vol.240, 106662. (IF: 4.6)
19. Fan S., Yang Z. (2023), "Accident data-driven human fatigue analysis in maritime transport using machine learning", *Reliability Engineering & System Safety*, Vol.241, 109675. (IF: 8.1)
20. Fang S., Liu Z., Yang X., Wang X., Wang J., Yang Z. (2023), "A quantitative study of the factors influencing human evacuation from ships", *Ocean Engineering*, Vol.285, 115-156. (IF: 5)
21. Gbako S., Paraskevadakis D., Ren J., Wang J., Radmilovic Z. (2023), "A systematic literature review of technological developments and challenges for inland waterways freight transport in intermodal supply chain management", *Benchmarking: an International Journal*, 2023, doi: 10.1108/BIJ-03-2023-0164. (IF: 5.6)
22. Guo Y.L., Jin Y.X., Hu S.P., Yang Z., Xi Y.T., Han B. (2023), "Risk evolution analysis of ship pilotage operation by an integrated model of FRAM and DBN", *Reliability Engineering and System Safety*, Vol.229, 108850. (IF: 8.1)
23. Gurevin B., Gulturk F., Yildiz M., Pehlivan I., Nguyen T.T., Caliskan F., Boru B., Yildiz M.Z. (2023), "A novel GUI sign for comparison of ROS-based mobile robot local planners", *IEEE Access*, Vol.11, 125738-125748. (IF: 3.9)

* IF: Impact Factor.

24. Hassan S., Kontovas C., Bashir M., Wang J., "A decision support system for assessing cross country pipeline systems: An approach based on Evidential Reasoning (ER) and Cost-Benefit-Analysis (CBA)", *Journal of Pipeline Systems Engineering and Practice*, 2023, Vol.14, Issue 1. (IF: 2)
25. Huang D., Liang T., Hu S., Loughney S., Wang J. (2023), "Characteristics analysis of intercontinental sea accidents using weighted association rule mining: Evidence from the Mediterranean Sea and Black Sea", *Ocean Engineering*, Vol.287(2), 115839. (IF: 5)
26. Ishaya B.J., Paraskevadis D., Bury A., Bryde D. (2023), "A systematic literature review of modern slavery through benchmarking global supply chain", *Benchmarking: An International Journal*, doi: 10.1108/BIJ-09-2022-0554. (IF: 5.6)
27. Jiang M.Z., Liu Y.L., Lv J., Qu Z.H., Yang Z. (2023), "Risk assessment of maritime supply chains within the context of the Maritime Silk Road", *Ocean and Coastal Management*, Vol.231, 106380. (IF: 4.6)
28. Jiang Z., Dai J., Saettone S., Tørå G., He Z., Bashir B., Souto-Iglesias A. (2023), "Design and model test of a soft-connected lattice-structured floating solar photovoltaic concept for harsh offshore conditions", *Marine Structures*. Vol.90, 103426. (IF 3.9)
29. Kara-Mohamed M., Zhang Q., Yan X. (2023), "Design and control of an innovative over-actuated thrust vectoring six-dof quadrotor for extreme and challenging environments", *Unmanned Systems*, doi: 10.1142/S2301385025500190. (IF: 5.3)
30. Khalique A., Bury A., Loughney S. (2024), "Analysis and optimisation of best practice for proper lookout at night". *TransNav, International Journal on Marine Navigation and Safety of Sea Transportation*, Vol.18, 357-367. (IF: 0.6)
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32. Le H.T., Punurai W., Yubonmhat K., Yuliati E., Leow J.S., Kang H.S., Amelia S., Bin Yaakob O., Zawawi N.A.W., Wang J., Le S.V. (2023), "Naturally occurring radioactive material waste management in the ASEAN oil and gas industry: a review", *Journal of Hazardous, Toxic, and Radioactive Waste Management*, 10.1061/JHTRBP.HZENG-1247. (IF: 2.7)
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34. Li H., Ren X.J. and Yang Z. (2023), "Data-driven Bayesian network for risk analysis of global maritime accidents", *Reliability Engineering and System Safety*, Vol.230, 108938. (IF: 8.1)
35. Li H., Jiao H., Yang Z. (2023), "Ship trajectory prediction based on machine learning and deep learning: A systematic review and methods analysis", *Engineering Applications of Artificial Intelligence*, Vol.126, 107162. (IF: 8)
36. Li H., Jiao H., Yang Z. (2023), "AIS data-driven ship trajectory prediction modelling and analysis based on machine learning and deep learning methods", *Transportation Research Part E: Transport and Logistics*, Vol.175, 103152. (IF: 10.6)
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38. Li H., Yang Z. (2023), "Towards safe navigation environment: the imminent role of spatio-temporal pattern mining in maritime piracy incidents analysis", *Reliability Engineering & System Safety*, Vol.238, 109422. (IF: 8.1)
39. Li H., Yang Z. (2023), "Incorporation of AIS data-based machine learning into unsupervised route planning for maritime autonomous surface ships", *Transportation Research Part E: Transport and Logistics*, Vol.176, 103171. (IF: 10.6)
40. Liang M., Li H., Liu W., Lam J. and Yang Z. (2023), "PiracyAnalyzer: Spatial temporal patterns analysis of global piracy incidents", *Reliability Engineering & System Safety*, Vol. 243, 109877. (IF: 8.1)
41. Liu Y., Liu J., Zhang Q., Liu Y., Wang Y. (2024), "Effect of dynamic safety distance of heterogeneous traffic flows on ship traffic efficiency: a prediction and simulation approach", *Ocean Engineering*, Vol.294. (IF: 5)
42. Ma F., Kang Z., Chen C., Sun J., Xu X.B., Wang J. (2023), "Identifying ships from radar blips like humans using a customized neural network", *IEEE Intelligent Transportation Systems Transactions*, doi: 10.1109/TITS.2023.3347761. (IF: 8.5)
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44. Malkeson S.P., Chakraborty N. (2023), "Laminar natural convection of water-based alumina nanofluids in a square enclosure with partial heating from the bottom and symmetrical cooling from the sides", *Heat Transfer Engineering*, doi: 10.1080/01457632.2023.2249727. (IF: 2.3)
45. Nikitas G., Bhattacharya S. (2023), "Experimental study on sand-tire chip mixture foundations acting as a soil liquefaction countermeasure", *Bulletin of Earthquake Engineering*, Vol.21, 4037-4063. (IF: 4.6)
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47. Seyfi H., Hitchmough D., Armin M., Blanco-Davis E. (2023), "A study on the viability of fuel cells as an alternative to diesel fuel generators on ships", *Journal of Marine Science and Engineering*, Vol.11(8), 1489. (IF: 2.9)
48. Shahrokhi A., Berthaut-Gerentes J., Ma L., Ingham D., Pourkashanian P. (2023), "Large eddy simulation inflow generation using reduced length scales for flows past low-rise buildings", *Sustainability*, Vol.15(17), 12786. (IF: 3.9)
49. Shi Z., Endres S., Rutgersson A., Al-Hajjaji S., Brynolf S., Booge D., Hassellöv I.-M., Kontovas C., Kumar R., Liu H., Marandino C., Matthias V., Moldanová J., Salo K., Sebe M., Yi W., Yang M., Zhang C. (2023), "Perspectives on shipping emissions and their impacts on the surface ocean and lower atmosphere: an environmental-social-economic dimension", *Elementa: Science of the Anthropocene*, Vol.11(1), 00052. (IF: 3.9)
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59. Xin X.R., Liu K.Z., Loughney S., Wang J., Li H., Ekere N., Yang Z. (2023), "Multi-Scale collision risk estimation for maritime traffic in complex port waters", *Reliability Engineering & System Safety*, Vol.240, 109457. (IF: 8.1)
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Appendix 2: LOOM monthly seminars in 2023

Time: 10.00-11.15, first Wednesday of each month.

Venue: Room 1.21, LOOM Research Institute, James Parsons Building, Byrom Street, Liverpool John Moores University, Liverpool, L3 3AF, UK

Each internal speaker will give a talk of 30 minutes (excluding question time) while an external speaker is usually given 60 minutes (excluding question time).

In 2023, LOOM planned to deliver 10 research seminars with 19 speakers.

January LOOM seminar (11/01/2023)

Chair: Ava Shahrokhi

Changki Park

Title: Evaluating the cybersecurity risks in the maritime industry

Xuri Xin

Title: Multi-Scale collision risk estimation for maritime traffic in complex waters

February LOOM seminar (01/02/2023)

Chair: Eddie Blanco Davis

Tianran (Rachel) Ren

Title: A Comprehensive Review of Modern Cold Chain Shipping Solutions

Prof Wonsiri Punurai

Title: Analysis of a BIM based on Carbon Footprint and Emission Estimation: Focus on SalayaOne Project

March LOOM seminar (08/03/2023)

Chair: Ben Matellini

Adem Mohammed Habib

Title: Analysis of Sustainable Supply Chain Management (SSCM) Practice in the Ethiopian Coffee Supply Chain

Ramatu Abdulkadir

Title: Supply Chain Integration: Empirical Evidence From Kaduna State Public Health Supply Chains

April LOOM seminar (19/04/2023)

Chair: Milad Armin

Onyeka John Chukwuka

Title: Managing risk in emergency supply chains – An empirical study

Shekwoyemi Gbako

Title: Inland Waterway Freight Transport in Major Logistic Gateways: A Performance Evaluation of The United Kingdom's and Continental Europe's Inland Waterways

May LOOM seminar (10/05/2023)

Chair: Sean Loughney

Barnabas Ishaya

Title: A Performance Evaluation on the Detection and Prevention of Modern Slavery in global supply chains

Joe Ford

Title: Key Factors in the Handling of Hazardous Waste During the Decommissioning of UK Installations

June LOOM seminar (07/06/2023)

Chair: Chia-Hsun Chang

Abadi Afera Gugusa

Title: The Performance of Cold Chain Logistics for Perishable Products; From Systematic Literature Review to Conceptual Framework and Research Agenda

Bilal Gurevin

Title: Developing and Implementing Path Planning in Mobile Robots with Meta-Heuristic Algorithms

July LOOM seminar (05/07/2023)

Chair: Jun Ren

Xinrui Liang

Title: Risk analysis of cargo theft from freight supply chains using a data-driven Bayesian network

Kun Shi

Title: Ship emission estimation with high spatial-temporal resolution in the Yangtze River estuary using AIS data

August LOOM seminar (24/08/2023)

Chair: Zaili Yang

Prof. Zaojian Zou

Title: Identification modelling and prediction of ship manoeuvring motion based on machine learning

November LOOM seminar (08/11/2023)

Chair: Chia-Hsun Chang

Changki Park

Title: Cybersecurity Risk Assessment in the Maritime Industry

Siming Fang

Title: Research on human evacuation when ship is heeling or trimming

December LOOM seminar (06/12/2023)

Chair: Chia-Hsun Chang

Xiaofei Ma

Title: Unravelling the Usage Characteristics of Human Element, Human Factor, and Human Error in Maritime Safety

Prof Dinh Van Dzung

Title: Digital Platforms for Transdisciplinary Innovation