

Rui-Yang Zhang

Email: r.zhang26@lancaster.ac.uk
Personal Website: <https://shusheng3927.github.io/>

EDUCATION

Lancaster University

PhD Statistics and Operation Research

Lancaster, UK

October 2024 - Current

- **Project Title:** Bayesian experimental designs of drifters for ocean currents modelling
- **Project Partner:** ARC TIDE Research Hub
- **Supervisors:** David Leslie, Henry Moss, Lachlan Astfalck, Edward Cripps

Lancaster University

MRes Statistics and Operation Research

Lancaster, UK

October 2023 - September 2024

- **Grade:** Distinction

University College London

BSc Mathematics and Statistical Science

London, UK

September 2020 - June 2023

- **Grade:** First Class

PREPRINTS AND PUBLICATIONS

1. **Zhang, R. Y.**, Moss, H. B., Astfalck, L. C., Cripps, E. J., and Leslie, D. S. (2025). BALLAST: Bayesian Active Learning with Look-ahead Amendment for Sea-drifter Trajectories under Spatio-Temporal Vector Fields. *arXiv preprint arXiv:2509.26005*.
2. Iguchi, Y., Livingstone, S., Nüsken, N., Vasdekis, G., & **Zhang, R. Y.** (2025+). Skew-symmetric schemes for stochastic differential equations with non-Lipschitz drift: an unadjusted Barker algorithm. **IMA Journal of Numerical Analysis** (forthcoming).
3. **Zhang, R. Y.**, Moss, H. B., Astfalck, L. C., Cripps, E. J., and Leslie, D. S. (2024). BALLAST: Bayesian Active Learning with Look-ahead Amendment for Sea-drifter Trajectories. *NeurIPS 2024 Workshop on Bayesian Decision-making and Uncertainty*.

TALKS

- A Dynamic Perspective on Matérn Gaussian Processes
 - CSML Reading Group, **Lancaster University**. October 2025.
 - Workshop on Kernels, Flows, and Sampling, **Newcastle University**. October 2025.
- BALLAST: Bayesian Active Learning with Look-ahead Amendment for Sea-drifter Trajectories under Spatio-Temporal Vector Fields
 - Irish CRT Winter Symposium, **University College Dublin**. January 2026.
 - STOR-i Annual Conference, **Lancaster University**. January 2026.
 - STOR-i Forum, **Lancaster University**. October 2025.
 - Physics Enhancing Machine Learning Workshop 2025, **Institute of Physics**. October 2025.
- BALLAST: Bayesian Active Learning with Look-ahead Amendment for Sea-drifter Trajectories
 - Statistics PhD Seminar, **University College London**. February 2025.
 - Biannual TIDE Workshop, **University of Western Australia**. November 2024.
 - STOR-i Forum, **Lancaster University**. October 2024.
- Skew-symmetric schemes for stochastic differential equations with non-Lipschitz drift
 - STOR-i Forum, **Lancaster University**. June 2024.
 - CSML Reading Group, **Lancaster University**. June 2024.

SUPERVISIONS

Benjamin Matsaert	STOR-i Summer Internship
<i>Probabilistic Eddy Identification using Gaussian Processes</i>	<i>July 2025 - August 2025</i>
Harriett Du Four (Secondary Supervisor)	STOR-i Summer Internship
<i>Spatial Analysis of Sea Surface Temperature</i>	<i>July 2025 - August 2025</i>

ACTIVITIES AND SERVICE

Learning Development Maths and Stats Hub	Lancaster, UK
<i>Tutor</i>	<i>Oct 2025 - Present</i>
STOR-i Forum	Lancaster, UK
<i>Co-Organiser</i>	<i>Oct 2024 - Present</i>
Outreach Talks to Sixth Form Students	Lancaster, UK
<i>Speaker</i>	<i>Mar 2025 - Apr 2025</i>
Lancaster AI Reading Group	Lancaster, UK
<i>Co-Organiser</i>	<i>Oct 2024 - Sep 2025</i>
BayesAI Workshop	Lancaster, UK
<i>Co-Organiser</i>	<i>Jun 2024 - Sep 2024</i>

GRANTS AND AWARDS

- Early Career Researcher Travel Grant for Physics Enhancing Machine Learning 2025, **Data-Centric Engineering**, *October 2025*.
- PGR Citizenship Prize (with A. Makris), **School of Mathematical Sciences, Lancaster University**, *July 2025*
- Focused Research Grants (with Y. Iguchi, S. Livingstone, G. Vasdekis), **Heilbronn Institute for Mathematical Research**, *June 2025*
- Funding for Academic Visit and Workshop Presentation, **ARC TIDE Research Hub**, *November 2024*.
- Early Career Researcher Travel Grant, **London Meeting on Computational Statistics**, *June 2024*.
- Royal Statistical Society Award, **UCL**, *September 2023*.
- Dean's List, **UCL**, *September 2023*.
- LMS Undergraduate Research Bursary, **London Mathematical Society**, *June 2023 - July 2023*.

SKILLS

Languages: English (Bilingual), Mandarin Chinese (Native)
Programming Languages: R, Python (JAX, Numpy, Torch)