

# Siu Lun Chau

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🔍 Google Scholar

## Education

- 2018–2023 **DPhil in Statistics**, *University of Oxford*, Oxford UK
- Thesis: “Towards Trustworthy Machine Learning with Kernels”
  - Supervisors: Prof. Dino Sejdinovic (main), Prof. Mihai Cucuringu, and Prof. Xiaowen Dong.
- 2014–2018 **MMATH in Mathematics and Statistics**, *University of Oxford*, Oxford UK
- Graduated with First Class Honours
  - Ranked 2<sup>nd</sup> in 4<sup>th</sup> year and 1<sup>st</sup> in 3<sup>rd</sup> year.

## Experience

- 2025–Present **Assistant Professor**, *College of Computing & Data Science, Nanyang Technological University*, Singapore
- Lead the Epistemic Intelligence & Computation Lab, teach, and supervise PhD students.
- 2023–2025 **Postdoctoral Researcher**, *CISPA Helmholtz Center for Information Security*, Saarbrücken DE
- Conducted research and mentored PhD and Master's students.
- 2023 **Research Assistant**, *CISPA Helmholtz Center for Information Security*, Saarbrücken DE
- Completed my DPhil thesis while mentoring PhD and Master's students.
- 2023 **Data Scientist**, *Ravio (HR Tech Startup)*, London UK
- Utilised language models to unify job titles across heterogeneous organisations
  - Developed predictive model with interpretable constraints, e.g. monotonicity.
- 2022 **Applied Scientists II Intern**, *Amazon*, London UK
- Developed coherent deep probabilistic forecast models for the EU transportation network.
- 2021 **Research Intern**, *Max Planck Institute for Intelligent Systems*, Tübingen DE
- Researched on improving econometrics models with modern machine learning methods.
- 2019–2020 **Machine Learning Consultant**, *Catalyst AI*, Cambridge UK
- Delivered machine learning solutions to clients.

## Research Funding & Awards

- 2024 ICML 2024 Spotlight Paper Award
- 2024 AAAI 2024 Oral Paper Award
- 2023 NeurIPS 2023 Spotlight Paper Award
- 2023–2025 Helmholtz Association Postdoc funding
- 2018–2023 EPSRC and MRC studentship for DPhil in Statistics and Machine Learning
- 2017 Department Prize for FHS Mathematics and Statistics Part B (Top of the year)

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## Publications

20. **Truthful Elicitation of Imprecise Forecasts**  
Anurag Singh, [Siu Lun Chau](#), Krikamol Muandet  
*ArXiv Preprint: 2503.16395*
19. **Kernel Quantile Embeddings and Associated Probability Metrics**  
Masha Naslidnyk, [Siu Lun Chau](#), Francois-Xavier Briol, Krikamol Muandet  
*In Submission*
18. **Strategic Learning with Local Explanations as Feedback**  
Kiet Vo, [Siu Lun Chau](#), Masahiro Kato, Yixin Wang, Krikamol Muandet  
*ArXiv Preprint: 2502.04058*
17. **Credal Two-Sample Tests of Epistemic Uncertainty**  
[Siu Lun Chau](#), Antonin Schrab, Arthur Gretton, Dino Sejdinovic, Krikamol Muandet  
*To appear in AISTATS 2025*
16. **Bayesian Optimization for Building Social-Influence-Free Consensus**  
Masaki Adachi, [Siu Lun Chau](#), Wenjie Xu, Anurag Singh, Michael Osborne, Krikamol Muandet  
*Arxiv Preprint: 2502.07166*
15. **Highly Parallel Optimisation of Nickel-Catalysed Suzuki Reactions through Automation and Machine Intelligence**  
Joshua W. Sin, [Siu Lun Chau](#), Ryan P. Burwood, Kurt Püntener, Raphael Bigler, Philippe Schwaller  
*ChemRxiv Preprint*
14. **Domain Generalisation via Imprecise Learning**  
Anurag Singh, [Siu Lun Chau](#), Shahine Bouabid, Krikamol Muandet  
*ICML 2024 (Spotlight paper)*
13. **Collaborative and Explainable Bayesian Optimisation**  
Masaki Adachi, Brady Planden, David A. Howey, Krikamol Muandet, Michael A. Osborne, [Siu Lun Chau](#)  
*AISTATS 2024*
12. **Causal Strategic Learning with Competitive Selection**  
Kiet Vo, Muneeb Aadil, [Siu Lun Chau](#), Krikamol Muandet  
*AAAI 2024 (Oral paper)*
11. **Explaining the Uncertain: Stochastic Shapley values for Gaussian Process Models**  
[Siu Lun Chau](#), Krikamol Muandet\*, Dino Sejdinovic\*  
*NeurIPS 2023 (Spotlight paper)*
10. **Gated Domain Units for Multi-Source Domain Generalisation**  
Simon Föll<sup>†</sup>, Alina Dubatovka<sup>†</sup>, Eugen Ernst\*, [Siu Lun Chau](#)\*, Martin Maritsch, Patrik Okanovic, Gudrun Thäter, Joachim M. Buhmann, Felix Wortmann, Krikamol Muandet  
*TMLR 2023*
9. **Towards Trustworthy Machine Learning with Kernels**  
[Siu Lun Chau](#)  
*DPhil Thesis*
8. **Giga-scale Kernel Matrix-Vector Multiplication on GPU**  
Robert Hu, [Siu Lun Chau](#), Dino Sejdinovic, Joan Alexis Glaunès  
*NeurIPS 2022*
7. **Explaining Preference with Shapley Values**  
[Siu Lun Chau](#)\*, Robert Hu\*, Jaime Ferrando Huertas, Dino Sejdinovic  
*NeurIPS 2022*

6. **RKHS-SHAP: Shapley Value for Kernel Methods**  
Siu Lun Chau, Robert Hu, Javier Gonzalez, Dino Sejdinovic  
*NeurIPS 2022*
5. **Spectral Ranking with Covariates**  
Siu Lun Chau, Mihai Cucuringu, Dino Sejdinovic  
*ECML PKDD 2022*
4. **Learning Inconsistent Preference with Gaussian Processes**  
Siu Lun Chau, Javier Gonzalez, Dino Sejdinovic  
*AISTATS 2022*
3. **BayesIMP: Uncertainty Quantification for Causal Data Fusion**  
Siu Lun Chau\*, Jean Francois Ton\*, Yee Whye Teh, Javier Gonzalez, Dino Sejdinovic  
*NeurIPS 2021*
2. **Deconditional Downscaling with Gaussian Processes**  
Siu Lun Chau\*, Shahine Bouabid\*, Dino Sejdinovic  
*NeurIPS 2021*
1. **Kernel-Based Graph Learning From Smooth Signals: A Functional Viewpoint**  
Xingyue Pu, Siu Lun Chau, Xiaowen Dong, Dino Sejdinovic  
*IEEE 2020*

## Selected Invited Talks

- Mar.2025 Rain ML lab, University of Oxford
- Mar.2025 March's AI-Fun with ELLIS Seminar, University of Manchester
- Feb.2025 Amazon Web Service, Berlin
- Oct.2024 Gatsby Unit, University College London
- Oct.2024 Fundamentals of Statistical Machine Learning Group, University College London
- Jul.2024 College of Computing and Data Science, Nanyang Technological University, Singapore
- Mar.2024 Institute of Informatics, Ludwig-Maximilians-Universität München (LMU)
- Dec.2023 Australian Data Science Network 2023
- Nov.2023 School of Computing, Australian National University
- Nov.2023 Data 61, CSIRO, Melbourne
- Nov.2023 School of Computing and Information Systems, University of Melbourne
- Nov.2023 Australian Institute for Machine Learning, University of Adelaide
- Sep.2023 The Department of Management, Technology, and Economics, ETH Zurich
- Sep.2023 ETH AI Center
- Sep.2023 Oxford-Man Institute, University of Oxford
- Feb.2023 CISPA – Helmholtz Center for Information Security
- Sep.2022 ELISE Theory Workshop on ML Fundamentals, EURECOM
- Jun.2022 S-DCE Alan Turing Institute seminar
- May.2022 Gatsby Unit, University College London
- Feb.2022 UCL SML group
- Feb.2022 Imperial & Oxford StatML seminar
- Oct.2021 Max Planck Institute for Intelligent Systems
- Jun.2021 Warwick ML Group, University of Warwick

## Supervision\ Mentoring Experience

- 2023-Present **Anurag Singh** (PhD Student, previously at Technical University of Munich)

2023-Present **Kiet Vo** (PhD Student, previously at Saarland University)  
2024-Present **Asma Ahmed Hashmi** (PhD Student at Ludwig-Maximilians-Universität München (LMU))  
2024-Present **Joshua W. Sin** (PhD Student at École Polytechnique Fédérale de Lausanne (EPFL))  
2024 **Masaki Adachi** (Intern, PhD Student at the University of Oxford)  
2023-2024 **Masha Naslidnyk** (Intern, PhD Student at University College London)  
2024-Present **Swathi Suhas** (Research Assistant, Master Student at Saarland University)  
2022 **Oscar Yung** (Master Student at University of Oxford)  
2020 **Samuel Weinman** (Master Student at University of Oxford)