**Shang Liu**

Address: ACEX Building 349, Imperial College London,

Exhibition Rd, South Kensington, London SW7 2BX, UK

Email: s.liu21@imperial.ac.uk

***EDUCATION***

**Ph.D. of Operations and Analytics**

Business School,Imperial College London (ICL), London, UK. *Sept. 2022 – Jun. 2026 (Expected)*

Advisor: Prof. Xiaocheng Li

**Master of Research of Operations and Analytics (Distinction)**

Business School,Imperial College London (ICL), London, UK. *Sept. 2021 – Jun. 2022*

**Bachelor of Mathematics**

School of Mathematical Sciences, Peking University (PKU), Beijing, China. *Sept. 2016 – Jun. 2021*

***RESEARCH***

**Online Bin Packing with Known**

**Shang Liu**, Xiaocheng Li, *under Major Revision at Mathematics of Operations Research*, [arXiv](https://arxiv.org/abs/2112.03200)

**Non-stationary Bandits with Knapsacks**

**Shang Liu**, Jiashuo Jiang, Xiaocheng Li, *NeurIPS 2022*,[arXiv](https://arxiv.org/abs/2205.12427)

**Maximum Optimality Margin: A Unified Approach for Contextual Linear Programming and Inverse Linear Programming**

Chunlin Sun\*, **Shang Liu**\*, Xiaocheng Li, *ICML 2023*, [arXiv](https://arxiv.org/abs/2301.11260)

**Distribution-Free Model-Agnostic Regression Calibration via Nonparametric Methods**

**Shang Liu**\*, Zhongze Cai\*, Xiaocheng Li, *NeurIPS 2023*, [arXiv](https://arxiv.org/abs/2305.12283)

**Understanding Uncertainty Sampling**

**Shang Liu**, Xiaocheng Li, *submitted*, [arXiv](http://arxiv.org/abs/2307.02719)

**When No-Rejection Learning is Consistent for Regression with Rejection**

Xiaocheng Li, **Shang Liu**, Chunlin Sun, Hanzhao Wang, *AISTATS 2024*, [arXiv](https://arxiv.org/abs/2307.02932)

**Towards Better Statistical Understanding of Watermarking LLMs**

Zhongze Cai\*, **Shang Liu\***, Hanzhao Wang\*, Huaiyang Zhong, Xiaocheng Li, [arXiv](https://arxiv.org/abs/2403.13027)

**Understanding the Training and Generalization of Pretrained Transformer for Sequential Decision Making**

Hanzhao Wang\*, Yu Pan\*, Fupeng Sun, **Shang Liu**, Kalyan Talluri, Guanting Chen, Xiaocheng Li, [arXiv](https://arxiv.org/abs/2405.14219)

**Towards Better Understanding of In-Context Learning Ability from In-Context Uncertainty Quantification**

**Shang Liu\***, Zhongze Cai\*, Guanting Chen, Xiaocheng Li, [arXiv](https://arxiv.org/abs/2405.15115)

*\*: equal contribution*

***PRIZES & AWARDS***

Dean’s List for Academic Excellence at Imperial College Business School, 2021/2022

Outstanding Graduate of Peking University, 2021

*Wusi* Scholarships at Peking University, 2016/2017, 2017/2018

***SEVICE***

Reviewer: NeurIPS 2024

***TEACHING***

TA: Machine Learning, Spring 2024, Imperial College London