

QUAN ZHOU

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Technion, Israel

SUMMARY

I am interested in optimization, stochastic process and applications in machine learning algorithms. I received my PhD degree in August 2024.

EMPLOYMENT

Postdoc at Technion, Department of Electrical Engineering	Israel
Supervisor: Prof. Shie Mannor	<i>Since Nov 2024</i>

EDUCATION

Imperial College London, Dyson School of Design Engineering	United Kingdom
PhD in Design Engineering	<i>Oct 2022 - Aug 2024</i>
Supervisor: Prof. Robert Shorten, Dr. Jakub Mareček	
University College Dublin, School of Electrical & Electronic Engineering	Ireland
PhD in Electrical and Electronic Engineering (transferred to Imperial)	<i>Feb 2020 - Aug 2022</i>
Supervisor: Dr. Jakub Mareček, Prof. Robert Shorten	
University of Edinburgh, School of Mathematics	United Kingdom
MSc Operational Research with Risk	<i>Sep 2018 - Nov 2019</i>
Supervisor: Dr. Jakub Mareček, Prof. Jacek Gondzio	Grade: 75, Distinction
Hunan University, College of Finance and Statistics	China
BEc (Hons) Insurance and Actuarial Science	<i>Sep 2014 - Jun 2018</i>

PREPRINTS

Quan Zhou, Mark Kozdoba, and Shie Mannor. Representative action selection for large action-space meta-bandits. *arXiv preprint arXiv:2505.18269*, 2025 (Submitted to AAAI-2026)

Quan Zhou, and Jakub Marecek. Group-blind optimal transport to group parity and its constrained variants. *arXiv preprint arXiv:2310.11407*, 2023 (Under second-round review at JMLR)

PUBLICATION LIST

Quan Zhou and Jakub Mareček. Learning of linear dynamical systems as a non-commutative polynomial optimization problem. *IEEE Transactions on Automatic Control*, 2023

Quan Zhou, Jakub Mareček, and Robert Shorten. Fairness in forecasting of observations of linear dynamical systems. *Journal of Artificial Intelligence Research*, 76:1247–1280, 2023

Quan Zhou, Jakub Mareček, and Robert N Shorten. Fairness in forecasting and learning linear dynamical systems. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 35, pages 11134–11142, 2021

Quan Zhou, Jakub Mareček, and Robert Shorten. Subgroup fairness in two-sided markets. *Plos one*, 18(2):e0281443, 2023

Quan Zhou, Ramen Ghosh, Robert Shorten, and Jakub Mareček. Closed-loop view of the regulation of ai: Equal impact across repeated interactions. In *2024 IEEE 40th International Conference on Data Engineering Workshops (ICDEW)*, pages 176–181. IEEE, 2024

Aida Manzano Kharman, Christian Jursitzky, Quan Zhou, Pietro Ferraro, Jakub Marecek, Pierre Pinson, and Robert Shorten. An adversarially robust data-market for spatial, crowd-sourced data. *Distrib. Ledger Technol.*, November 2024. Just Accepted

RESEARCH EXPERIENCE

Machine Learning for Microsoft Azure *Sep 2021-Jan 2022*

With a team of researchers at DKI (Data, Knowledge, Intelligence) Group of Microsoft Research Asia, I explore the applications of machine learning in certain problems at Microsoft Azure.

Proper Learning of Linear Dynamic Systems *May-Aug 2019*

Postgraduate research project under the supervision of Dr. Jakub Mareček (IBM Research) and Prof. Jacek Gondzio (University of Edinburgh).

Insurance Company Economic Capital Measurement based on Copula *Dec 2017 - May 2018*

Undergraduate research project under the supervision of Prof. Dihong Chen (Hunan University).

TALKS AT CONFERENCES & WORKSHOPS

2025 Mathematical Aspects of Data Science (one poster).

2024 ICDE Workshop on Fairness in AI.

2023 Machine Learning NeEDS Mathematical Optimization.

2021 ICLR Workshop on Responsible AI (two posters).

2021 DET Seminar at Dyson School of Design Engineering, Imperial College London.

2021 Thirty-Fifth AAAI Conference on Artificial Intelligence.

AWARD

2024 Funding for the conference “Modern Perspectives in Applied Mathematics: Theory and Numerics of PDEs” at ETH Zurich

SKILLS

Programming Languages
Software Packages

PyTorch, Python, Julia, MATLAB
Mosek, CPLEX, GAMS, Xpress

TEACHING EXPERIENCE

One lecture on fairness for *Machine Learning (2023)*.

TA for *Machine Learning (2023)*, *Signal Processing (2021)*, and *Optimization (2022)*.

VOLUNTEERING

Teacher, AIESEC

- (Kuala Lumpur, Malaysia, Mar 2018) Worked in a Christian charity house for one month and cooperated with a Vietnamese volunteer to teach English and mathematics to around 30 students. On holidays, we organized extracurricular activities.
- (Colombo, Sri Lanka, Jul 2016) Worked in a 6-person team to give English and Chinese courses in a Buddhist primary school and a high school, for one month.

REFERENCES

Prof. Shie Mannor

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Prof. Robert Shorten

Dyson School of Design Engineering
Imperial College London
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Dr. Jakub Mareček

Department of Computer Science
Czech Technical University in Prague
jakub@marecek.cz