Zimin Liang

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SUMMARY

I am a PhD student at the University of Birmingham, UK, in the Department of Computer Science. My research interests focus on multi-objective optimisation, evolutionary computation, and combinatorial optimisation problems. This includes optimising conflicting objectives in areas like engineering design (cost, performance, energy) and machine learning (accuracy, speed, generalisation). Additionally, I lead the academic department of the Doctorate Associate, promoting global interdisciplinary communication among young scholars. I have organised online academic salons on "Sustainable Development" and support PhD groups interested in entrepreneurship. In my free time, I enjoy playing the piano, Go, reading, Yi-ology and divination. I aim to help more people and contribute to the long-term survival of human civilization.

EDUCATION

2021 – Expect 2025   **University of Birmingham, UK**   **Ph.D Computer Science**
Research: Multi-objective optimisation, Multi-objective Combinatorial Optimisation, Non-elitist Evolutionary Algorithm, Visualisation of optimisation problems.

2019 – 2021   **University of Birmingham, UK**   **MRes Natural Computation**
Research: Artificial lifes, Agent-based model, Evolutionary Computation. Projects: Agent-based model on how human activities impact the cultural diversity of chimpanzees, Chaotic Random Number Generator in Genetic Algorithms

2015 – 2019   **University of Birmingham, UK**   **MSci Computer Science**

RESEARCH PROJECTS

-	Visualisation of multi-objective optimisation problems	**2023 –**
-	Importance of dominated solutions in EC	**2023 –**
-	Efficient Algorithms on MO Combinatorial problems	**2022 –**
-	MOEAs vs LS on MO Combinatorial problems	**2022 – 2024**
-	Non-Elitist Multi-Objective Evolutionary Algorithms	**2021 – 2023**

PUBLICATIONS

- Z. Liang, Z. Cui, M. Li. Pareto landscape: Visualising the landscape of multi-objective optimisation problems. In International Conference on Parallel Problem Solving from Nature (PPSN), 2024
- M. Li, X. Hang, X. Chu, Z. Liang. Empirical comparison between MOEAs and local search on multi-objective combinatorial optimisation problems. In Genetic and Evolutionary Computation Conference (GECCO), 2024
- Z. Liang, M. Li, P. K. Lehre. Non-elitist evolutionary multi-objective optimisation: Proof-of-principle results. In Genetic and Evolutionary Computation Conference (GECCO) Companion, 383-386, 2023.

EXPERIENCE

2024 -   **Doctorate Association**   **Director of Academic Department**
Organising academic events and promoting global interdisciplinary communication among young scholars. (e.g., Online academic salons series on "Sustainable Development", Birmingham Early-Career Researchers Forum)

2022 –   **University of Birmingham**   **Teaching Assistant**
Modules: Computer Aided Verification, Evolutionary Computation, Artificial Intelligence 2, MSc Final year project, Algorithms for Data Science.

2021 –   **University of Jinan**   **Teaching Assistant**
Assisted Associate Professor Cui Na's research group at the School of Civil Engineering, University of Jinan, in supervising master's students in developing optimisation algorithms for scheduling, resource allocation and routing problems.

SKILLS

Language: Mandarin Chinese, Cantonese Chinese, English(Academic Proficiency, IETLS 8), German (Beginner)
Programming Languages: Python, Java, C/C++, ProMela, Haskell