Yixin WANG

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EDUCATION

Shenzhen University (SZU) Sept 2020 – Jun 2023
MSc in *Management Science and Engineering*, equivalent to ***MPhil*** College of Management
GPA: 3.52, **Average Score: 85.9/100**, Supervisor: A/Prof. Hong Wang and Prof. Ben Niu
Thesis: Medical resources allocation for hierarchical healthcare system based on multiobjective bacterial colony optimization

Dongguan University of Technology (DGUT) Sept 2016 – Jun 2020
BSc in *Industrial Engineering* School of Mechanical Engineering
GPA: 3.90, **Average Score: 89.0/100**
Thesis: Prediction and Analysis of The Value of Unfilled Orders Based on ARIMA Model

WORK EXPERIENCE

Research Associate (Full-time) Dec 2024 – Now
Harbin Institute of Technology (Shenzhen) & The University of Sydney School of Mechanical Engineering and Automation

Research Associate (Full-time) Jul 2023 – Apr 2024
The Hong Kong Polytechnic University Department of Logistics and Maritime Studies (LMS)

Research Assistant (Part-time) Nov 2020 – Nov 2021
Shenzhen University Greater Bay Area International Institute for Innovations (GBAI3)

Teaching Assistant (Part-time) Spring terms, Mar 2022 – Jun 2022 & Mar 2021 – Jun 2021
Shenzhen University Tutorials: "E-Commerce Simulation Practice" & "Basic C Programming Language"

ACADEMIC HONORS

- **Best Paper Award**, the 13th International Conference on Swarm Intelligence (ICSI) (2022)
- **Second Prize**, The 19th China Postgraduate Mathematical Contest in Modeling (2022) **Rank: 290/4021**
- **Second Prize**, The 11th Asia and Pacific Mathematical Contest in Modeling (APMCM), PG group (2021)
- **Third Prize**, The 18th China Postgraduate Mathematical Contest in Modeling (2021)
- **Second Prize** for Excellent Postgraduate Scholarship, SZU (**10 awardees** each year) (2022, 2023)
- **National Encouragement Scholarship**, Department of Education of Guangdong Province, China (**top 5% of undergraduates** in the faculty each year) (2017, 2018, 2019)
- **Guangda Scholarship; Kanghua Scholarship**, DGUT (**only 2 undergraduates** each year) (2018, 2019)
- **Outstanding Graduate** (2020); **First Prize** for Excellent Undergraduate Scholarship, DGUT (**only 2 undergraduates** each grade each year) (2017)

MISCELLANEOUS

Professional skills:

- **Projects experiences**: Deep learning and reinforcement learning, Discrete event simulation (particularly public transit system), Inventory systems, Complex systems modeling, Meta-heuristic optimization, etc.
- **Programming tools**: Python, PyTorch, Simpy, Ray, Git, Matlab, Linux, etc.

Language proficiency: **Chinese**: First-language; **English**: IELTS 6.5; **Cantonese**: Advanced

RESEARCH INTERESTS

- *Intelligent Decision-making:* Learning algorithms (DL and RL), Operational research and Optimization, etc.
- *Interdisciplinary Applications:* Complex systems in Transportation and Energy, Operation management, etc.

PUBLICATIONS

Peer-referred journal papers †

[1] Hong Wang (*Supervisor*), Yixin Wang, Menglong Liu, Tianwei Zhou, and Ben Niu. "An enhanced bacterial colony optimization with dynamic multi-leader co-evolution for multiobjective optimization problems." ***Expert Systems***, 2023. (**JCR Q2, IF: 3.30**) <**Link**> <**PDF**>

[2] Hong Wang (*Supervisor*), Yikun Ou, Yixin Wang, Tongtong Xing, and Lijing Tan. "Semisupervised bacterial heuristic feature selection algorithm for high-dimensional classification with missing labels." ***International Journal of Intelligent Systems***, 2023. (**JCR Q1, IF: 8.993**) <**Link**> <**PDF**>

[3] Shuang Geng, Xiaofu He, Yixin Wang, Hong Wang, Ben Niu, Kris M. Law. "Multicriteria recommendation based on bacterial foraging optimization." ***International Journal of Intelligent Systems***, 2021. (**JCR Q1, IF: 8.993**) <**Link**> <**PDF**>

Full papers in conference proceedings †

[4] Hong Wang (*Supervisor*), Yixin Wang, Mengjie Wan, Sili Wen, and Shan Wei. "Multi-objective bacterial colony optimization based on multi-subsystem for environmental economic dispatching." In ***the 13th International Conference on Swarm Intelligence (ICSI 2022)***. (**Best Paper Award**) <**Link**> <**PDF**>

[5] Hong Wang (*Supervisor*), Yikun Ou, and Yixin Wang. "A multi-objective structure variant bacterial heuristic feature selection method in high-dimensional data classification." In ***the 6th Data Mining and Big Data (DMBD 2021)***. <**Link**> <**PDF**>

[6] Hong Wang (*Supervisor*), Yixin Wang, Yikun Ou, Ben Niu. "Bacterial foraging optimization with leader selection strategy for bi-objective optimization." In ***the 12th International Conference on Swarm Intelligence (ICSI 2021)***. <**Link**> <**PDF**>

[7] Hong Wang (*Supervisor*), Zhuo Zhou, Yixin Wang, Xiaohui Yan. "Feature selection for image classification based on bacterial colony optimization." In ***the 12th International Conference on Swarm Intelligence (ICSI 2021)***. <**Link**> <**PDF**>

† *In papers [1, 4, 6], I (Yixin Wang) conducted* ***at least 70%*** *of the research, with the first author Hong Wang being my supervisor and the grant recipient. For papers [2, 3, 5, 7], I contributed* ***more than 20%*** *of the research work as a collaborator.*

Working papers

- Yixin Wang et al. "Deep Reinforcement Learning Based Real-time Task Assignment for Motorman in Hong Kong Public Tram Traffic." <**Link**>
- Yixin Wang et al. "Learning to Order for Inventory Systems with Uncertainties through Deep Reinforcement Learning." <**Link**>

PRESENTATIONS

- "Deep Reinforcement Learning for Inventory Management under Stochastic Demand", The 2nd ORSHK Young Researchers Workshop, City University of Hong Kong (CityU), Hong Kong, Dec 2023. <**Link**>
- "Optimization Path of Resource Integration under Medical Alliance as Tertiary Hospitals Eliminate General Outpatient Clinics", The 5th Intelligent Manufacturing and System Engineering Conference, Shenzhen University (SZU), Shenzhen, Nov 2022. <**Link**>

BLOGS

- "Time series representation from a contrastive self-supervised learning perspective: MoCo-based time series representation in a case study of traffic detector anomaly detection.", In medium.com, Oct 2024. <**Link**>