



Delong Chen

Date of Birth: August 31, 2000

PhD Student in Management Science and Engineering
National University of Defense Technology, China

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Education

• PhD Student in Management Science and Engineering

Mar 2024 – Present

National University of Defense Technology (NUDT), Changsha, China

College of Systems Engineering. Research focus: Large Language Model-Assisted Operations Research and Evolutionary Algorithms.

• M.S. in Management Science and Engineering

Sep 2022 – Jan 2024

National University of Defense Technology (NUDT), Changsha, China

College of Systems Engineering. Research focus: Machine Learning-Assisted Operations Research and Optimization.

• B.S. in Vehicle Engineering

Sep 2018 – Jun 2022

University of Science and Technology Beijing (USTB), Beijing, China

School of Mechanical Engineering.

Research Experience

• PhD Research Project

Mar 2024 – Present

National University of Defense Technology, Changsha, China

Large Language Model-Assisted Operations Research and Evolutionary Algorithms.

- Developing LLM-assisted evolutionary algorithms for optimization problems.
- Designed a hierarchical automated algorithm design framework using large language models.
- Applied LLM-enhanced differential evolution to nonlinear equation systems and continuous optimization problems.
- Conducted experiments on GNBG benchmark suite for box-constrained numerical global optimization.

Research Interests

- Large Language Model(LLM)-Assisted Optimization
- Evolutionary Algorithms and Metaheuristics
- LLM-based Automated Algorithm Design
- Applications: Nonlinear Equation Systems, Path Optimization, Continuous Optimization

Publications

• Conference Papers

- 1 **Chen, Delong**; Zhang, Tao; Li, Shuijia; Zhao, Qingsong; Huang, Weixiong; Wang, Rui. “Large Language Model Assisted Evolutionary Algorithm for Nonlinear Equation Systems Optimization.” *2025 7th International Conference on Data-Driven Optimization of Complex Systems (DOCS 2025)*, 2025. DOI: 10.1109/DOCS67533.2025.11200842.

• Journal Papers

- 1 Li, SJ; Wang, R; Gong, WY; Li, YC; **Chen, DL**; Liao, ZW. “Information entropy based evolutionary multitasking optimization.” *Expert Systems with Applications*, 2026, 308: 131137. DOI: 10.1016/j.eswa.2026.131137.
- 2 Huang, Weixiong; Wang, Rui; Li, Wenhua; Qi, Sheng; Luo, Tianyu; **Chen, Delong**; Zhang, Tao; Wang, Ling. “Fully Tensorized GPU-Accelerated Multi-Population Evolutionary Algorithm for Constrained Multiobjective Optimization Problems.” *IEEE Transactions on Evolutionary Computation*, 2026. DOI: 10.1109/TEVC.2026.3651395.

• Journal Papers (Under Review)

- 1 **Delong Chen**, Wei Liu, Tao Zhang, Shuijia Li, Qingsong Zhao, Weixiong Huang, and Rui Wang. “StructEvo: Hierarchical Evolution of Algorithmic Structures for Automated Algorithm Design.” (under review)

Skills

•**Programming:** Python, MATLAB.

•**Academic writing:** Word, \LaTeX .

•**Scientific plotting:** PowerPoint, Matplotlib.

•**Reference management:** Zotero, Obsidian.

Awards

- 2022: Outstanding Graduate of Beijing
- 2024: NUDT Freshman Scholarship
- 2025: National Second Prize, China Postgraduate Mathematical Contest in Modeling