



Xuan Wu

NEURAL COMBINATORIAL OPTIMIZATION · EVOLUTIONARY COMPUTATION

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Education

Jilin University

PH.D. IN COLLEGE OF COMPUTER SCIENCE AND TECHNOLOGY

- Outstanding Graduate Student of Jilin University, First Prize Graduate Scholarship of Jilin University

Changchun, China

Sep. 2022 - current

Nanyang Technological University

VISITING PH.D. STUDENT IN COLLEGE OF COMPUTING AND DATA SCIENCE

- Scholarship of China Scholarship Council

Singapore

Nov. 2023 - Nov. 2024

Jilin University

M.Sc. IN COLLEGE OF COMPUTER SCIENCE AND TECHNOLOGY

- Graduate Academic Scholarship

Changchun, China

Sep. 2020 - Jul. 2022

Jilin University

B.Sc. IN COLLEGE OF COMPUTER SCIENCE AND TECHNOLOGY

- Outstanding Student of Jilin University, Second Prize Scholarship of Jilin University

Changchun, China

Sep. 2016 - Jul. 2020

Selected Publications

JOURNAL ARTICLES

- X. Wu, D. Wang, H. Chen, et al., "Neural architecture search for text classification with limited computing resources using efficient Cartesian genetic programming," IEEE Transactions on Evolutionary Computation, vol. 28, no. 3, pp. 638–652, 2024.
- X. Wu, J. Han, D. Wang, et al., "Incorporating Surprisingly Popular Algorithm and Euclidean distance-based adaptive topology into PSO," Swarm and Evolutionary Computation, vol. 76, p. 101222, 2023.
- Z. Cao*, X. Wu*, C. Wu, et al., "KeypointNet: An Efficient Deep Learning Model with Multi-View Recognition Capability for Sitting Posture Recognition," Electronics, vol. 14, p. 4, 2025.
- Y. Xiao, D. Wang, X. Wu†, et al., Improving generalization of neural vehicle routing problem solvers through the lens of model architecture, Neural Networks, vol. 187, p. 107380, 2025.
- J. Sun, X. Wu, Y. Xiao, et al., "DANet: Temporal Action Localization with Double Attention," Applied Sciences-basel, vol. 13, 2023.
- H. Liu, Y. Xiao, X. Wu, et al., "Semhybridnet: A semantically enhanced hybrid CNN-transformer network for radar pulse image segmentation," Complex and Intelligent Systems, vol. 10, no. 2, pp. 2851–2868, 2024.
- Z. He, Y. Xiao, X. Wu, et al., "An automatic assessment model of adenoid hypertrophy in MRI images based on deep convolutional neural networks," IEEE Access, vol. 11, pp. 106516–106527, 2023.

CONFERENCE PROCEEDINGS

- X. Wu, D. Wang, C. Wu, et al., Efficient Heuristics Generation for Solving Combinatorial Optimization Problems Using Large Language Models, Proceedings of the ACM SIGKDD Conference on Knowledge Discovery and Data Mining.
- W. Song*, X. Wu*, B. Yang, et al., Towards Efficient Few-shot Graph Neural Architecture Search via Partitioning Gradient Contribution, Proceedings of the ACM SIGKDD Conference on Knowledge Discovery and Data Mining.
- X. Wu, J. Huang, X. Fu, et al., "The Novel Characterizing Method of Collective Behavior Pattern in PSO," in Proceedings of ACIS/IEEE International Conference on Computer and Information Science, 2023, pp. 59–72.
- J. Zhang, Z. Cao, X. Wu, et al., "Clip-DS: Incorporating datastd and similarity networks into clip for scene recognition task," in Proceedings of International Conference on Computer Communication and Artificial Intelligence, 2024, pp. 28–34.
- S. Jiao, Y. Xiao, X. Wu, et al., "LMSPNet: Improved lightweight network for multi-person sitting posture recognition," in Proceedings of IEEE International Conference on Computer Communication and Artificial Intelligence, 2023, pp. 289–295.
- Y. Li, Y. Xiao, X. Wu, et al., "Leveraging hierarchical similarities for contrastive clustering," in Proceedings of International Conference on Neural Information Processing, 2023.

PRE-PRINTS

- X. Wu, D. Wang, L. Wen, et al., Neural Combinatorial Optimization Algorithms for Solving Vehicle Routing Problems: A Comprehensive Survey with Perspectives, arXiv: 2406.00415, 2024.
- Y. Xiao, D. Wang, X. Wu†, et al., From Global Assessment to Local Selection: Efficiently Solving Traveling Salesman Problems of Varying Sizes, Under Review.

* equal contributions, † corresponding authors

Academic Services

CONFERENCE REVIEWER

- ICLR'2025

JOURNAL REVIEWER

- IEEE TNNLS, IEEE TEVC