

# Dang Viet Anh Nguyen

PhD Student in Intelligent Transportation Systems,  
Technical University of Denmark

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## Education

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- 2023 – Present    **PhD Student in Intelligent Transportation Systems**  
Technical University of Denmark (DTU), Denmark  
Project: Proactive traffic control through AI and Big Data  
Supervisors: Filipe Rodrigues , Carlos Lima Azevedo
- 2021-2022        **MSc. Supply Chain and Logistics**  
Nanyang Technological University (NTU), Singapore  
Thesis: Two-echelon Vehicle Routing Problem for Post-disaster Aid  
Advisor: Rajesh Piplani
- 2015-2020        **BE in Transportation Engineering**  
Hanoi University of Civil Engineering (HUCE), Vietnam  
Awards: Third Prize, Vietnam Olympiad on Mechanics; Student with Five Good Merits (National Level)

## Employment

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- 2022 – 2023      **Research Engineer – Intelligent Systems and Optimization**  
Singapore Management University (SMU), Singapore  
Project: “E-waste must never be wasted: Vehicle Route Planning Optimization for E-Waste Collection”  
Supervisors: Aldy Gunawan
- 2020-2021        **Research Assistant – Transportation and Traffic Simulation Lab**  
Hanoi University of Civil Engineering (HUCE), Vietnam  
Project: Optimization Models for Urban Freight Distribution  
Supervisors: Viet Phuong Nguyen

## Publications

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- Nguyen, D. V. A., Azevedo, C. L., Toledo, T., & Rodrigues, F. (2025). Robustness of Reinforcement Learning-Based Traffic Signal Control under Incidents: A Comparative Study. arXiv preprint arXiv:2506.13836. (Under review)
- Nguyen, D. V. A., Flensburg, J. V., Cerreto, F., Pascariu, B., Pellegrini, P., Azevedo, C. L., & Rodrigues, F. (2024). Multi-Graph Inductive Representation Learning for Large-Scale Urban Rail Demand Prediction under Disruptions. arXiv preprint arXiv:2408.15619. (Under review)
- Nguyen, D. V. A., Gunawan, A., Misir, M., Hui, L. K., & Vansteenwegen, P. (2025). Deep reinforcement learning for solving the stochastic e-waste collection problem. *European Journal of Operational Research*.

**Nguyen, D. V. A.**, Gunawan, A., Misir, M., & Vansteenwegen, P. (2024, April). Q-learning based framework for solving the stochastic e-waste collection problem. In *European Conference on Evolutionary Computation in Combinatorial Optimization (Part of EvoStar)* (pp. 49-64). Cham: Springer Nature Switzerland.

Gunawan, A., Hoe, S. L., Lim, X. Y., Tran, L. C., & **Nguyen, D. V. A.** (2023, December). ExploreLah: Personalised and Smart Trip Planner for Mobile Tourism. In *2023 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)* (pp. 0923-0927). IEEE.

Gunawan, A., **Nguyen, D. V. A.**, Nguyen, P. K. M., & Vansteenwegen, P. (2023, September). Grasp solution approach for the e-waste collection problem. In *International Conference on Computational Logistics* (pp. 260-275). Cham: Springer Nature Switzerland.

Gunawan, A., Nguyen, M. P. K., Vincent, F. Y., & **Nguyen, D. V. A.** (2023, August). The heterogeneous vehicle routing problem with multiple time windows for the e-waste collection problem. In *2023 IEEE 19th International Conference on Automation Science and Engineering (CASE)* (pp. 1-6). IEEE.

## Presentations

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**Nguyen, D. V. A.**, Flensburg, J. V., Cerreto, F., Pascariu, B., Pellegrini, P., Azevedo, C. L., & Rodrigues, F. (2025) Large-scale demand prediction in urban rail using multi-graph inductive representation learning. *104th Annual Meeting of the Transportation Research Board (TRB)*, 2025. Lectern Session: Emerging Behaviors of Urban Rail Transit Passengers - A Global Scan.

**Nguyen, D. V. A.**, R. Piplani, A. Gunawan. GRASP reinforced by Evolutionary Path-relinking for two-echelon covering tour vehicle routing problem. *33rd European Conference on Operational Research (EURO)*, 2024.

Gunawan, A., **Nguyen, D. V. A.**, **Nguyen, P. K. M.**, & Vansteenwegen, P. (2023). GRASP based metaheuristic to solve the mixed fleet e-waste collection route planning problem. *17th International Congress on Logistics and SCM Systems*, 2023.

## Thesis

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**Nguyen, D. V. A.**, (2022). Two-echelon vehicle routing problem for post-disaster aid. *Nanyang Technological University*.

## Teaching and Mentoring

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Teaching Assistant – *42101 Introduction to Operations Research*, Spring 2024, Technical University of Denmark (DTU).

Teaching Assistant – *42578 Advanced Business Analytics*, Spring 2024 & Spring 2025, Technical University of Denmark (DTU).

Teaching Assistant – *42577 Introduction to Business Analytics*, Autumn 2024 & Autumn 2025, Technical University of Denmark (DTU).

Co-supervisor – MSc Thesis: Damien Fleutry. MSc in Transport and Logistics, Spring 2024. Thesis: *Deep Reinforcement Learning for Traffic Signal Control: Adapting the framework for SimMobility*.

Co-supervisor – MSc Thesis: Alma Fazlagic & Kristine Pryds Loft. MSc in Business Analytics, Spring 2025.  
Thesis: *Forecasting Reconciliation with Origin-Destination Models Using Graph Neural Networks*.

## Evaluator Roles

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Evaluator for the ELLIS PhD Program – European Laboratory for Learning and Intelligent Systems (2024)

## Reviewer for Academic Journals

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Artificial Intelligence for Transportation (AIT), Elsevier

Engineering Applications of Artificial Intelligence (EAAI), Elsevier

European Journal of Operational Research (EJOR), Elsevier

Transportation Research Part C: Emerging Technologies (TRC), Elsevier

Transportation Research Part E: Logistics and Transportation Review (TRE), Elsevier

## Reviewer for Scientific Conferences

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Transportation Research Board (TRB) Annual Meeting - 2025

The Conference on Neural Information Processing Systems (NeurIPS) - 2025

The International Conference on Optimization, Modeling, Simulation, and Analytics - 2025

TRC-30: 30th Anniversary of Transportation Research Part C – 2024

Symposium of the European Association for Research in Transportation (hEART) – 2024

## Professional Memberships

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Sep 2025 – Present	IEEE Robotics and Automation Society (IEEE-RAS)
Sep 2025 – Present	IEEE Intelligent Transportation Systems Society (IEEE-ITSS)
Sep 2025 – Present	IEEE Control Systems Society (IEEE-CSS)
Sep 2025 – Present	European Complex Systems Society (ECSS)
Sep 2025 – Present	The Institute of Electrical and Electronics Engineers (IEEE)
Jun 2023 – Present	INFORMS – The Institute for Operations Research and the Management Sciences
Jun 2023 – Present	SIAM – Society for Industrial and Applied Mathematics
May 2023 – Present	ACM – Association for Computing Machinery

## References

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Assoc. Prof. Filipe Rodrigues  
Email: [rodr@dtu.dk](mailto:rodr@dtu.dk)  
Relationship: PhD Supervisor

Assoc. Prof. Carlos Lima Azevedo  
Email: [climaz@dtu.dk](mailto:climaz@dtu.dk)  
Relationship: PhD Co-supervisor