

CURRICULUM VITAE**PERSONAL INFORMATION**

Name, Surname	Nhu Toan Nguyen
Address	[REDACTED]
Telephone	[REDACTED]
E-mail	[REDACTED]
Website	[REDACTED]
Nationality	[REDACTED]
Place and Date of birth	[REDACTED]

EDUCATION

Date	November 2024 – Now
Name and type of education institution	Department of Industrial Engineering, University of Bologna, Italy; Public University
Main subject/ professional skills covered by the study	Machine learning and optimization algorithms for developing a human motion tracking system for a hand-guided collaborative mobile robot manipulator.
Title of qualification	Ph.D in Mechanics and Advanced Engineering Sciences
Date	October 2021 – December 2023
Name and type of education institution	Hanoi University of Science and Technology, Hanoi, Vietnam Public University
Main subject/ professional skills covered by the study	Control Theory, Optimization, Automation Systems, Signal Processing Thesis title: <i>“Adaptive tracking control for autonomous vehicles with system constraints”</i>
Title of qualification awarded	Master in Control Engineering and Automation
Date	August 2017 – August 2021
Name and type of education institution	Hanoi University of Science and Technology, Hanoi, Vietnam Public University
Main subject/ professional skills covered by the study	Control Theory, Optimization, Machine Learning, Robot Engineering, Signal Processing, Automation Systems Thesis title: <i>“Development of autonomous navigation for assistive mobile robots”</i>
Title of qualification awarded	Bachelor in Control Engineering and Automation

WORK EXPERIENCE

Date	December 2023 – October 2024
Name and address of employer	Department of Industrial Engineering, University of Bologna, Italy Viale del Risorgimento 2, Bologna
Type of business or sector	Public University
Occupation or position held	Research Assistant
Main activities and responsibilities	Developed a human motion tracking system for a hand-guided collaborative mobile manipulator using wearable IMUs and cameras

Date	July 2022 – December 2022
Name and address of employer	VinGroup Big Data Institute, Hanoi, Vietnam 458 Minh Khai Street, Hai Ba Trung District, Hanoi, Vietnam
Type of business or sector	Technology company
Occupation or position held	Technical Engineer
Main activities and responsibilities	Applied machine learning techniques to develop and evaluate models for spinal lesion detection and classification

PRIZES AND HONORS

2023	VinIF Scholarship for domestic Master and Doctoral training from Vingroup Innovation Foundation, Vietnam
2022	Honda-YES Scholarship from Honda Foundation and the Honda Vietnam Company, Vietnam
2021	The Excellent Scholarship from Hanoi University of Science and Technology, Vietnam
2020	The Excellent Scholarship from Hanoi University of Science and Technology, Vietnam
2020	The AES Scholarship, from the AES Mong Duong Power Company Limited and Hanoi University of Science and Technology, Vietnam

LANGUAGES

First Language	Vietnamese
Other Languages	English
	Reading: Excellent, Listening: Excellent, Writing: Excellent, Speaking: Good

SKILLS

Domain	State Estimation, Optimization, SLAM, Computer Vision, Control Theory
Programming	C/C++, Python, Matlab
Software	ROS 1/2, Gazebo, Simulink, Git, Pytorch, Gtsam

SELECTED PUBLICATIONS

1. Masi, E., **Nguyen, N. T.**, Monari, E., Valori, M., & Vertechy, R. (2025). Marker-Based Safety Functionality for Human–Robot Collaboration Tasks by Means of Eye-Tracking Glasses. *Machines*, 13(2), 122. <https://www.mdpi.com/2075-1702/13/2/122>
2. Nguyen Manh, C., **Nguyen, N. T.**, Bui Duy, N., & Nguyen, T. L. (2023). Adaptive fuzzy Lyapunov-based model predictive control for parallel platform driving simulators. *Transactions of the Institute of Measurement and Control*, 45(5), 838-852. <https://journals.sagepub.com/doi/10.1177/01423312221122470>
3. **Nguyen, N. T.**, Le, D. T., Pham, V. H., Nguyen, D. H., Hoang, D. C., & Nguyen, T. L. (2022, November). Prescribed Tracking Performance for Lateral Control of an Autonomous Vehicle with High-Gain Observer. In 2022 11th International Conference on Control, Automation and Information Sciences (ICCAIS) (pp. 158-163). IEEE. <https://doi.org/10.1109/ICCAIS56082.2022.9990307>
4. **Nguyen, N. T.**, Nguyen, V. A., Nguyen, M. C., Nguyen, D. H., & Nguyen, T. L. (2022). A Fuzzy Approximation Supported Model-Free Tracking Control Design for Tower Crane Systems. In *Intelligent Systems and Networks: Selected Articles from ICISN 2022, Vietnam* (pp. 62-70). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-3394-3_8
5. **Nguyen, N. T.**, Nguyen, M. C., Bui, D. N., Nguyen, V. A., Nguyen, D. H., & Nguyen, T. L. (2022, July). Observer-Based Lateral Motion Control of an Autonomous Vehicle Via Takagi-Sugeno Fuzzy System. In


- International Conference on Green Technology and Sustainable Development (pp. 401-412). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-19694-2_36
6. **Nguyen, N. T.**, Trinh, M. N., Tran, T. T., & Pham, V. T. (2021). Refining Skip Connections by Fusing Multi-scaled Context in Neural Network for Cardiac MR Image Segmentation. In *Soft Computing: Biomedical And Related Applications* (pp. 47-57). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-76620-7_4

RECOMMENDATIONS

Prof. Rocco Vertechy
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Assoc. Prof. Tung Lam Nguyen
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Date: _____ 23/10/2025 _____

Signature: _____  _____