

RESEARCH INTEREST

- Distributed Model Predictive Control for Multi-agent Systems
- Machine Learning for Dynamics and Control
- Robotics and Autonomous Systems

EDUCATION

Northern Arizona University M.Sc. in Informatics, GPA: 4.00/4.00 (as of Fall 2020)	Flagstaff, AZ, USA Aug. 2019–May 2021 (Expected)
Hanoi University of Science and Technology B.Eng. in Control Engineering and Automation (Talented Program ¹), GPA: 3.44/4.00	Hanoi, Vietnam Aug. 2014–Jun. 2019

PROFESSIONAL EXPERIENCE

Northern Arizona University Graduate Research Assistant at School of Informatics, Computing and Cyber Systems <ul style="list-style-type: none">– Gaussian Process based Distributed Model Predictive Control for Multi-agent Systems– Adaptive Sampling for Mobile Robotic Sensor Networks– Flagstaff's F1/10 Robo-Racing Project	Flagstaff, AZ, USA Aug. 2019–Present
Vietnam Maritime University Undergraduate Research Intern at School of Mechanical Engineering <ul style="list-style-type: none">– Applications of modern control theories in designing the crane's control systems– Research, design and manufacture of the model of floating cranes for loading and unloading containers at Vietnam's seaports	Haiphong, Vietnam Sep. 2017–Mar. 2019

SCHOLARSHIPS AND AWARDS

- **Aug. 2020:** Student Travel Award by IEEE Control Systems Society (CSS) to attend the 2020 IEEE Conference on Control Technology and Applications (CCTA)
- **Aug. 2019:** Northern Arizona University's Presidential Fellowship Award for graduate students
- **Aug. 2018:** Odon Vallet's Scholarship (established by Prof. Odon Vallet from Sorbonne University) for undergraduate students
- **Jun. 2018:** Conference Travel Award by Vietnam's National Foundation for Science and Technology Development (NAFOSTED) to attend the 2018 IEEE International Conference on System Science and Engineering (ICSSE)
- **Dec. 2017:** Certificate of training program in leadership, communication, creative and critical thinking, culture knowledge and teamwork skills at Vietnam's FPT Center for Young Talents (FYT)
- **Apr. 2015:** Gold Medal in the 2015 Vietnam's National Mathematical Olympiad for undergraduate students

¹The undergraduate program for approximately top 100 students in five majors

PUBLICATIONS

- [1] **V.-A. Le**, L. Nguyen, and T. X. Nghiem, “An Efficient Adaptive Sampling Approach for Mobile Robotic Sensor Networks using Proximal ADMM”, *submitted to 2021 American Control Conference (ACC)*, under review.
- [2] **V.-A. Le** and T. X. Nghiem, “Gaussian Process Based Distributed Model Predictive Control for Multi-agent Systems using Sequential Convex Programming and ADMM”, in *2020 IEEE Conference on Control Technology and Applications (CCTA)*, IEEE, 2020, pp. 31–36.
- [3] H. X. Le, **V.-A. Le**, and L. Nguyen, “Adaptive fuzzy observer based hierarchical sliding mode control for uncertain 2D overhead cranes”, *Cyber-Physical Systems*, vol. 5, no. 3, pp. 191–208, 2019.
- [4] **V.-A. Le**, H.-X. Le, L. Nguyen, and M.-X. Phan, “An efficient adaptive hierarchical sliding mode control strategy using neural networks for 3D overhead cranes”, *International Journal of Automation and Computing*, vol. 16, no. 5, pp. 614–627, 2019.
- [5] T. X. Nghiem, T.-D. Nguyen, and **V.-A. Le**, “Fast Gaussian Process based Model Predictive Control with Uncertainty Propagation”, in *2019 57th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, IEEE, 2019, pp. 1052–1059.
- [6] V. T. Nguyen, T. K. D. Ha, **V.-A. Le**, *et al.*, “Modeling and integral hierarchical sliding-mode control for 2D ship-mounted crane”, in *2019 First International Symposium on Instrumentation, Control, Artificial Intelligence, and Robotics (ICA-SYMP)*, IEEE, 2019, pp. 82–85.
- [7] A. T. Le, M. C. Hoang, V. T. Pham, C. N. Luong, D. T. Vu, and **V.-A. Le**, “Adaptive neural network sliding mode control of shipboard container cranes considering actuator backlash”, *Mechanical Systems and Signal Processing*, vol. 112, pp. 233–250, 2018.
- [8] **V.-A. Le**, X. H. Le, D. T. Vu, V. T. Pham, A. T. Le, and M. C. Hoang, “Designing an adaptive controller for 3D overhead cranes using hierarchical sliding mode and neural network”, in *2018 International Conference on System Science and Engineering (ICSSE)*, IEEE, 2018, pp. 1–6.

TECHNICAL SKILLS

- **Programming languages:** Python, Julia, C/C++, MATLAB, R.
- **Software/Tools:** Git, LaTeX, Robot Operating System (ROS), Docker, Labview.

REFERENCES

- Dr. Truong Xuan Nghiem (Master Advisor)
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- Dr. Xuan-Minh Phan (Undergraduate Advisor)
Professor, Department of Automatic Control, Hanoi University of Science and Technology, Hanoi, Vietnam
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- Dr. Anh-Tuan Le (Internship Advisor)
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