

Vuong V. Trinh

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EXPERIENCE	R&D Freelancer, Benjamin Muyl Design Sarl Sep–Dec 2018 <ul style="list-style-type: none">Develop scientific software for computation and optimization of sailing yachts for racing competitions;Deploy Python (<i>CasADi</i>), version management (<i>Git</i>) and production tools (<i>bash</i>, <i>unit tests</i>). Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives 2014–2017 Supervisors: M. Mazen Alamir and M. Patrick Bonnay, on process control and energetic optimization. <ul style="list-style-type: none">Develop explicit constrained control via nonlinear regression and reduced-set support vector machines;Develop hierarchical control coordination via derivative-free optimization and fixed-point iterations;Modelling and control of cryogenic refrigerator and compression station (coldbox, valve, compressors);Intensive use of Matlab (<i>CPLEX</i>, <i>ACADOtoolkit</i>) and C; PLC (<i>Schneider</i>), SCADA and Modbus. Research Intern, Grenoble Images Parole Signal Automatique Laboratoire Jan–May 2014 Supervisors: M. Ioan D. Landau and M. Luc Dugard, on robust active vibration analysis and control. <ul style="list-style-type: none">Perform system identification, robust control design and experiments using Matlab and xPC Target;Laboratory instructor and teaching assistant for the adaptive control course at EECI IGSC'14. Industrial Intern, Yazaki Corporation Apr–Aug 2011 <ul style="list-style-type: none">Analyse customer specifications, present technical solution, train operators, deliver bill-of-materials;Setup control box, relays and inverters; program PLC and HMI; use AutoCAD, Step7 and WinCC.
EDUCATION	M.S. Automation & Control Engineering , Université Joseph Fourier & Grenoble INP 2013–2014 Mention: <i>good (MiSCIT Program)</i> GPA: 15/20 Rank: 3/18 B.S. Automation & Control Engineering , Hanoi University of Science and Technology 2007–2012 Mention: <i>good (Talented Engineer's Program)</i> GPA: 3.17/4.00
VALORISATION	CS50's Introduction to Computer Science , Harvard University edX Six Sigma and Lean Processional Program , Technische Universität München edX TUM Lean Six Sigma Yellow Belt , Technische Universität München TUM School of Management Semaine d'Étude Maths-Info Entreprises , Agence Maths Entreprises
LANGUAGES	Vietnamese (<i>native</i>) English (<i>fluent</i> : IELTS 6.5) French (<i>basic</i>)
AWARDS	Excellence Master Fellowship , LabEx PERSYVAL-Lab 2013 Vallet Scholarship for excellent academic performance , Rencontres du Vietnam 2008 Double Prize in Physics (1st) and Maths (cons) , Vietnam Mathematics & Youth Magazine 2007
SERVICES	Adjunct Researcher, Dong A University Research Institute since Mar 2019 <ul style="list-style-type: none">Develop real-time anomaly detection algorithms for industrial Big Data, particularly sensor networks;Develop quantitative analytics and algorithmic trading strategies, particularly for crypto-market;Familiar with Python (<i>Flask</i>, <i>Pandas</i>), JS (<i>Highcharts</i>), Heroku (<i>Postgres</i>), AWS (<i>RDS</i>), Hugo, Netlify. Organization Team, Junior Scientist and Industries Annual Meeting Mar 2016

- PUBLICATIONS **V. V. Trinh, M. Alamir, P. Bonnay and F. Bonne, Explicit model predictive control via nonlinear piecewise approximations**, in *Proceedings of the 10th IFAC Symposium in Nonlinear Control Systems*, Monterey, CA, USA, 2016.
- M. Alamir, V. V. Trinh and P. Bonnay, On the stabilization of fixed-point iterations arising in hierarchical control design**, in *Proceedings of the 20th IFAC World Congress*, Toulouse, France, 2017.
- M. Alamir, P. Bonnay, F. Bonne and V. V. Trinh, Fixed-point based hierarchical MPC control design for a cryogenic refrigerator**, *Journal of Process Control*, vol. 58, no. Supplement C, pp. 117-130, 2017.
- V. V. Trinh, K. P. Tran and A. T. Mai, Anomaly detection in wireless sensor networks via support vector data description with Mahalanobis kernels and discriminative adjustment**, in *Proceedings of the 2017 4th NAFOSTED Conference on Information and Computer Science*, Hanoi, Vietnam, 2017.
- V. V. Trinh, K. P. Tran and T. H. Truong, Data driven hyperparameter optimization of one-class support vector machines for anomaly detection in wireless sensor networks**, in *Proceedings of the 2017 International Conference on Advanced Technologies for Communications*, Quy Nhon, Vietnam, 2017.

REFERENCES	Kim-Phuc Tran	<i>Associate Professor in Automation and Industrial Informatics</i>
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