

Vuong V. Trinh

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<https://vuongvtrinh.github.io>

EXPERIENCE	Freelancer, Benjamin Muyl Design Sarl	Sep–Dec 2018
	<ul style="list-style-type: none">• Develop scientific software for computation and optimization of sailing yachts via symbolic framework,• Familiar with Python (<i>CasADi</i>, <i>Numpy</i>, <i>Scipy</i>), databases, bash, version control and unit-testing.	
	Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives	2014–2017
	Supervisors: M. Mazen Alamir and M. Patrick Bonnay, on cryogenic process control and 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 (cold box, valve, compressors)• Familiar with Matlab (<i>CPLEX</i>, <i>ACADO</i>, <i>NLopt</i>), C, TeX and Inkscape, PLC, SCADA and Modbus.	
	Research Intern, Grenoble Images Parole Signal Automatique Laboratoire	Jan–May 2014
EDUCATION	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 for the adaptive control course at EECI IGSC'14.	
	Industrial Intern, Yazaki Corporation	Apr 2011
	<ul style="list-style-type: none">• Analyse customer specifications, present technical solution, train operators, deliver bill-of-materials,• Design, set up and program PLC, HMI and inverter using AutoCAD, Step7 and WinCC.	
	M.S. Automation & Control Engineering , Université Joseph Fourier de Grenoble	2014
	Mention: good GPA: 15/20	
AWARDS	B.S. Automation & Control Engineering , Hanoi University of Science and Technology	2012
	Mention: good (<i>Talented Engineer's Program</i>) GPA: 3.17/4.00	
	Excellence Master Fellowship , LabEx PERSYVAL-Lab	2013
	Vallet Scholarship for excellent academic performance , Rencontres du Vietnam	2008
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>)	
SERVICES	Junior Researcher, Dong A University Research Institute	since Jan 2019
	Research: anomaly detection algorithms with application to wireless sensor networks.	
	Community Analyst, Blockchain & Cryptoasset Quantitative Analytics	May 2018
	Research: data-driven analytics of blockchain projects and quantitative trading strategies for crypto-market. Technology: Python (<i>Flask</i> , <i>Django</i> , <i>Pandas</i>), JS (<i>Highcharts</i>), Hugo, Heroku (<i>Postgres</i>) , AWS (<i>RDS</i>).	
	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.