

Vuong V. Trinh

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EXPERIENCE	<p>Adjunct Researcher, Dong A University Research Institute since Mar 2019</p> <ul style="list-style-type: none">• Develop real-time anomaly detection algorithms for industrial Big Data, particularly sensor networks,• Develop intelligent data-driven application to monitor blockchain projects and to analyze cryptoassets,• Deploy Python (<i>Flask, Pandas</i>), JS (<i>Highcharts</i>), Heroku (<i>Postgres</i>), AWS (<i>RDS</i>), Hugo. <p>Freelance, Benjamin Muyl Design Sarl Sep–Dec 2018</p> <ul style="list-style-type: none">• Develop scientific software for computation and optimization of sailing yachts via symbolic framework,• Familiar with Python (<i>CasADi, Numpy, Scipy</i>), bash, version control (<i>Git</i>) and unit-testing. <p>Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives 2014–2017</p> <p>Supervisors: M. Mazen Alamir and M. Patrick Bonnay, on process control and energetic optimization.</p> <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)• Intensive use of Matlab (<i>CPLEX, ACADOtoolkit</i>) and C; PLC (<i>Schneider</i>), SCADA and Modbus. <p>Research Intern, Grenoble Images Parole Signal Automatique Laboratoire Jan–May 2014</p> <p>Supervisors: M. Ioan D. Landau and M. Luc Dugard, on robust active vibration analysis and control.</p> <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. <p>Industrial Intern, Yazaki Corporation & SysTech Apr–Aug 2011</p> <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	<p>M.S. Automation & Control Engineering, Université Joseph Fourier de Grenoble 2014</p> <p>Mention: good (<i>MiSCIT program</i>) GPA: 15/20 Rank: 3/18</p> <p>B.S. Automation & Control Engineering, Hanoi University of Science and Technology 2012</p> <p>Mention: good (<i>Talented Engineer's Program</i>) GPA: 3.17/4.00</p>
VALORISATION	<p>CS50's Introduction to Computer Science, Harvard University edX</p> <p>Six Sigma and Lean Processional Program, Technische Universität München edX</p> <p>TUM Lean Six Sigma Yellow Belt, Technische Universität München TUM School of Management</p> <p>Semaine d'Étude Maths-Info Entreprises, Agence Maths Entreprises</p>
LANGUAGES	<p>Vietnamese (<i>native</i>) English (<i>fluent</i>: IELTS 6.5) French (<i>basic</i>)</p>
AWARDS	<p>Excellence Master Fellowship, LabEx PERSYVAL-Lab 2013</p> <p>Vallet Scholarship for excellent academic performance, Rencontres du Vietnam 2008</p> <p>Double Prize in Physics (1st) and Maths (cons), Vietnam Mathematics & Youth Magazine 2007</p>
SERVICES	<p>Organization Team, Junior Scientist and Industries Annual Meeting Mar 2016</p>

- 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.