

Vuong V. Trinh

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EXPERIENCE	<p>Software Engineer, Benjamin Muyl Design Sarl Sep–Dec 2018</p> <ul style="list-style-type: none">• Develop scientific software for simulation, optimization and control of racing sail yachts;• Deploy Python (<i>CasADi</i>), version management (<i>Git</i>), production tools (<i>Bash</i>) and unit-tests. <p>Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives 2014–2017 Supervisors: Mazen Alamir and Patrick Bonnay, on cryogenic process control and energetic optimization.</p> <ul style="list-style-type: none">• Develop advanced control strategies including explicit constrained control and hierarchical distributed coordination, using machine learning, dynamic optimization and numerical algorithms;• Model and simulation of compression stations and cryogenic refrigerators using <i>Simcryogenics</i>; involve in experiments with helium facility 400W 1.8K at CEA and 18kW 4.5K LHC units at CERN;• Intensive use of Matlab and C (<i>CPLEX</i>, <i>ACADOtoolkit</i>); familiar with PLC (<i>Siemens</i>, <i>Schneider</i>), SCADA and Modbus; know-how (coldbox, valve, compressor, thermodynamic cycles). <p>Research Intern, Grenoble Images Parole Signal Automatique Laboratoire Jan–May 2014 Supervisors: Ioan D. Landau and 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 and teaching assistant for the adaptive control course at EECI IGSC'14. <p>Industrial Intern, Yazaki Corporation Apr–Aug 2011</p> <ul style="list-style-type: none">• Analyse customer specifications, present technical solutions, train operators, deliver BOMs;• Setup control box, relays and inverters; program PLC and HMI; deploy AutoCAD, Step7 and WinCC.
EDUCATION	<p>M.S. Automation & Control Engineering, Université Joseph Fourier & Grenoble INP 2013–2014 Mention: <i>good (MiSCIT Program)</i> GPA: 15/20 Rank: 3/18</p> <p>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</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>Adjunct Researcher, Dong A University Research Institute since Mar 2019</p> <ul style="list-style-type: none">• Work with Kim-Phuc Tran on real-time anomaly detection algorithms for industrial Big Data;• Familiar with Python (<i>Flask</i>, <i>Pandas</i>, <i>TensorFlow</i>), JS (<i>Highcharts</i>), Heroku (<i>Postgres</i>), AWS (<i>RDS</i>). <p>Organization Team, Junior Scientist and Industries Annual Meeting Mar 2016</p>
LANGUAGES	Vietnamese (<i>native</i>) English (<i>fluent</i> : IELTS 6.5) French (<i>basic</i>)
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 ANSYS OPTIS</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.

REFERENCES	Kim-Phuc Tran	<i>Associate Professor in Automation and Industrial Informatics</i>
	Email: kim-phuc.tran@ensait.fr	École nationale supérieure des arts et industries textiles
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MISC **Personal Info:** Sex: Male | Marital status: Single | DOB: 20/12/1989 | POB: Thanh Hoa (Vietnam)
Interests: Hiking | Ping-pong | Travel | Reading