

# Vuong V. Trinh

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EXPERIENCE	<p><b>Adjunct Researcher, Dong A University Research Institute</b> since Mar 2019</p> <ul style="list-style-type: none"><li>• Work with M. Kim-Phuc Tran on real-time anomaly detection algorithms for industrial Big Data;</li><li>• Familiar with Python (<i>Flask, Pandas, TensorFlow</i>), JS (<i>Highcharts</i>), Heroku (<i>Postgres</i>), AWS (<i>RDS</i>).</li></ul> <p><b>Simulation Engineer, Benjamin Muyl Design Sarl</b> Sep–Dec 2018</p> <ul style="list-style-type: none"><li>• Contribute to project <i>Meta</i> for design and analysis, simulation and optimization of sail yachts;</li><li>• Deploy Python (<i>CasADi</i>), version management (<i>Git</i>), production tools (<i>Bash</i>) and unit-tests.</li></ul> <p><b>Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives</b> 2014–2017</p> <p>Supervisors: M. Mazen Alamir and M. Patrick Bonnay within project ANR CryoGreen on cryogenic process control and energetic optimization.</p> <ul style="list-style-type: none"><li>• Develop advanced control strategies including explicit constrained control and hierarchical distributed coordination, combining machine learning, dynamic optimization and numerical algorithms;</li><li>• Dynamic model and simulation of compression stations and cryogenic refrigerators using <i>Simcryogenics</i>; involve in experiments with station 400W 1.8K at SBT and 18kW 4.5K LHC facilities at CERN;</li><li>• Intensive use of Matlab and C (<i>CPLEX, ACADOtoolkit</i>); familiar with PLC (<i>Siemens, Schneider</i>), SCADA and Modbus; cold-box, valve, compressor and thermodynamics.</li></ul> <p><b>Research Intern, Grenoble Images Parole Signal Automatique Laboratoire</b> 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"><li>• Perform system identification, robust control design and experiments using Matlab and xPC Target;</li><li>• Laboratory instructor and teaching assistant for the adaptive control course at EECI IGSC'14.</li></ul> <p><b>Industrial Intern, Yazaki Corporation</b> Apr–Aug 2011</p> <ul style="list-style-type: none"><li>• Analyse customer specifications, present technical solutions, train operators, deliver BOMs;</li><li>• Setup control box, relays and inverters; program PLC and HMI; deploy AutoCAD, Step7 and WinCC.</li></ul>
EDUCATION	<p><b>M.S. Automation &amp; Control Engineering</b>, Université Joseph Fourier &amp; Grenoble INP 2013–2014</p> <p>Mention: <i>good (MiSCIT Program)</i>   GPA: 15/20   Rank: 3/18</p> <p><b>B.S. Automation &amp; Control Engineering</b>, Hanoi University of Science and Technology 2007–2012</p> <p>Mention: <i>good (Talented Engineer's Program)</i>   GPA: 3.17/4.00</p>
AWARDS	<p><b>Excellence Master Fellowship</b>, LabEx PERSYVAL-Lab 2013</p> <p><b>Vallet Scholarship for excellent academic performance</b>, Rencontres du Vietnam 2008</p> <p><b>Double Prize in Physics (1st) and Maths (cons)</b>, Vietnam Mathematics &amp; Youth Magazine 2007</p>
LANGUAGES	Vietnamese ( <i>native</i> )   English ( <i>fluent: IELTS 6.5</i> )   French ( <i>basic</i> )
VALORISATION	<p><b>CS50's Introduction to Computer Science</b>, Harvard University   edX</p> <p><b>Six Sigma and Lean Processional Program</b>, Technische Universität München   edX</p> <p><b>TUM Lean Six Sigma Yellow Belt</b>, Technische Universität München   TUM School of Management</p> <p><b>Semaine d'Étude Maths-Info Entreprises</b>, 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.

SERVICES **Organization Team of JSIam, Grenoble Innovation for Advanced New Technologies** Mar 2016

REFERENCES **Kim-Phuc Tran** *Associate Professor in Automation and Industrial Informatics*  
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MISC **Personal Info:** Gender: Male | Marital status: Single | DOB: 20 Dec 1989 | POB: Thanh Hoa (Vietnam)  
**Interests:** Hiking | Ping-pong