

Vuong V. Trinh

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EXPERIENCE	Adjunct Researcher, Dong A University Research Institute Mar–Sep 2019 <ul style="list-style-type: none">• Work with Kim-Phuc Tran, Anh-Tuan Mai and Thu-Huong Truong on real-time anomaly detection algorithms for industrial Big Data, particularly for wireless sensor networks;• Familiar with Python (<i>Flask</i>, <i>Pandas</i>, <i>Scikit-Learn</i>), JS (<i>Highcharts</i>), Heroku (<i>Postgres</i>), AWS (<i>RDS</i>, <i>EC2</i>); editing tools (<i>TeX</i>, <i>Inkscape</i>); embedded systems (<i>Rasp Pi</i>, <i>STM32</i>).
	R&D Engineer, Benjamin Muyl Design Sarl Sep–Dec 2018 <ul style="list-style-type: none">• Work with Benjamin Muyl and Antoine Guillou on simulation and optimization of sail yachts;• Contribute to <i>META</i> project by upgrading from Java and Matlab to Python using symbolic framework;• Deploy Python (<i>CasADi</i>), version management (<i>Git</i>), production tools (<i>Bash</i>) and unit-tests.
	R&D 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, within project ANR CRYOGREEN. <ul style="list-style-type: none">• Develop advanced model predictive control strategies including explicit constrained control and hierarchical distributed coordination, via machine learning, applied optimization and numerical algorithms;• 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;• Intensive use of Matlab and C (<i>CPLEX</i>, <i>ACADOtoolkit</i>); familiar with PLC (<i>Siemens</i>, <i>Schneider</i>), SCADA and Modbus; technology know-how (cold-box, valve, compressor, sensors).
	Research Intern, Grenoble Images Parole Signal Automatique Laboratoire Jan–May 2014 Supervisors: Ioan Doré Landau and 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 within European Embedded Control Institute IGSC.
	Industrial Intern, Yazaki Corporation Apr–Aug 2011 <ul style="list-style-type: none">• Analyse technical specifications and devise suitable solution for automotive wire production conveyors;• Setup control box, relays and inverters; program PLC and HMI; deploy 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
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
LANGUAGES	Vietnamese (<i>native</i>) English (<i>fluent: IELTS 6.5</i>) French (<i>basic</i>)
VALORISATION	CS50's Introduction to Computer Science , edX Harvard University
	Six Sigma and Lean Processional Program , edX Technische Universität München
	TUM Lean Six Sigma Yellow Belt , Technische Universität München TUM School of Management
	Semaine d'Étude Maths-Info Entreprises , Agence Maths Entreprises

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

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Mar 2016

REFERENCES	Kim-Phuc Tran	<i>Associate Professor in Automation and Industrial Informatics</i>
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	Phone: +33 (0)3 20 25 89 60	2 allée Louise et Victor Champier, 59056 Roubaix, France
	Ioan-Doré Landau	<i>Emeritus Research Director at National Centre for Scientific Research</i>
	Email: ioan-dore.landau@gipsa-lab.fr	Grenoble Images Parole Signal Automatique Laboratoire
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Personal Info: Gender: Male | Marital status: Single | DOB: 20 Dec 1989 | POB: Thanh Hoa (Vietnam)
Professions: Industrial Automation | Process Control & Optimization | Data Analytics
Interests: Hiking | Ping-pong | Reading

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