

# Vuong V. Trinh

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<https://vuongvtrinh.github.io>

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| EXPERIENCE   | <b>Junior Researcher, Dong A University Research Institute</b> since Mar 2019 <ul style="list-style-type: none"><li>Develop kernel-based anomaly detection algorithms with application to wireless sensor networks.</li></ul>   |
|              | <b>Software Engineer, Benjamin Muyl Design Sarl</b> Sep–Dec 2018 <ul style="list-style-type: none"><li>Develop scientific software for computation and optimization of sailing yachts via symbolic framework,</li><li>Familiar with Python (<i>CasADi</i>), databases, bash, version control and unit-testing.</li></ul>  |
|              | <b>Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives</b> 2014–2017<br>Supervisors: M. Mazen Alamir and M. Patrick Bonnay, on process control and energetic optimization. <ul style="list-style-type: none"><li>Develop explicit constrained control via nonlinear regression and reduced-set support vector machines,</li><li>Develop hierarchical control coordination via derivative-free optimization and fixed-point iterations,</li><li>Modelling and control of cryogenic refrigerator and compression station (cold-box, valve, compressors)</li><li>Familiar with Matlab (<i>CPLEX</i>, <i>ACADOtoolkit</i>), C/C++, TeX and Inkscape, PLC, SCADA and Modbus.</li></ul> |
|              | <b>Research Intern, Grenoble Images Parole Signal Automatique Laboratoire</b> Jan–May 2014<br>Supervisors: M. Ioan D. Landau and M. Luc Dugard, on robust active vibration analysis and control. <ul style="list-style-type: none"><li>Perform system identification, robust control design and experiments using Matlab and xPC Target,</li><li>Laboratory instructor for the adaptive control course at EECI IGSC'14.</li></ul>   |
|              | <b>Industrial Intern, Yazaki Corporation</b> Apr 2011 <ul style="list-style-type: none"><li>Analyse customer specifications, present technical solution, train operators, deliver bill-of-materials,</li><li>Design, set up and program PLC, HMI and inverter using AutoCAD, Step7 and WinCC.</li></ul>   |
| EDUCATION    | <b>M.S. Automation &amp; Control Engineering</b> , Université Joseph Fourier de Grenoble 2014<br>Mention: good   GPA: 15/20   Rank: 3/18  |
|              | <b>B.S. Automation &amp; Control Engineering</b> , Hanoi University of Science and Technology 2012<br>Mention: good ( <i>Talented Engineer's Program</i> )   GPA: 3.17/4.00   |
| AWARDS       | <b>Excellence Master Fellowship</b> , LabEx PERSYVAL-Lab 2013   |
|              | <b>Vallet Scholarship for excellent academic performance</b> , Rencontres du Vietnam 2008   |
| VALORISATION | <b>CS50's Introduction to Computer Science</b> , Harvard University   edX<br><b>Six Sigma and Lean Processional Program</b> , Technische Universität München   edX<br><b>TUM Lean Six Sigma Yellow Belt</b> , Technische Universität München   TUM School of Management<br><b>Semaine d'Étude Maths-Info Entreprises</b> , Agence Maths Entreprises   |
| LANGUAGES    | Vietnamese ( <i>native</i> )   English ( <i>fluent</i> : IELTS 6.5)   French ( <i>basic</i> )   |
| SERVICES     | <b>Community Analyst, Blockchain &amp; Cryptoasset Quantitative Analytics</b> May 2018<br>Research: data-driven analytics of blockchain projects and quantitative trading strategies for crypto-market.<br>Technology: Python ( <i>Flask</i> , <i>Django</i> , <i>Pandas</i> ), JS ( <i>Highcharts</i> ), Hugo, Heroku ( <i>Postgres</i> ), AWS ( <i>RDS</i> ).   |
|              | <b>Organization Team, Junior Scientist and Industries Annual Meeting</b> 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.