

# Vuong V. Trinh

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<https://vuongvtrinh.github.io>

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| EXPERIENCE   | <b>Research Scientist, Dong A University Research Institute</b>   | since Jan 2019 |
|              | <ul style="list-style-type: none"><li>• Develop kernel based anomaly detection algorithms with application to sensor networks.</li></ul>  |                |
|              | <b>Software Engineer, Benjamin Muyl Design S.A.</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, CasADi, bash, version control and unit-testing.</li></ul>  |                |
|              | <b>Research Engineer, Commissariat à l'Énergie Atomique et aux Énergies Alternatives</b>  | 2014–2017      |
|              | Supervisors: M. Mazen Alamir and M. Patrick Bonnay, funded by the project ANR CryoGreen. <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>• Familiar with Matlab, C, LaTeX and Inkscape, cryogenic processes with PLC, SCADA and Modbus.</li></ul> |                |
|              | <b>Research Intern, Grenoble Images Parole Signal Automatique Laboratoire</b>   | Jan–May 2014   |
|              | Supervisors: M. Ioan D. Landau and M. Luc Dugard, on robust active vibration 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 Haiphong Vietnam</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 / inverter using AutoCAD, Step7 and WinCC.</li></ul>  |                |
| EDUCATION    | <b>M.S. Automation &amp; Control</b> , Université Joseph Fourier & Institut Polytechnique de Grenoble   | 2014           |
|              | Mention: good   GPA: 15/20  |                |
|              | <b>B.S. Automation &amp; Control</b> , Hanoi University of Science and Technology   | 2012           |
|              | 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 Course Certification</b> , Harvard University via edX  |                |
|              | <b>Six Sigma and Lean Processional Program Certification</b> , Technische Universität München via edX   |                |
|              | <b>TUM Lean Six Sigma Yellow Belt Certification</b> , Technische Universität München  |                |
| LANGUAGES    | Vietnamese ( <i>native</i> )   English ( <i>fluent</i> : IELTS 6.5)   French ( <i>basic</i> )   |                |
| VOLUNTEER    | <b>Organization Team, Junior Scientist and Industries Annual Meeting</b>  | Mar 2016       |
|              | <b>Community Analyst, Quantitative Analytics and Trading Strategies of Cryptoassets</b>   | May 2018       |
|              | Research: data-driven analytics of blockchain projects and quantitative trading for crypto-market<br>Technology: Python ( <i>Flask, Pandas, Dash, Tkinter</i> )   AWS ( <i>RDS, EC2</i> )   Heroku ( <i>Postgres</i> )   SQL  |                |

- 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.