

# Vuong V. Trinh

🌐 <https://vuongvtrinh.github.io> ✉ [vanvuong.trinh@gmail.com](mailto:vanvuong.trinh@gmail.com) ☎ +84(0)932375111 🌐 [trinhvv](#)

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| EXPERIENCE   | <p><b>Software Engineer, Benjamin Muyl Design Sarl</b> Sep–Dec 2018</p> <ul style="list-style-type: none"><li>• Develop scientific software for simulation, optimization and control of racing 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<br/>Supervisors: <a href="#">Mazen Alamir</a> and <a href="#">Patrick Bonnay</a>, 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, using machine learning, dynamic optimization and numerical algorithms;</li><li>• 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;</li><li>• 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).</li></ul> <p><b>Research Intern, Grenoble Images Parole Signal Automatique Laboratoire</b> Jan–May 2014<br/>Supervisors: <a href="#">Ioan D. Landau</a> and <a href="#">Luc Dugard</a>, 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<br/>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<br/>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>   |
| SERVICES     | <p><b>Adjunct Researcher, Dong A University Research Institute</b> since Mar 2019</p> <ul style="list-style-type: none"><li>• Work with <a href="#">Kim-Phuc Tran</a> on real-time anomaly detection algorithms for industrial Big Data;</li><li>• Familiar with Python (<i>Flask</i>, <i>Pandas</i>, <i>TensorFlow</i>), JS (<i>Highcharts</i>), Heroku (<i>Postgres</i>), AWS (<i>RDS</i>).</li></ul> <p><b>Organization Team, Junior Scientist and Industries Annual Meeting</b> Mar 2016</p>  |
| LANGUAGES    | Vietnamese ( <i>native</i> )   English ( <i>fluent</i> : IELTS 6.5)   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.

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| REFERENCES | <b>Kim-Phuc Tran</b>  | <i>Associate Professor in Automation and Industrial Informatics</i> |
|            | Email: <a href="mailto:kim-phuc.tran@ensait.fr">kim-phuc.tran@ensait.fr</a> | École nationale supérieure des arts et industries textiles          |
|            | Phone: +33 (0)3 20 25 89 60   | 2 allée Louise et Victor Champier, 59056 Roubaix, France            |

MISC **Personal Info:** Sex: Male | Marital status: Single | DOB: 20/12/1989 | POB: Thanh Hoa (Vietnam)  
**Interests:** Hiking | Ping-pong | Travel | Reading