

Pedro Bruel | Researcher & Software Engineer

Performance Tuning & Modeling • Optimal Experimental Design

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Experience

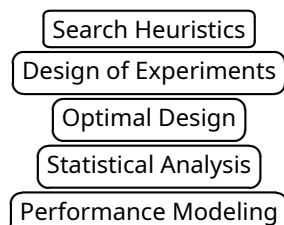
- SEP 2019 – MAR 2020 **Researcher & Software Engineer**
Hewlett-Packard Enterprise
University of São Paulo, Brazil
Developing Design of Experiments software and refining autotuning techniques for High-Performance Computing
- 2017 – MAY 2020 **Researcher & Software Engineer**
Grenoble Informatics Laboratory
University of Grenoble Alpes, France
Developing Design of Experiments Techniques for autotuning High-Performance Computing kernels and compilers on CPUs, GPUs and FPGAs
- 2015 – MAY 2020 **Researcher & Software Engineer**
Software Systems Laboratory
University of São Paulo, Brazil
Developed autotuners for High-Level Synthesis compilers for FPGAs and for the CUDA Compiler using Search Heuristics
- 2015 – 2016 **Researcher & Software Engineer**
Hewlett-Packard Enterprise
University of São Paulo, Brazil
Developed an autotuner for the LegUp High-Level Synthesis compiler for Altera FPGAs
- 2012 – 2014 **Researcher – Intern**
Computer Music Research Group
University of São Paulo, Brazil
Maintained and developed a multiagent system for music composition via agent interaction

Languages

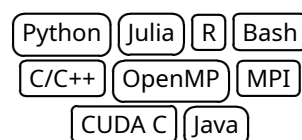
PORTUGUESE	CEFR C2	Native
ENGLISH	CEFR C2	Fluent
FRENCH	CEFR C1	Proficient
SPANISH	CEFR A2	Basic

Skills

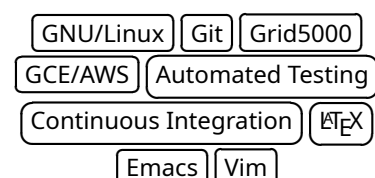
Performance Tuning



Software Engineering



Tools and Infrastructure



Select Publications

- Bruel, P.**, Quinito Masnada, S., Videau, B., Legrand, A., Vincent, J. M., and Goldman, A., **2019**. *Autotuning Under Tight Budget Constraints: A Transparent Design of Experiments Approach*. 19th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID).
- Bruel, P.**, Goldman, A., Chalamalasetti, S.R. and Milo-jicic, D., **2017**. *Autotuning high-level synthesis for FPGAs using OpenTuner and LegUp*. ReConFigurable Computing and FPGAs (ReConFig), International Conference.
- Bruel, P.**, Chalamalasetti, S.R., Dalton, C., El Hajj, I., Goldman, A., Graves, C., Hwu, W.M., Laplante, P., Milo-jicic, D., Ndu, G. and Strachan, J.P., **2017**. *Generalize or Die: Operating Systems Support for Memristor-based Accelerators*. IEEE International Conference on Reboot-ing Computing (ICRC).
- Bruel, P.**, Amarís, M. and Goldman, A., **2017**. *Autotuning CUDA compiler parameters for heterogeneous applications using the OpenTuner framework*. Concurrency and Computation: Practice and Experience.
- Gonçalves, R., Amarís, M., Okada, T., **Bruel, P.** and Goldman, A., **2016**. *Openmp is not as Easy as it Ap-pears*. System Sciences (HICSS), 49th Hawaii Interna-tional Conference.

Education

- 2015 – 2020 **PhD in Computer Science**
University of Grenoble Alpes, France
University of São Paulo, Brazil
High-Performance Computing, Autotuning, Design of Experiments, Search Heuristics, Data Analysis
- 2010 – 2014 **BsC in Molecular Sciences**
University of São Paulo, Brazil
Multiagent Systems, Digital Signal Processing