Mickaël Dardaillon

PhD, Research Engineer

Experience

2017– **Research Engineer**, *IRISA*, Rennes, France.
WCET-Aware Parallelization for Heterogeneous Parallel Systems.

2015–2017 **Staff Software Engineer**, *National Instruments*, Austin, Texas.
Compilation for Parameterized Dataflow in Labview FPGA Group.

2014–2015 **Research Intern**, *Nokia Technologies*, Berkeley, California.
Implementation of LTE-Advanced Protocol on FPGA and Manycores.

2011–2014 **PhD Student**, *CITI-Inria, INSA Lyon & CEA, LETI*, Lyon & Grenoble, France.
Compilation for Parametric Dataflow Targeting MPSoC.

2011 **Research Intern**, *CITI-Inria, INSA Lyon*, Lyon, France.
Implementation of Cryptographic Primitives on Wireless Sensor Node.

Education

2014 **Doctorate degree**, *INSA Lyon*, Computer Science.
Models of Computation, Compilation, Telecommunications and Embedded Systems.

2011 **Master degree**, *Université d'Orléans*, Electrical Engineering.
Electronics, Signal Processing and Microsystems.

2011 **Engineer degree**, *Polytech'Orléans*, Electrical Engineering.
Electronics, Signal and Image Processing.

Teaching

Undergraduate	Architecture, Algorithmic and Databases.	*Lab teaching and examination design*
Elementary	First Lego League Robotics.	*Team coaching*

Technical Skills

Hardware	FPGA Architecture Design and Implementation.
Compilation	Dataflow Model of Computation, Polyhedral model.
Languages	C, C++, C#, Java, LabVIEW (MRD, CDL, VI), VHDL, LaTeX.
Applications	Software Defined Radio, LTE-Advanced, Digital Signal Processing.

Soft Skills

Collaboration	Teamwork and Communication.	*Work within local and international teams*
Organization	Planning and Prioritization.	*Feature research, design and implementation*

+337 69 24 04 12 • mickael.dardaillon@gmail.com
dardarel.github.io • mickael.dardaillon

Publications

Thesis manuscript

2014 M. Dardaillon, "Compilation d'applications flot de données paramétriques pour MPSoC dédiés à la radio logicielle," PhD thesis, INSA Lyon, Lyon, France, Nov. 2014

Journal

2016 M. Dardaillon, K. Marquet, T. Risset, J. Martin, and H.-P. Charles, "A new compilation flow for software-defined radio applications on heterogeneous mpsocs," *ACM Transactions on Architecture and Code Optimization (TACO)*, vol. 13, no. 2, Jun. 2016

Book chapter

2014 M. Dardaillon, K. Marquet, T. Risset, J. Martin, and H.-P. Charles, "Cognitive radio programming survey," in *Handbook of Research on Software-Defined and Cognitive Radio Technologies for Dynamic Spectrum Management*, N. Kaabouch and W.-C. Hu, Eds., IGI Global, Oct. 2014, ch. 25, pp. 653–679

International conferences

2018 I. Puaut, M. Dardaillon, C. Cullmann, G. Gebhard, and S. Derrien, "Fine-grain iterative compilation for wcet estimation," in *International Workshop on Worst-Case Execution Time Analysis*, Barcelona, Spain, Jul. 2018

2015 M. Dardaillon, C. Jabbour, and V. Srini, "Adaptive digital pre-distortion for future wireless transmitters," in *IEEE International Conference on Electronics, Circuits, and Systems*, Cairo, Egypt, Dec. 2015

2014 M. Dardaillon, K. Marquet, T. Risset, J. Martin, and H.-P. Charles, "A compilation flow for parametric dataflow: Programming model, scheduling, and application to heterogeneous mpsoc," in *International Conference on Compilers, Architecture and Synthesis for Embedded Systems (CASES)*, New Delhi, India, Oct. 2014

2012 M. Dardaillon, C. Lauradoux, and T. Risset, "Hardware implementation of the GPS authentication," in *International Conference on Reconfigurable Computing and FPGAs (ReConFig)*, Cancun, Mexico, Dec. 2012, pp. 1–6

M. Dardaillon, K. Marquet, T. Risset, and A. Scherrer, "Software defined radio architecture survey for cognitive testbeds," in *International Wireless Communications and Mobile Computing Conference (IWCMC)*, Limassol, Cyprus, Aug. 2012, pp. 189–194

National conference and seminar

2015 M. Dardaillon, "Compilation of parametric dataflow applications for software-defined-radio-dedicated MPSoCs," in *Design of Robotics and Embedded systems, Analysis, and Modeling Seminar (DREAMS)*, U.C. Berkeley, California, Feb. 2015

2014 M. Dardaillon, K. Marquet, T. Risset, J. Martin, and H.-P. Charles, "Contrôle d'application flot de données pour les systèmes sur puces : Étude de cas sur la plateforme magali," in *Conférence en Parallélisme, Architecture et Système (ComPAS)*, Neuchâtel, Switzerland, Apr. 2014

+337 69 24 04 12 • mickael.dardaillon@gmail.com
dardarel.github.io • mickael.dardaillon