



# Mickaël Dardaillon

## 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.

## Experience

- 2015–2017 **Staff Software Engineer**, *National Instruments*, Austin, Texas.  
Models of Computation and High-Level Synthesis.
- 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.

## Teaching

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

## Technical Skills

- Hardware Design and Implementation. *FPGA architecture development*
- Compilation Dataflow Model of Computation. *Theory and implementation*
- Network CAN, SPI, 802.15.4, LTE-Advanced. *PHY layer development*
- Applications Software Defined Radio, Digital Signal Processing.

## Soft Skills

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

## 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

- 2015 M. Dardaillon, C. Jabbour, and V. Srin, "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