

Nicolas BERTHIER



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Born 11/19/1985
French Nationality
Bachelor

Research Interests

Global Control for Resource and Energy Management in Embedded Systems, Kernel Architecture, Hardware and Operating System-level Virtualization, Programming Languages for Systems Design, Operating Systems Design and Implementation

Education

- 2008–2012 **PH.D IN COMPUTER SCIENCE** at [Université Joseph Fourier](#), Grenoble, France
- 2005–2008 **M.RES IN COMPUTER SCIENCE (MAGISTÈRE)** at [Université Joseph Fourier](#), Grenoble, France
magna cum laude
- 2006–2008 **M.Sc IN COMPUTER SCIENCE** at [Université Joseph Fourier](#)
cum laude
- 2005–2006 **B.Sc IN COMPUTER SCIENCE** at [Université Joseph Fourier](#)
cum laude
- 2003–2005 **UNDERGRADUATE DEGREE IN COMPUTER SCIENCE (DUT)**
at [Université Pierre-Mendès-France](#), Grenoble
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Research Experience

- Oct 2008 **PH.D CANDIDATE** in [Synchrone Team](#), [Verimag Lab.](#), Grenoble, France
–Mar 2012 *Research on power-aware implementation of embedded systems*
Advised by Florence Maraninchi and Laurent Mounier; Defended on March 12, 2012
- Feb–Sept 2008 **RESEARCH INTERN** in [Synchrone Team](#), [Verimag Lab.](#)
Research on system-level modeling of embedded control systems
Advised by Florence Maraninchi and Christophe Rippert
- Apr–Sept 2007 **RESEARCH INTERN** in ISE Team, [Verimag Lab.](#)
Designed a hybrid dynamic memory management mechanism for real-time Java applications
Advised by Christophe Rippert and Guillaume Salagnac
- Jun–Sept 2006 **RESEARCH INTERN** in ISE Team, [Verimag Lab.](#)
Research on the life span of dynamically allocated objects in real-time Java applications
Advised by Christophe Rippert and Guillaume Salagnac
- Apr–Sept 2005 **INTERN** in [OSIRIS Team](#), [TIMC Lab.](#), Grenoble
Investigated and developed a tool for automatic generation of graphical user interface from ISIS query
Advised by Ana Simonet

Publications

PAPER:

Nicolas Berthier, Florence Maraninchi, and Laurent Mounier. Synchronous Programming of Device Drivers for Global Resource Control in Embedded Operating Systems. In *Proceedings of the 2011 SIGPLAN/SIGBED Conference on Languages, Compilers and Tools for Embedded Systems*, LCTES '11, pages 81–90, New York, NY, USA, 2011. ACM.

THESIS:

Nicolas Berthier. *Synchronous Programming of Device Drivers for Global Resource Control in Embedded Systems*. PhD thesis, Université de Grenoble, March 2012.

Nicolas Berthier. *System-level Modeling of Embedded Control Systems: a Case Study from the Automated Transfer Vehicle*. Master's thesis, Université Joseph Fourier, June 2008.

Nicolas Berthier. *Gestion hybride de la mémoire dynamique dans les systèmes Java temps-réel*. Magistère deuxième année, Université Joseph Fourier, September 2007.

Nicolas Berthier. *Analyse de la démographie des objets dans les systèmes Java temps-réel*. Magistère première année, Université Joseph Fourier, September 2006.

OTHER:

Nicolas Berthier, Florence Maraninchi, and Laurent Mounier. *Global Platform Management by Using Synchronous Device Drivers in μ -Kernel-based Systems*. Fun Ideas and Thoughts Session, Conference on Languages, Compilers, Tools and Theory for Embedded Systems (LCTES), April 2011. (*Best FIT Presentation Award*).

Teaching Experience

- 2008–2011 **TEACHING ASSISTANT** at [Ensimag, Grenoble INP, France](#)
Computer architecture; practical courses, 1st year engineering school
Unix & shell-script development; lecture and practical courses, 1st year engineering school
C programming; project supervision, 1st year engineering school
System programming; project supervision, 2nd year engineering school
- 2008–2010 **TEACHING FELLOW** at [Conservatoire National des Arts et Métiers, regional centre in Grenoble](#)
Algorithms and data structures; evening classes, lecture courses, 1st year undergraduates
- Sept–Oct 2007 **TUTORING** at [Université Joseph Fourier, Grenoble](#)
Algorithms, language theory and automata; 3rd year undergraduates

Language Proficiency

- French: *native* • English: *fluent* • Spanish: *basic*

Miscellaneous

- Leisure: mountaineering, snowboarding
- Interests: free software advocacy, zetetics
- French driving licence B
- Ten years of scouting