

# Scientific Curriculum Vitae

Jérôme Gallard

## Personal Data

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<b>Last Name</b>	Gallard
<b>First Name</b>	Jérôme
<b>Birth</b>	April, 25th 1983 – Saint-Denis, Réunion Island, France
<b>Nationality</b>	French
<b>Office Address</b>	INRIA, Centre Rennes – Bretagne Atlantique, IRISA, Campus de Beaulieu, 35042 Rennes Cedex, France
<b>Current Position</b>	PhD student – 3rd year
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## Education

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<b>Currently</b>	3rd year of Ph.D. in Computer Science at the University of Rennes 1, France.
<b>2006 – 2007</b>	Master's degree in Computer Science from the University of Rennes 1, France.
<b>2003 – 2006</b>	Engineering Degree in Computer Science from the ENSSAT school in Lannion, France.
<b>2001 – 2003</b>	Preparation in mathematics and physics for entrance to French engineering schools.
<b>2000 – 2001</b>	Scientific Baccalauréat.

## Research Interests & Ongoing Projects

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Since October 2007, my main activities have been focusing on the use of virtualization mechanisms (VM) in the context of grid computing. This work is done in the framework of the XtremOS European Project.

I have studied the complementarity between virtualization technologies and Single System Image (SSI) Operating Systems. An article was presented at the

3rd workshop on Virtualization in High Performance Cluster and Grid Computing co-located with Euro-Par 2008 (VHPC'08 – see article "Complementarity Between Virtualization and Single System Image Technologies").

In addition, I have worked on an extension of the Goldberg's Theory. This extension aims at formally classifying the different existing virtualization systems (see research report "Refinement Proposal of the Goldberg's Theory").

Moreover, in summer 2008, I co-supervised an intern, Oana Goga. This intern worked on a system able to deploy the Kerrighed SSI on Grid'5000 (Kargo) and another system (VMdeploy), which aims to deploy and manage Virtual Machines on the Grid (see research report "VMdeploy: Improving Best-Effort Job Management in Grid'5000").

During the summer 2009, I worked with Eliana-Dina Tîrşa on the design and the conception of a framework allowing to deploy XtreamOS resource nodes, in an automatic way, in clouds. In our experiments, we used our own Nimbus open-source Cloud (from the Argonne National Laboratory).

## Professional Experiences

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| <b>2007 (five months)</b>  | Master's internship: Application scheduling in clusters, study and evaluation.<br>INRIA, IRISA, Rennes, France.                                   |
| <b>2006 (six months)</b>   | Engineering internship: Study and evaluation of the Kerrighed operating system with bio-informatic applications.<br>INRIA, IRISA, Rennes, France. |
| <b>2005 (three months)</b> | Engineering internship: Design an implementation of a LiveCD for the Kerrighed operating system.<br>INRIA, IRISA, Rennes, France.                 |
| <b>2004 (two months)</b>   | Engineering internship: Design and implementation of a billing management system for a learning centre.<br>CQFD, Saint-Denis, France.             |

## Student Supervision & Teaching

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| <b>2007 (six months)</b>   | VMdeploy: Improving Best-Effort Job Management in Grid'5000, supervision of Oana Maria Victoria Goga.                            |
| <b>2006 (three months)</b> | Tutorial Sessions of Programmation Introduction (French Licence 2 Économie) at UFR of Economic Sciences, University of Rennes 1. |

## Publications

### Article in Journals

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1. Christine Morin, Yvon Jégou, Jérôme Gallard and Pierre Riteau. Clouds: A New Playground for the XtremOS Grid Operating System. In *Parallel Processing Letters (PPL)*, Vol. 19(3):435-449, 2009.

### International Conferences

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1. Jérôme Gallard, Adrien Lèbre, Geoffroy Vallée, Christine Morin, Pascal Gallard and Stephen L. Scott. Refinement Proposal of the Goldberg's Theory. In *proceedings of the International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP'09)*. Springer LNCS, Taipei, Taiwan, 2009.
2. Jérôme Gallard, Geoffroy Vallée, Adrien Lèbre, Christine Morin, Pascal Gallard and Stephen L. Scott. Complementarity Between Virtualization and Single System Image Technologies. In *VHPC 2008, 3rd Workshop on Virtualization in High-Performance Cluster and Grid Computing, Held in conjunction with Euro-par 2008*, Springer LNCS, Las Palmas de Gran Canaria, Canary Island, Spain, 2008.

### Master's Theses

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1. Jérôme Gallard. *Ordonnement de tâches dans des grappes de calculateurs*. Master's thesis, IFSIC - Université de Rennes 1, June 2007.
2. Jérôme Gallard. *Écoulement de la charge sur le système à image unique Kerrighed : application au domaine de la biologie*. Master's thesis, EN-SSAT - Université de Rennes 1, June 2006.

### Posters

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1. Jérôme Gallard. Kget+: An efficient tool for managing VM image snapshots. In *Actes de Toulouse'09 (RenPar'19 / SympA'13 / CFSE'7)*. Toulouse, France, September 2009.

## Research Reports

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1. Jérôme Gallard, Adrien Lèbre and Christine Morin. *Saline: Improving Best-Effort Job Management in Grids*. Technical report, RR-7055, INRIA, September 2009.
2. Jérôme Gallard, Oana Goga, Adrien Lèbre and Christine Morin. *VMdeploy: Improving Best-Effort Job Management in Grid5000*. Technical report, RR-6764, INRIA, December 2008.
3. Jérôme Gallard, Pascal Gallard, Adrien Lèbre, Christine Morin, Stephen L. Scott and Geoffroy Vallée. *Refinement Proposal of the Goldberg's Theory*. Technical report, RR-6613, INRIA, August 2008.

## Misc

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- Presentation: “Discussion: Improving Best-Effort Job Management in Grids” (Aladdin/G5K spring school, Nancy, France, April 2009).  
<https://www.grid5000.fr/mediawiki/index.php/Grid5000:School2009>
- Reviewer for the 3rd Workshop on System-level Virtualization for High Performance Computing (HPCVirt 2009)  
<http://www.csm.ornl.gov/srt/hpcvirt09/>
- Reviewer for the 14th IEEE International Conference on Parallel and Distributed Systems (ICPADS’08) / Cluster and Grid Computing track.  
<http://www.deakin.edu.au/conferences/icpads2008/>
- Reviewer for The 2008 IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA-08).  
<http://www.cs.usyd.edu.au/ispa2008/index.html>
- Reviewer for the 5th IEEE International Workshop on Storage Network Architecture and Parallel I/O (SNAPI 2008).  
<http://www.snapi08.wustl.edu/index.html>
- Presenting VMdeploy, a VM framework management for the Aladdin/G5K kick-off (July 2007).
- Presenting Kerrighed for the 30th birthday of IRISA (October 2006).