Sebastien VARRETTE, PhD

Research Associate
specialized in Distributed Platforms Security and HPC/Cloud systems.
14 years of experience in Linux HPC systems

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Born on November 27th, 1979 (in France)
Married (2004), two children (2007,2010)

TECHNICAL / MANAGEMENT EXPERTISE:	High Performance Computing (HPC) , Grid, Cluster & Cloud Platforms. I'm administrating cluster-based HPC systems since 2003 (Linux environment) Leader of an expert team of HPC system administrator since 2008.
MAIN RESEARCH DOMAINS:	Security and Evaluation of Distributed Computing Platforms Relevant contributions per domains:

- Code Obfuscation , CERTICLOUD, a Cloud IaaS secure platform
- Crash/cheating faults analysis in grid platforms
- Performance & Energy efficiency of HPC/Cloud platforms
- Design of the authentication system of Grid'5000
- Developing security awareness by education

Education

2007	PH.D. IN COMPUTER SCIENCE, with honours (*Excellent/Outstanding*) University of Luxembourg (UL) & Institut National Polytechnique de Grenoble (INPG) Thesis: *Security in Large Scale Distributed Systems: Authentication and Result Checking* Advisors : Franck Leprévost (UL) & Jean-Louis Roch (INPG)
2003	M.SC. IN COMPUTER SCIENCE with honours (*TB/First Class*) Speciality: Cryptology, Security and Information Coding (CSCI), rank: 1st Institut National Polytechnique de Grenoble (INPG) & University Joseph Fourier (UJF)
2003	MASTER'S DEGREE IN ENGINEERING (Telecoms ENSIMAG) with honours (*B/2.1*) Speciality: Computer Sciences and Telecommunications rank: top 10%
1997 – 2000	ADVANCED MATHEMATICS AND PHYSICS STUDIES For the competitive entrance to the French engineering schools
1997	SCIENTIFIC "BACCALAURÉAT" (French "A" levels) with honours (*B/2.1*)

Employment

2011 – now	RESEARCH ASSOCIATE (UL, Luxembourg)
2007 – 2010	SCIENTIFIC COLLABORATOR (UL, Luxembourg)
2004 – 2007	RESEARCH ASSISTANT (UL, Luxembourg)
2003	SYSTEM ADMINISTRATOR (ID-IMAG, Grenoble, France)

Teaching Experience

2008 – now	PARALLEL & GRID COMPUTING, MIDDLEWARE	Master MICS2 (UL)
2004 – 2007	PROGRAMMING TECHNIQUES I	Bachelor I1/CUT1 (UL)
	ADVANCED PROGRAMMING IN C, C++ AND JAVA	Bachelor I2 (UL)
	SYSTEM ADMINISTRATION AND NETWORK SECURITY	Master CSCI2 (UJF)
2006	CRYPTOLOGY AND NETWORK SECURITY Master in Computer Science (Univ. of Yaoundé I, Cameroon)	

Additional Information

Languages	FRENCH (native language), ENGLISH (fluent) and GERMAN (basic knowledge)
Sports	Karate (Black belt – 2nd DAN, Federal Instructor Diploma (DIF)), Jogging, Badminton, Ski etc.

Graduate Students Supervision

PhD.	Jakub Muszyński (2011 – 2015)	Cheating-Tolerance of Parallel and Distributed Evolutionary Algorithms in Desktop Grids and Volunteer Computing Systems
	Benoît Bertholon (2010 – 2013)	CertiCloud & JShadObf: Toward Integrity and Software Protection in Cloud Computing Platforms

Master	Maxime Schmitt (2014–2015)	RESIF and OpenStack Deployment
	Ludovic Schoepps (2014)	Design a REST API service to Monitor UL HPC Resources
	Anna Giannakou (2013)	Energy Efficiency in HPC environments
	Valentin Plugaru (2012 –)	Energy Efficiency of Hypervisors and Cloud middleware
	Sébastien Martinez (2012)	Source Code Obfuscation by mean of Evolutionary Algorithms
	Fotis Georgatos (2012 – 2014)	System administrator of the UL HPC facility
	Mateusz Guzek (2011)	System administration of cluster-based HPC systems
	Benoît Bertholon (2009)	Integrity issues in distributed executions
	Christophe Weis (2009)	Optimizing hash functions and S-Box by GEP
	Dominic Dunlop (2008 – 2009)	Using GAs to tune benchmarks for HPCs
	Romain Cavagna (2007 – 2008)	Deployment of a GForge platform

Bachelor	Hyacinthe Cartiaux (2011 –)	System administrator of the UL HPC facility
	Bernard Reichert (2008)	Collision detection implementation using CUDA

Research Projects

2007 – now	UL HPC, co-PI (UL cumulative contribution: **6.4 M€**)
2014 – now	EU COST Action IC1305: Network for Sustainable Ultrascale Computing (NESUS)
2016 – 2019	co-PI, UL Lsdem (UL contribution: 332 k€)
2011 – 2013	UL EvoPerf (UL contribution: 373 k€)
2010 – 2012	FNR CORE GreenIT (Total: 1,5 M€, FNR contribution: 432 k€)
2010 – 2012	AFR PhD Bertholon (PHD-09-142; Scientific Advisor; Total/AFR contribution: 110 k€) Confidentiality and Integrity Issues over Cloud Computing Platforms
2009 – 2013	EU COST Action IC0804: Energy efficiency in large scale distributed systems
2009 – 2013	EU CoreGrid
2006 – 2008	ANR SafeScale-BGPR (ANR-05-SSIA-0005; ANR contribution: 68 k€)
2005 – now	Grid'5000 (technical committee)
2005 – 2007	FNR-SECOM TeseGrad (FNR contribution: 300 k€)
2004 – 2007	CryptAlpes
2004 – 2006	RagTime (Total: 545 k€, Rhône-Alpes Region contribution: 217 k€)

Professional Development

	IEEE Computer and Computational Intelligence society member
	Organizer of various conferences
	”*Autorisation à Diriger des Recherches*” (ADR) granted on July, 2015

2009 – now	Technical advisor for LCSB and the MECO Ministry on HPC projects
2007 – now	UL HPC Manager. **Cumulative Project Investment: 6.3 M€** (as of 2015). 400 computing nodes, 4284 cores, $R_{\mathrm{peak}} = 49.92$ TFlops 150 servers (74,6% are Xen VMs) NFS, GPFS, Lustre Storage (Total capacity: 4268 TB) Management of a team of 4 system administrators

2007 – now	Manager of various IT services (Gforge @ Uni.lu, Jabber etc.)
2006	EGIDE mission for 3 weeks in Cameroon (master lecture – Univ. of Yaoudé I)
2005	Editorial Committee for the definition of new UL master and bachelor degrees
2005 – 2006	Editorial Committee, UL website (CMS selection & management)
2005 – 2006	Faculty Council, elected member (assistant representative)
2000 – 2002	Ensimag Junior Enterprise, developer member

Publications

Publication category	Quantity
PhD Thesis	1
Books	4
Magazine	1
Book Chapters	9
International journals	7
International conferences with proceedings and reviews	43
(French) national conferences with proceedings and reviews	4
International conferences with proceedings	1
International conferences with reviews	7
Masters Thesis	1
Technical Reports	8
Miscellaneous	1
Total:	**87**

Publish or Perish	Papers:117	Citations:330,Years:13	**h-index:10**,g-index:15	hc-index:8,hI-index:2,78,hI-norm:5
	Cites/year: 25.38	Cites/paper: 2.95/1.0/0	Cites/author: 113.24	Papers/author: 40.16 Query date: **2016-04-05**
DBLP	Google Scholar			

Selected Publications