Adrien Lèbre

Associate Professor in Computer Science
PhD in Distributed Systems and HPC File systems

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36 years old (born on June 1977, the 28th)
French nationality
Married, two children (2003/2009)

Education

2003 - 2006	**PhD in Computer Science** at the "Institut National Polytechnique de Grenoble", France.
	Design and development of **an Input/Output scheduling framework for HPC architecture** (**C, Linux, kernel space - http ://aioli.imag.fr**).
	Funded by BULL SA company around the *LInux Platform Solution* collaboration with the Grenoble Computer Science Laboratory and supervised by Prof. Brigitte Plateau and co-supervised by Prof. Yves Denneulin (currently vice-head of Grenoble Computer Science Lab) and Pascal Ross ?-Laurent (BULL Linux Senior Architect).
2001 - 2002	**MSc in Computer Science** "Communications and Systems", University of Sciences Joseph Fourier, Grenoble, France, **with honours** (get **a merit-based scholarship** from the University).
	Evaluations and improvements of **meta-data management** by setting up distributed mechanisms **within the Parallel NFS system** (**C, Linux, user space - http ://nfsp.imag.fr**).
1998 - 2001	**Maîtrise de Mathématiques et d'Informatique**, equivalent to a **Taught Master's Degree** in Computer Science, "Institut Universitaire Professionnalis ?" Avignon, France, **with honours**.

Work Experience

since Sept. 2008	**Ass. Prof.** at the "**Ecole des Mines de Nantes**" (EMN, **http ://www.emn.fr**), Nantes, France.
	Research activities are done in the **ASCOLA Research Group**. Major works cover two main areas : the design and the implementation of new distributed file systems and the use of virtualization technologies in very large scale platforms.
2006 - 2008	**Post Doc** at **INRIA, the French Research Institute of Computer Science**, Rennes, France.
	Design and development of a **symmetric file system for cluster** (**C, Linux, kernel space**) under the framework of **the EU-funded XtreemOS project** led by Christine Morin (Senior Researcher at INRIA). Further information at **http ://kerrighed.sourceforge.net/wiki/index.php/KernelDevelKdFS**
2002	**3 months**, system developer, Grenoble Computer Science Laboratory, France.
	Design and development of a **RAID layer** in the Parallel NFS proposal (**C, Linux, user space**).
2001	**6 months**, **internship**, CanalNumedia (Vivendi group), Stockholm, **Sweden**.
	Design and development of several content management modules for the different Scandinavian Canal+ websites (**ASP, XML - SQL Server, IIS**).

Teaching Experience

Since Sept. 2008 (at EMN)	In charge of the **Object-oriented Programming** module, (**JAVA**, ∼100 undergraduate students).
	In charge of the **Systems and Networks** module, (∼25 graduate students), including **Introduction to Gnu/Linux and Open-Source Systems** (UBUNTU) and **Operating systems and Networks** tutorials.

Since 2006	**Distributed Computing** lectures, MSc in Computer Science (2nd year), University of Rennes, France.
2006 - 2007	**Computer architecture** lectures, last year of statistics engineering school, ENSAI, Rennes, France.
	Operating systems tutorials, MSc in Computer Science (1st year), IFSIC, University of Rennes, France.
2004 - 2006	**Parallel Programming** practical works, MSc and PhD, INPG Doctoral School, Grenoble, France.
	System, network and data base tutorials, 2nd year of engineering school, ENSGI, Grenoble, France.

Computer Skills

System	**GNU/Linux** (Debian) use and internal design, **distributed architecture** (cluster, grid, cloud). **Network** (TCP-UDP/IP stack), distributed and local **file systems**, **virtualization** technologies
Programming	Language **C** (**user/kernel** space), language object (**JAVA**), basic knowledge of parallel programming (**thread**, **MPI**), relational Data Base systems (**SQL**), and multimedia programming (javascript, HTML, XML, PHP)

Selected Publications

Journals/International Conferences/Workshops	**Cooperative and Reactive Scheduling in Large-Scale Virtualized Platforms with DVMS**, by F. Quesnel, A. Lèbre, and M. Sudholt - **Concurrency and Computation : Practice and Experience**, December **2012**.
	DISCOVERY, Beyond the Clouds - DIStributed and COoperative Framework to Manage Virtual EnviRonments autonomicallY : A Prospective Study, by A. Lèbre, P. Anedda, M. Gaggero and F. Quesne, In Proceedings of VHPC - EUROPAR Workshop - LNCS - August, 2011
	Cluster-wide context switch of virtualized jobs by F. Hermenier, A Lèbre, and J.M. Menaud, in Proceedings of the **ACM VTDC** Workshop, co-located with the ACM HPDC Conference, US, **2010**.
	Handling Persistent States in Process Checkpoint/Restart Mechanisms for HPC Systems by P. Riteau, A Lèbre, and C. Morin, in Proceedings of the **IEEE CCGRID** Conference, China, **2009**.
	Reducing Kernel Development Complexity in Distributed Environments. by A Lèbre, R. Lottiaux, E. Focht, and C. Morin, in Proceedings of the **EUROPAR** Conference, LNCS 5168, Spain, **2008**.
	I/O Scheduling for Multi-Application Clusters by A Lèbre, G. Huard, Y. Denneulin, and P. Sowa, in Proceedings of the **IEEE Cluster** Conference, Spain, **2006**.
	aIOLi : an input/output library for cluster of SMP by A Lèbre, and Y. Denneulin in Proceedings of the **IEEE CCGRID** Conference, UK, **2005**.
	Performance Evaluation of a Prototype Distributed NFS Server by R. Avila, P. Navaux, P. Lombard, A. Lèbre, and Y. Denneulin, in Proceedings of **IEEE SBAC**-**PAD Conference**, Brasil, **2004**.
	Distributed File Systems for Clusters and Grids by O. Valentin, P. Lombard, A. Lèbre, C. Guinet and Y. Denneulin, in Proceedings of **PPAM Conference**, LNCS 3019, Poland, **2003**

R&D Personal Involvement

Collaborations	Member of the EU **SCALUS consortium** (**http ://www.scalus.eu**). The SCALUS consortium aims at at elevating education, research, and development inside the storage area with a focus on cluster, grid, and cloud.
	Member of the **Grid5000** directory committee : **Head** of the **Virtualization** Working group since 2008 (**http ://www.grid5000.fr/mediawiki/index.php/Virtualization_Working_Group**) **Project founder** of the kDFS proposal, a symmetric file system for the Kerrighed project (**http ://www.kerrighed.org** (maintainer until 2009)).
	Member of the EU **XtreemOS** project from 2006-2008.
	Coordinator of the **aIOLi** and **NFSp** activities (**Brasil**, **Poland** and **France**) from 2005-2007.

Steering/Program Committee	**General/Program chair** of the 5th, 5th, 6th ACM **VTDC** Workshop (co-located with HPDC).
	PC Member at ACM SuperComputing 2013, Europar 2013, ACM/IEEE CCGRID 2013, IEEE CGC 2012 Conference, IEEE ScalCom 2011 Conference, IEEE NAS 2010 Conference and several workshops related to storage, virtualization and energy concerns in large scale infrastructures (such as HPCVirt, E2GC2 . . .).
External Reviewer	International journals such as **TPDS**, **JPDC**, **FGCS**.
Invited Talks	**Beyond the Cloud : The Discovery Initiative**, 6th edition of the VHPC workshop (co-located with EUROPAR 2011), France.
	How Virtualization Changed the Grid Perspective, From Grid to Cloud workshop, Ecole Normale Superieure de Lyon, France, 2010.
	Virtualization Technologies in Distributed Architecture : The Grid5000 Recipe, 4th edition of the ACM VTDC workshop (co-located with HPDC 2010), US.
PhD Supervision	Flavien Quesnel, **Dynamic scheduling of virtual machines in large scale systems** (achieved in February 2013).
	Gustavo Bervian Brand, **Dynamic federation of distributed file systems** (defense expected by the end of 2013).
	Jonathan Pastor, **Cloud should be a Distributed Infrastructure** (defense expected by the end of 2014).

Languages

French	Mother tongue
English	Almost fluent

Referees

Academics	**Narendra Jussien**, Head of the C.S. department of the Ecole des Mines / **Google Focused Research Award 2010** (**http ://narendra.jussien.free.fr/**)
	Frédéric Desprez, Senior Researcher at INRIA / **Scientific Director** of the **Grid'5000** platform (**http ://graal.ens-lyon.fr/~desprez/**)
	Christine Morin, Senior Researcher at INRIA / currently **Affiliate at Lawrence Berkeley National Laboratory** (**http ://www.irisa.fr/myriads/members/cmorin**)

Additional Information

Social skills	Good public relations (**dynamic**, **communicative** and **open-minded**) . Interested in **working in multicultural teams**.
Organization skills	Experience in **setting-up** projects and external **collaborations**.
Interests	Keen on **skateboarding**, skiing and **snowboarding** for more than **20 years** Running (at least twice per week), listening music, playing **drums**
Miscellaneous	Clean **driving licence** **First aid certificate** ("Attestation Française des Premiers Secours" graduated in 1997)