

Pierre-Louis Aublin

Ph.D. in Computer Science

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Experience

- January 2016 – **Research Associate**, *Imperial College*, London, UK.
- working on the **security of cloud** applications using **secure enclaves** as part of the European Sereca and SecureCloud projects.
- September 2014 – **R&D Software Engineer**, *Alphanumeric Vision*, Orsay, France.
- working on a multi-platform **character recognition software** using **neural network** algorithms;
- January 2016
- performance optimization using **multicore** and **CUDA** programming;
 - **C++** programming using the Qt framework on Linux and Windows; **Android** development.
- October 2013 – **Teaching and Research Assistant**, *INSA, LIRIS laboratory*, Lyon, France.
- August 2014
- collaborating with the Laboratory of Informatics at Grenoble on the design of **accountable peer-to-peer systems**. Published in SRDS 2014;
 - collaborating with the University of Milano on the design of a framework for the design of **rational resilient collaborative systems**;
 - giving lectures at INSA Lyon (Java and databases; 174 hours).
- October 2010 **Ph.D. student**, *LIG laboratory*, Grenoble, France.
- Designing **efficient and robust Byzantine fault-tolerant replication protocols**.
- January 2014
- designing, implementing and evaluating a **new Byzantine fault-tolerant replication protocol much more robust than the previous ones** (worst performance degradation <3%). Published in ICDCS 2013;
 - collaborating with several French universities as part of the French Research Agency project Soceda;
 - collaborating on the implementation of a **very efficient and robust** Byzantine fault-tolerant replication protocol with the “École Polytechnique Fédérale de Lausanne”. Published in the ACM TOCS journal;
 - giving lectures at Polytech Grenoble (Java, system programming and databases; 206 hours).
- April – May 2012 **Parallel programming contest “Acceler8 your code”**, *Intel Corporation*.
- optimized and parallelized a reference algorithm solving the DNA Sequence Alignment problem;
 - finished 24/500, titled “Excellent software optimization skills”.
- February – June 2010 **Designing an efficient communication mechanism for fault-tolerance on multicore machines**, *INRIA*, Grenoble, France.
- developing a **Linux driver** for communication on a multicore machine;
 - designing, implementing and evaluating a new communication mechanism which improves the performance of fault-tolerant applications running on a multicore machine by up to 100%.

Publications

- January 2015 **The next 700 BFT protocols**, *ACM Transactions on Computer Systems*, rank A.
- October 2014 **FullReview: Practical Accountability in Presence of Selfish Nodes**, *Proceedings of the International Symposium on Reliable Distributed Systems*, rank A.
- May 2014 **A Semi-Automatic Framework for the Design of Rational Resilient Collaborative Systems**, *Research report, LIRIS/INSA Lyon*.
- July 2013 **RBFT: Redundant Byzantine Fault Tolerance**, *Proceedings of the 33rd International Conference on Distributed Computing Systems*, acceptance rate: 13%.
- April 2012 **REICoM: Robust and Efficient Inter-core Communications on Manycore Machines**, *Research report, INRIA Rhône-Alpes*.

Skills

- C/C++, Java, Javascript, Python, Rust
- Windows, GNU/Linux
- Eclipse, QtCreator, Visual Studio, svn, git, mercurial
- French (native), English (fluent), Japanese (beginner)

Education

- 2010–2014 **Ph.D. in Computer Science**, *Joseph Fourier University*, Grenoble, France.
- 2008–2010 **Master in Computer Science**, *Joseph Fourier University*, Grenoble, France.
- 2007–2010 **Magistère in Computer Science**, *Joseph Fourier University*, Grenoble, France, University award of excellence.

Interests

- zetetic
- video games
- Mozilla project contributor
- cycling/hiking
- sysadmin
- member of an associative ISP