
INTERESTS

Distributed systems, peer-to-peer overlay networks, and system monitoring.

EDUCATION

2003 Ph.D. in Computer Science, with honors. INRIA, Université Paris 6 (France). Thesis title: “Pandora: Support for Internet Scale Metrology Services”. Advisors: Dr. Mesaac Makpangou and Prof. Bertil Folliot.

1999 M.Sc. in Computer Science, with honors (ranked 1st). École Normale Supérieure de Lyon, Université Lyon 1 (France). Major: parallel and distributed systems. Thesis title: “Pandora: a System for Collecting Web Traffic Traces of Distributed User Communities”. Advisor: Dr. Mesaac Makpangou.

1997 B.S. in Computer Science, with honors. École Normale Supérieure de Lyon, Université Lyon 1 (France).

1993 Baccalauréat in Science, with honors.

PROFESSIONAL EXPERIENCE

January 2006 – present Software Engineer, Flexeye Technology, Paris, France.

Design and development of a flexible business intelligence platform.

Team collaboration. Worked remotely with a team of 5 engineers. I am responsible of the back-end (server) of the platform and cooperate closely with the rest of the team (junior engineers and engineers responsible of the other parts of the platform).

Platform development. Leading the development effort for the server part of the platform (~100 000 lines of Java code out of more than 300 000 for the full platform).

October 2003 – December 2005 Postdoctoral researcher, University of Bologna, Italy (Prof. Ozalp Babaoglu).

Design of a framework for prototyping J2EE replication algorithms.

European project management. Integrated in a large EU-funded project (ADAPT). I have coordinated one of the four work packages and led the Bologna effort in the project (cooperation with 6 international partners).

API specification. Specified an API to design J2EE replication algorithms. This API has been used by at least 3 independent groups to develop novel algorithms.

Framework prototype. Designed and implemented a framework that implements the replication API (~30 000 lines of Java). The framework was integrated with the large legacy code base of the JBoss application server, while not being allowed to modify it. The performance of the framework were assessed using the industry-grade ECperf benchmark.

May – September 2003 Software engineer, REGAL group, INRIA Rocquencourt, France.

Industrial transfer of the Pandora platform to W2G Technologies.

- Ported the core platform to run on a Win32 environment.
- Collaborated with W2G staff, written technical documentation and given tutorial talks.

September 1999 – April 2003 Graduate student researcher, REGAL group, INRIA Rocquencourt, France.

Design of the Pandora platform for supporting Internet scale monitoring services.

Component Model. Designed a light-weight component model suitable for system monitoring tasks and defined a language to specify component assemblies.

Platform prototype. Designed and implemented (sole developer) a prototype of the platform (~100 000 lines of C++). Strong focus on flexibility (use of dynamic libraries, run-time reconfiguration) and performance (originally designed to perform on-line network traffic analysis).

SKILLS

Programming and Computing

- Operating systems: UNIX (Linux, FreeBSD, Solaris, Tru64)
- Programming languages: C, C++, Java, Perl, shell
- Network protocols: TCP/IP, DNS, SMTP, HTTP
- Databases: SQL language, PostgreSQL, MySQL
- Office applications: \LaTeX , Microsoft Office
- Software design: object-oriented architecture, components, distributed processes, thread programming, client/server architecture, peer-to-peer networks
- Methodology: performance analysis, code optimization, regression tests

Project Management

- Lead of the Bologna effort for the EU-funded ADAPT project.
- Active participation to the writing of 3 european project grant applications.
- Supervision of 2 Master students and 5 engineer interns.

Teaching and Presentation

- Teaching Operating Systems and Computer Science Fundamentals in university (Paris 6, Paris 11) and *grandes écoles* (École Polytechnique). *300 hours, 1999 – 2003*
- Talks in international conferences (Usenix 2000, DOA 2004, DBISP2P 2005) and EU project review meetings.

Languages

- French (mother tongue)
- Fluent English and Italian (written and spoken)
- Some knowledge of German

MAIN PUBLICATIONS

All these publications are available on-line on the following Web page:
<http://patarin.info/publi.html>.

Ph.D. Thesis

- [1] S. Patarin. *Pandora: support pour des services de métrologie à l'échelle d'Internet (english title: Pandora: Support for Internet Scale Monitoring Services)*. PhD thesis, Université Paris 6, June 2003. *in French*

International Journals

- [2] A. Bartoli, R. Jiménez-Peris, B. Kemme, C. Pautasso, S. Patarin, S. Wheeler, and S. Woodman. The ADAPT framework for adaptable and composable web services. *IEEE Distributed Systems Online*, 6(9), Sept. 2005.
- [3] D. Hales and S. Patarin. Computational sociology for systems “in the wild”: the case of BitTorrent. *IEEE Distributed Systems Online*, 6(7), July 2005.

International Conferences

- [4] C. Comito, S. Patarin, and D. Talia. A semantic overlay network for P2P schema-based data integration. In *Proceedings of the 11th IEEE Symposium on Computers and Communications (ISCC'06)*, pages 88–94, Pula-Cagliari, Italy, Jun. 2006.
- [5] S. Handurukande, A.-M. Kermarrec, F. Le Fessant, L. Massoulié, and S. Patarin. Peer sharing behaviour in the eDonkey network, and implications for the design of server-less file sharing systems. In *Proceedings of the First EuroSys Conference (EuroSys 2006)*, pages 359–371, Leuven, Belgium, Apr. 2006.
- [6] A. Hachichi, C. Martin, G. Thomas, B. Folliot, and S. Patarin. A generic language for dynamic adaptation. In *Proceedings of the 11th International Euro-Par Conference (Euro-Par 2005)*, pages 40–49, Lisboa, Portugal, Aug. 2005.
- [7] O. Babaoglu, A. Bartoli, V. Maverick, S. Patarin, J. Vuckovic, and H. Wu. A Framework for Prototyping J2EE Replication Algorithms. In *Proceedings of the International Symposium on Distributed Objects and Applications (DOA 2004)*, pages 1413–1426, Larnaca, Cyprus, Oct. 2004.
- [8] S. Patarin and M. Makpangou. Pandora: A Flexible Network Monitoring Platform. In *Proceedings of the USENIX 2000 Annual Technical Conference*, pages 27–40, San Diego, CA, USA, June 2000.

International Workshops

- [9] S. Patarin and M. Makpangou. Pandora: an efficient platform for the construction of autonomic applications. In *Self-Star Properties in Complex Information Systems*, volume 3460 of *LNCS*, pages 291–306, May 2005.
- [10] F. Ogel, S. Patarin, I. Piumarta, and B. Folliot. C/SPAN: a self-adapting web proxy cache. In *Proceedings of the Autonomic Computing Workshop (AMS 2003)*, pages 178–185, Seattle, WA, USA, June 2003.