

<p>Bureau D307 Département d'Informatique 9, rue Charles Fourier F-91011 Evry Cedex, France.</p> <p>Born on 1976/10/20, Paris French Citizen, 2 children</p> <p>Tel: +33 6 10 39 31 17 Mail: gael.thomas@telecom-sudparis.eu Web: http://www-public.it-sudparis.eu/thomas_g/</p>	<p>Gaël THOMAS</p> <p>Professor Telecom SudParis</p>
--	--

My research focuses on **virtualization, operating systems, concurrent programming** and **language run-times**. I am particularly interested in improving the *performance*, the *design* and the *safety* of the systems.

I. EDUCATION AND EXPERIENCE

2014 – today	Professor at Telecom SudParis
2006 – 2014	Associate Professor (HDR) at UPMC Sorbonne Université. Regal Team – INRIA/LIP6 Tenured of the scientific award of UPMC after 2010
2005 – 2006	PostDoc at Université Joseph Fourier (Grenoble/France). Adele Team – LSR (today LIG)
2001 – 2005	Ph.D. Thesis – Université Pierre et Marie Curie (UPMC). SRC Team – LIP6
	2004–2005 Assistant Professor – UPMC
	2001–2004 Teaching Assistant – UPMC
1999 – 2001	Masters degree in Computer Science at UPMC Magistère d'Informatique Appliquée d'Ile de France (MIAIF) Maîtrise d'Informatique/DEA Système Informatiques Répartis
1997 – 1999	Bachelors/First year of masters degree (M1) in Math. Sciences at UPMC
1994 – 1997	Bachelors degree in Physical Sciences at UPMC

II. RESEARCH ACTIVITIES

II.1. Habilitation à Diriger les Recherches and PhD thesis

HDR thesis in 2012: *Improving the design and the performance of managed runtime environments*

Examining committee

Emery BERGER, Associate Professor, *University of Massachusetts, Amherst* (rapporteur)
Albert COHEN, Senior researcher, *INRIA Saclay*
Bertil FOLLIOT, Professor, *UPMC Sorbonne Université*
Gilles MULLER, Senior researcher, *INRIA Rocquencourt*
Wolfgang SCHRÖDER-PREIKSCHAT, Professor, *Erlangen-Nürnberg University*
Jan VITEK, Professor, *Purdue University* (rapporteur)
Willy ZWAENEPOEL, Professor, *École Polytechnique Fédérale de Lausanne* (rapporteur)

PhD Thesis in 2005: *Active Applications: Dynamically Building Homogeneous Flexible Runtimes*

II.2. Grants and Contrats

International projects (3)

- 2010–2012: Collaboration CNPq/INRIA: Dependable Mechanisms for Dynamic Networks. Contributor.
- 2005–2006: ITEA S4ALL: Services for All. Scientific coordinator for LSR,
- 2002–2004: IST COACH: Component Based Open Source Architecture for Distributed Telecom Applications. Contributor.

French projects (6)

1. **2019–2022: Scalevisor (ANR PCRE). Member.**
2. **2018–2021: Primate (ANR PCRI). Principal Investigator for the french side.**
3. 2013–2015: Richelieu (FUI). Scientific leader for UPMC.
4. **2012-2015: Infra-JVM (ANR Infra). Principal Investigator.**
5. 2009–2012: ABL (ANR Blanc, 275 k€): A Bug Life. Coordinator of Task 1.
6. 2011–2014: CIFRE PhD (Koutheir Attouchi) funding with Orange Labs.

II.3. Student Supervisions

Current PhD Students (5)

1. Remi Dulong (2018 - 2021, 50% with P. Felber): Leveraging a NVRAM to analyze large data sets.
2. Anatole Lefort (2018 - 2021, 50% with P. Sutra): Persistent data types for a NVRAM.
3. Anton Daumen (2018 - 2021, 20% with P. Carribault and F. Trahay): Performance analysis of HPC applications.
4. Subashiny Tanigassalame (2018 - 2021, 100%): A language to simplify the development of privacy-preserving applications.
5. Alexis Lescouet (2017 - 2020, 100%): Scalevisor: an hypervisor for the rack.

Former PhD Students (9)

1. Gauthier Voron (2014 - 2018, 70% with P. Sens): Virtualisation efficace d'architectures NUMA. Currently postdoc at University of Sydney (Australia).
2. Mohamed Said Mosli Bouksiaa (2014 - 2018, 30% with F. Trahay): Performance variation considered helpful. Currently engineer at Applidium (France).
3. Lokesh Gidra (2011 - 2015, 70% with M. Shapiro and J. Sopena): Garbage Collector for memory intensive applications on NUMA architectures. Currently engineer at Google (US).
4. Florian David (2011 - 2015, 50% with G. Muller): Continuous and Efficient Lock Profiling for Java on Multicore Architectures. Currently engineer at Criteo (France).
5. Jean Pierre Lozi (2010 - 2014, 50%, avec G. Muller) : Towards more scalable mutual exclusion for multicore architectures. Currently research engineer at IBM (Switzerland).
6. Koutheir Attouchi (2011 - 2014, 50%, avec G. Muller) : Managing resource sharing conflicts in an open embedded software environment. Currently engineer at MicroDoc (Germany).
7. Thomas Preud'Homme (2008 - 2013, 30%, avec B. Folliot et J. Sopena) : Optimized inter-core communication protocol for stream-oriented parallelism. Currently engineer at ARM (United Kingdom).
8. Nicolas Geoffray (2005-2009, 80% with B. Folliot): Fostering System Research with VMKit. Currently engineer at Google (United Kingdom).
9. Charles Clément (2004-2009, 40% with B. Folliot): Isolation of operating system extensions with a managed runtime environment. Currently engineer at Amazon (US).

Engineers (1)

1. Harris Bakiras (2011 - 2013, 100%) : engineer on the VMKit project (INRIA ADT project). Currently engineer at Microsoft (France).

II.4. Invitations

Cooperations (2)

1. Invited Professor at Purdue University, Indiana, US (2 months between Sept. and Jul. 2012).
2. Invited Professor at LaBRI, Bordeaux, France (2 weeks in Oct. 2010).

Talks (18)

1. Scalevisor: a CPU/memory driver for large multicore architectures (07/2018, IRCICA, France)

2. A study of Garbage Collector Scalability on Multicore Hardware (02/2014, LIAFA, France – 09/2013, EPFL, Suisses – 07/2013, Verimag, France – 03/2013, IRISA, France – 01/2013, Epita, France)
3. Système, Virtualisation, Nuage - Petit tour d'horizon de la recherche en système en France (May. 2012, CNRS, France – Nov. 2011, UPMC, France)
4. VMKit: a substrate for Managed Runtime Environment (Feb. 2012, IRILL, France – Sep. 2011, Purdue University, US – Apr. 2011, Journées Compilation, Dinard, France – Mar. 2011, University of Utah, Salt-Lake City, US)
5. VMKit : un substrat de Machine Virtuelle (Oct. 2010, LaBRI, Bordeaux, France, invited during two weeks – Apr. 2010, Groupe de Travail Programmation, Lip6, Paris, France)
6. AutoVM : repousser les frontières de la généricité, Séminaire Performance et Généricité (May 2009, Epita, Paris, France)
7. Application d'une approche exo-noyau à la construction d'une machine virtuelle Java : la JnJVM (Apr. 2006, LIFL, Lille, France – Mar. 2006, IRISA, Rennes, France)
8. Applications Actives : Construction dynamique d'environnements d'exécution flexibles homogènes (Jul. 2005, LIG, Grenoble, France)

II.5. Program committees and reviews

Member of conference program committees (18)

- Member of the Eurosys 2018 and Eurosys 2016 program committees (Rank A)
- Member of the Middleware 2018
- Member of the SRDS 2018
- Member of the MoreVM 2018
- Member of the VEE 2015 program committee (Rank A)
- Member of the IC00LPS 2015 program committee
- Member of the ComPAS 2018, ComPAS 2017 (PC Chair of the system track), ComPAS 2016, ComPAS 2015, ComPAS/CFSE 2014, ComPAS/CFSE 2013 and CFSE 2011 program committees (French)
- Member of the PLOS 2013 program committee (Rank B)
- Member of the DAIS 2012 and 2011 program committees (Rank B)
- Program chair of the NOTERE 2011 Workshops (French)

External reviewer for 13 conferences and 7 journals

Conferences: DISC 2014 (Rank A), VEE 2014 (Rank A), OOPSLA 2013 and 2012 (Rank A), ISORC 2013 and 2012 (Rank C), ICDCN 2011 (Rank B), Apsys 2011 (Not Ranked), Europar 2011 and 2010 (Rank A), Application of Concurrency to System Design (ACSD) 2010 (Rank B), International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD) 2005 and 2008 (Rank B).

Journals: Science of Computer Programming (2014 and 2008, Elsevier, Rank A) Software Practice and Experience (2012 and 2011, Wiley, Rank A), Techniques et Sciences de l'Ingénieur (2012 and 2004, Wiley, French), The Computer Journal (2009, Oxford Journal, Rank A),

Event organization (5)

1. 2015/07 : Poster co-chair of the Eurosys 2015 conference. (~ 300 persons)
2. 2014/12 : Treasurer and sponsorship co-chair of Middleware 2014 conference (~ 200 persons)
3. 2014/06 : Organization of the informal "Managed Runtimes" workshop at LIP6 (~ 30 persons)
4. 2011/05 : Workshop co-chair of the Notere 2011 conference (~ 50 persons)
5. 2007/03: Organization of the OSGi User Group French (OUGF) workshop (~ 20 persons)

II.6. PhD and HDR thesis committees (34)

- Reviewer (rapporteur) of 19 theses: Mohamad Jaafar Nehme (12/2017), Boris Teabe (10/2017), Clément Béra (09/2017), Bo Zhang (12/2016), Julien Pagès (12/2016), Fabien André (11/2016), Nassim Halli (10/2016), François Serman (09/2016), Etienne Brodu (06/2016), Thomas Calmant (10/2015), José Simão (03/2015), Joaquim Perchat (01/2015), Victor Lomüller (11/2014), Camillo Bruni (05/2014),

Yufang Dan (05/2014), François Goichon (12/2013), Quentin Sabah (12/2013), Konstantinos Kloudas (03/2013), Geoffroy Cogniaux (12/2012).

- Examiner (examinateur) of 15 theses: Mickaël Salaün (03/2018), Alain Tchana (HDR, 12/2017), Antoine Capra (12/2015), Inti Gonzalez Herrera (12/2015), Aurèle Maheo (09/2015), Marion Guthmuller (04/2015), Pierre Olivier (12/2014), Baptiste Lepers (01/2014), Sylvain Cotard (12/2013), Jean-Yves vet (11/2013, président), Preston Francisco Rodrigues (05/2013), Sarni Toufik (10/2012), Rémy Pottier (09/2012), Kiev Santos de Gama (10/2011), Christophe Deleray (10/2006).

III. SOFTWARE (3)

1. Leader and contributor of the VMKit project (LLVM Licence). VMKit is a toolkit to help developers and researchers to experiment with new ideas in managed runtime environments. Was integrated in the Linux Ubuntu distribution. Web site: <http://vmkit.llvm.org>. Around 50000 lines of code. Started in 2007, retired in 2014.
2. Leader and main contributor of the JnJVM project. JnJVM is an adaptable Java virtual machine written in Scheme. Web site: http://vvm.lip6.fr/projects_realizations/jnjvm/. Around 50000 lines of code. Started in 2002, retired in 2007.
3. Contributor of the CVM project. CVM (Component Virtual Machine) is a managed runtime environment specialized for executing and adapting components. Web site: http://vvm.lip6.fr/projects_realizations/cvm/. Around 70'000 lines of code. Started in 2004, retired in 2005.

IV. TEACHING

Since 2001, I have taught around 2600 hours. During the year 2011–2012, I did not teach as I had a CRCT (Congés pour Recherche ou Conversion Thématique), i.e., one year for research. Before my associate professor and professor positions, I taught 10 hours at Polytech'Grenoble in 2005 during my Postdoctoral position, 172 hours at UPMC in 2004 when I was assistant professor and 288 hours during my PhD when I was teaching assistant. I teach principally in the domains of systems, languages and software engineering. Between 2010 and 2014, I have been responsible for the middleware track in the System Masters of UPMC. Since 2016, I'm the coordinator of the computer science courses at Telecom SudParis (~40 courses). Each course is around 60 hours.

Course Conceptions or Reworking (9)

1. Initiation to the Java programming language (Telecom SudParis, 2017, Bachelor 3, around 200 students)
2. Multicore programming (University Paris-Saclay, 2016, Master 2, around 20 students)
3. System programming (University Paris-Saclay, 2016, Master 1, around 30 students)
4. Initiation to systems with bash (Telecom SudParis, 2015, Bachelor 3, around 200 students)
5. Initiation to managed runtime environments (UPMC, 2009, Bachelor 2, around 100 students)
6. Multicore Systems and Virtualization (UPMC, 2009, Master 2, around 20 students)
7. Multicore Systems (Polytech'Paris, 2009, Master 2, around 20 students)
8. Advanced system frameworks (UPMC, 2008, Master 2, around 40 students)
9. Component oriented middlewares (UPMC, 2007, Master 2, around 100 students)

Course Responsibilities (11)

1. 2017–today: Initiation to the Java programming language (Telecom SudParis, Bachelor 3, around 200 students)
2. 2016–today: Multicore programming (University Paris-Saclay, Master 2, around 20 students)
3. 2016–today: System programming (University Paris-Saclay, Master 1, around 30 students)
4. 2015–today: Initiation to systems with bash (Telecom SudParis, Bachelor 3, around 200 students)
5. 2009–2014: Multicore Systems and Virtualization (UPMC, Master 2, around 30 students)
6. 2013–2014: Initiation to operating system (UPMC, Bachelor 2, around 200 students)
7. 2010–2014: Research group in systems (UPMC, Master 2, around 30 students)
8. 2009–2010: Multicore Systems (Polytech'Paris, Master 2, around 20 students)
9. 2006–2010: Client/Server oriented Distributed Systems (UPMC, Master 1, around 70 students)

10. 2006–2010: Distributed systems and client/server (UPMC, Master 2, around 10 students)
11. 2006–2009: Component oriented middlewares (UPMC, Master 2, around 100 students)

Teaching summary

<i>Degree</i>	<i>Teaching unit name</i>	<i>Years</i>	<i>Hours</i>	<i>University</i>
Bachelors 1	Functionnal programming with Scheme	2001–2004	192	UPMC
Bachelors 1	Initiation to the C language	2012–2013	60	UPMC
Bachelors 2	Initiation to managed runtime environments	2009–2014	107	UPMC
Bachelors 2	Initiation to operating system	2012–2014	100	UPMC
Bachelors 2	Architecture of microprocessors	2012–2013	40	UPMC
Bachelors 3	Operating system principles	2004–2011	180	UPMC
Bachelors 3	Introduction to architectures and systems	2014–2015	33	Telecom SudParis
Bachelors 3	Initiation to the Java programming language	2015–2018	90	Telecom SudParis
Bachelors 3	Initiation to operating systems	2015–2018	104	Telecom SudParis
Masters 1	Operating system kernels	2002–2014	594	UPMC
Masters 1	Parallel programming	2004–2005	20	UPMC
Masters 1	System Projects	2004–2014	27	UPMC
Masters 1	Client/server oriented distributed systems	2006–2011	172	UPMC
Masters 1	Components	2007–2008	2	UPMC
Masters 1	Operating systems principle	2008–2010	16	Polytech'Paris
Masters 1	Object oriented programming	2014–2016	54	Telecom SudParis
Masters 1	Design and implementation of centralized systems	2014–2017	75	Telecom SudParis
Masters 1	System programming	2016–2018	90	Paris-Saclay
Masters 1	System programming	2016–2018	60	Telecom SudParis
Masters 2	Distributed applications and systems	2005–2006	10	Polytech'Grenoble
Masters 2	Distributed systems and client/server	2006–2010	112	UPMC
Masters 2	Component oriented middlewares	2006–2009	84	UPMC
Masters 2	Advanced system frameworks	2008–2014	62	UPMC
Masters 2	Multicore systems	2009–2011	40	Polytech'Paris
Masters 2	Multicore systems and virtualization	2009–2015	92	UPMC
Masters 2	Research group in system	2009–2014	116	UPMC
Masters 2	Cloud computing	2015–2018	9	Paris-Saclay
Masters 2	High performance systems	2015–2018	15	Telecom SudParis
Masters 2	Cloud computing	2015–2018	9	Paris-Saclay
Masters 2	Multicore programming	2016–2018	60	Paris-Saclay
Masters 2	Cloud infrastructure	2017–2018	6	Telecom SudParis

V. OTHER

Administrative Responsibilities (8)

1. 2016 – today: coordinator of the computer science courses at Telecom SudParis (~600 students, ~40 courses)
2. 2014 – 2016: Treasurer of the French chapter of the ACM SIGOPS (ASF)
3. 2013: Member of the associate professor selection committee 27MCF0105 à l'ENSEEIH
4. 2011 – 2014: Chair of the French chapter of the ACM SIGOPS (ASF)
5. 2011 – 2014: Elected member of the LIP6 laboratory board (conseil de laboratoire)
6. 2011 – 2014: Founding member of the organizing committee of the "colloquium d'informatique de l'UPMC Sorbonne Université"
7. 2010: Member of the associate professor selection committee 27MCF1356 for UJF
8. 2010: Member of the associate professor selection committee for INRIA/IFSIC

VI. PUBLICATIONS

For the ranking of venues, I use the current Australian Ranking of ICT Conferences (<http://www.core.edu.au/>) which ranks conferences and journals with A*, A, B and C. If the rank is not given, it means that the venue is not ranked. Since the ranking can change from one year to the other, I am using the ranking of the year in which the publication appeared. My 13 most significant publications are highlighted.

	Rank A*	Rank A	Rank B	Rank C
Ranked Publications	6	13	7	4

26 international conferences

- [1] Vasily A. Sartakov, Stefan Brenner, Sonia Ben Mokhtar, Sara Bouchenak, Gaël Thomas, and Rüdiger Kapitza. Eactors: Fast and flexible trusted computing using sgx. In *Proceedings of the International Conference on Middleware, Middleware'18*, page 12, Rennes, France, 2018. ACM. Accepted for publication, Rank A.
- [2] Maria Carpen-Amarie, Yaroslav Hayduk, Pascal Felber, Christof Fetzer, Gaël Thomas, and David Dice. Towards an efficient pauseless java gc with selective HTM-based access barriers. In *Proceedings of the international conference on Managed Languages and Runtimes (formerly PPPJ), ManLang'17*, page 7, Prague, Czech Republic, 2017. ACM. Rank C.
- [3] **Gauthier Voron, Gaël Thomas, Vivien Quéma, and Pierre Sens. An interface to implement NUMA policies in the xen hypervisor. In *Proceedings of the EuroSys European Conference on Computer Systems, EuroSys'17*, page 14, Belgrade, Serbia, 2017. ACM. Rank A.**
- [4] Maria Carpen-Amarie, Dave Dice, Gaël Thomas, and Pascal Felber. Transactional pointers: Experiences with htm-based reference counting in c++. In *Proceedings of the International Conference on Networked Systems, NETYS'16*, page 15, Marrakech, Morocco, 2016. Springer-Verlag.
- [5] Maria Carpen-Amarie, Dave Dice, Patrick Marlier, Gaël Thomas, and Pascal Felber. Evaluating htm for pauseless garbage collectors in java. In *Proceedings of the International Symposium on Parallel and Distributed Processing with Applications, ISPA'15*, page 8, Helsinki, Finland, 2015. Rank B.
- [6] Pei Li, Elisabeth Brunet, François Trahay, Christian Parrot, Gaël Thomas, and Raymond Namyst. Automatic OpenCL code generation for multi-device heterogeneous architectures. In *Proceedings of the International Conference on Parallel Processing, ICPP'15*, page 10, Beijing, China, 2015. Rank A.
- [7] **Koutheir Attouchi, Gaël Thomas, Gilles Muller, Julia Lawall, and André Bottaro. Incinerator - eliminating stale references in dynamic OSGi applications. In *Proceedings of the international conference on Dependable Systems and Networks, DSN'15*, page 11, Rio de Janeiro, Brazil, 2015. IEEE Computer Society. Rank A.**
- [8] **Lokesh Gidra, Gaël Thomas, Julien Sopena, Marc Shapiro, and Nhan Nguyen. NumaGiC: a garbage collector for big data on big NUMA machines. In *Proceedings of the conference on Architectural Support for Programming Languages and Operating Systems, ASPLOS'15*, page 14, Istanbul, Turkey, 2015. ACM. Rank A*.**
- [9] Koutheir Attouchi, Gaël Thomas, André Bottaro, and Gilles Muller. Memory monitoring on a multi-tenant OSGi execution environment. In *Proceedings of the international symposium on Component-Based Software Engineering, CBSE'14*, pages 107–116, Lille, France, 2014. ACM. Rank B.
- [10] **Florian David, Gaël Thomas, Julia Lawall, and Gilles Muller. Continuously measuring critical section pressure with the Free-Lunch profiler. In *Proceedings of the conference on Object Oriented Programming Systems Languages and Applications, OOPSLA'14*, page 14, Portland, Oregon, US, 2014. ACM. Rank A*.**
- [11] **Lokesh Gidra, Gaël Thomas, Julien Sopena, and Marc Shapiro. A study of the scalability of stop-the-world garbage collectors on multicores. In *Proceedings of the conference on Architectural Support for Programming Languages and Operating Systems, ASPLOS'13*, pages 229–240, Houston, Texas, USA, 2013. ACM. Rank A*.**

- [12] Yérom-David Bromberg, Morandat Floréal, Réveillère Laurent, and Gaël Thomas. EZ: towards efficient asynchronous protocol gateway construction. In *Proceedings of the conference on Distributed Applications and Interoperable Systems, DAIS'13*, pages 169–174, Florence, Italy, 2013. Springer-Verlag. Short paper, Rank B.
- [13] **Suman Saha, Jean-Pierre Lozi, Gaël Thomas, Julia Lawall, and Gilles Muller. Hector: Detecting resource-release omission faults in error-handling code for systems software. In *Proceedings of the international conference on Dependable Systems and Networks, DSN'13*, page 12, Budapest, Hungary, 2013. IEEE Computer Society. Best paper award, Rank A.**
- [14] Thomas Preud'homme, Julien Sopena, Gaël Thomas, and Bertil Folliot. An improvement of OpenMP pipeline parallelism with the BatchQueue algorithm. In *Proceedings of the International Conference on Parallel and Distributed Systems, ICPADS'12*, page 8, Singapore, 2012. IEEE Computer Society. Rank B.
- [15] **Jean-Pierre Lozi, Florian David, Gaël Thomas, Julia Lawall, and Gilles Muller. Remote core locking: migrating critical-section execution to improve the performance of multithreaded applications. In *Proceedings of the Usenix Annual Technical Conference, USENIX ATC'12*, pages 65–76, Boston, MA, USA, 2012. USENIX Association. Rank A.**
- [16] **Nicolas Palix, Gaël Thomas, Suman Saha, Christophe Calvès, Julia Lawall, and Gilles Muller. Faults in linux: ten years later. In *Proceedings of the conference on Architectural Support for Programming Languages and Operating Systems, ASPLOS'11*, pages 305–318, Newport Beach, CA, USA, 2011. ACM. Rank A*.**
- [17] **Sergey Legtchenko, Sébastien Monnet, and Gaël Thomas. Blue banana: resilience to avatar mobility in distributed MMOGs. In *Proceedings of the international conference on Dependable Systems and Networks, DSN'10*, pages 171–180, Chicago, IL, USA, 2010. IEEE Computer Society. Rank A.**
- [18] Luciana Arantes, Pierre Sens, Gaël Thomas, Denis Conan, and Leon Lim. Partition participant detector with dynamic paths in mobile networks. In *Proceedings of the international symposium on Network Computing and Applications, NCA'10*, pages 224–228, Cambridge, MA, USA, 2010. IEEE Computer Society. Short paper, Rank A.
- [19] Thomas Preud'Homme, Julien Sopena, Gaël Thomas, and Bertil Folliot. BatchQueue: fast and memory-thrifty core to core communication. In *Proceedings of the international Symposium on Computer Architecture and High Performance Computing, SBAC-PAD'10*, pages 215–222, Petrópolis, Brazil, 2010. IEEE Computer Society. Rank B.
- [20] **Nicolas Geoffray, Gaël Thomas, Julia Lawall, Gilles Muller, and Bertil Folliot. VMKit: a substrate for managed runtime environments. In *Proceedings of the international conference on Virtual Execution Environments, VEE'10*, pages 51–62, Pittsburgh, PA, USA, 2010. ACM. Rank A.**
- [21] **Nicolas Geoffray, Gaël Thomas, Gilles Muller, Pierre Parrend, Stéphane Frénot, and Bertil Folliot. I-JVM: a java virtual machine for component isolation in OSGi. In *Proceedings of the international conference on Dependable Systems and Networks, DSN'09*, pages 544–553, Estoril, Portugal, 2009. IEEE Computer Society. Rank A.**
- [22] Nicolas Geoffray, Gaël Thomas, Charles Clément, and Bertil Folliot. A lazy developer approach: building a JVM with third party software. In *Proceedings of the international symposium on Principles and Practice of Programming in Java, PPPJ'08*, pages 73–82, Modena, Italy, 2008. ACM. Rank C.
- [23] Colombe Herault, Gaël Thomas, and Philippe Lalanda. A distributed service-oriented mediation tool. In *Proceedings of the international Conference on Services Computing, SCC'07*, pages 403–409, Salt Lake City, UT, USA, 2007. IEEE Computer Society. Rank A.
- [24] Nicolas Geoffray, Gaël Thomas, and Bertil Folliot. Transparent and dynamic code offloading for java application. In *Proceedings of the international conference on Distributed Objects and Applications, DOA'06*, pages 1790–1806, Montpellier, France, 2006. LNCS.

- [25] Assia Hachichi, Gaël Thomas, Cyril Martin, Simon Patarin, and Bertil Folliot. A generic language for dynamic adaptation. In *Proceedings of the European conference on Parallel processing, EuroPar'05*, pages 40–49, Lisboa, Portugal, 2005. LNCS. Rank A.
- [26] Frédéric Ogel, Gaël Thomas, and Bertil Folliot. Support efficient dynamic aspects through reflection and dynamic compilation. In *Proceedings of the Symposium on Applied Computing, SAC'05*, pages 1351–1356, Santa Fe, NM, USA, 2005. ACM. Rank B.

3 international journals

- [27] **Jean-Pierre Lozi, Florian David, Gaël Thomas, Julia Lawall, and Gilles Muller. Fast and portable locking for multicore architectures. *ACM Transactions on Computer Systems (TOCS)*, 33(4):13:1–13:62, January 2016. Rank A*.**
- [28] **Nicolas Palix, Gaël Thomas, Suman Saha, Christophe Calvès, Gilles Muller, and Julia Lawall. Faults in linux 2.6. *ACM Transactions on Computer Systems (TOCS)*, 32(2):4:1–4:40, 2014. Rank A*.**
- [29] Gaël Thomas, Nicolas Geoffray, Charles Clément, and Bertil Folliot. Designing highly flexible virtual machines: the JnJVM experience. *Software - Practice & Experience (SP&E)*, 38(15):1643–1675, 2008. Rank A.

8 international workshops

- [30] Maria Carpen-Amarie, Patrick Marlier, Pascal Felber, and Gaël Thomas. A performance study of java garbage collectors on multicore architectures. In *Proceedings of the International Workshop on Programming Models and Applications for Multicores and Manycores, PMAM'15*, page 10, San Francisco Bay Area, USA, 2015. ACM.
- [31] Lokesh Gidra, Gaël Thomas, Julien Sopena, and Marc Shapiro. Assessing the scalability of garbage collectors on many cores. In *Proceedings of the SOSP Workshop on Programming Languages and Operating Systems, PLOS'11*, pages 1–5, Cascais, Portugal, 2011. ACM. **Best paper award**, Rank B.
- [32] Nicolas Palix, Julia Lawall, Gaël Thomas, and Gilles Muller. How often do experts make mistakes? In *Proceedings of the workshop on Aspects, Components, and Patterns for Infrastructure Software, ACP4IS'10*, pages 9–16, Rennes and Saint Malo, France, 2010. Rank C.
- [33] Nicolas Geoffray, Gaël Thomas, Charles Clément, and Bertil Folliot. Towards a new isolation abstraction for OSGi. In *Proceedings of the workshop on Isolation and Integration in Embedded Systems, IIES'08*, pages 41–45, Glasgow, Scotland, UK, 2008.
- [34] Nicolas Geoffray, Gaël Thomas, and Bertil Folliot. Live and heterogeneous migration of execution environments. In *Proceedings of the international workshop on Pervasive Systems, PerSys'06*, pages 1254–1263, Montpellier, France, 2006.
- [35] Colombe Hérault, Gaël Thomas, and Philippe Lalanda. Mediation and enterprise service bus – a position paper. In *Proceedings of the international workshop on Mediation in Semantic Web Services, Mediate'05*, pages 1–13, Amsterdam, Netherlands, 2005.
- [36] Frédéric Ogel, Bertil Folliot, and Gaël Thomas. A step toward ubiquitous computing: an efficient flexible micro-ORB. In *Proceedings of the 2004 ACM SIGOPS European Workshop*, pages 176–181, Leuven, Belgium, 2004. ACM. Rank C.
- [37] Frédéric Ogel, Gaël Thomas, Bertil Folliot, and Ian Piumarta. Application-level concurrency management. In *Proceedings of the NATO workshop on Concurrent Information Processing and Computing, CIPC'03*, pages 1–13, Sinaia, Romania, 2003.

13 french journals, conferences and workshops

- [38] Alexis Lescouet, Nicolas Derumigny, and Gaël Thomas. Scalevisor : un pilote CPU et mémoire pour les gros multicœurs. In *Proceedings of the Conférence en Parallélisme, Architecture et Système, COMPAS'18*, page 7, Toulouse, France, 2018.
- [39] Mohamed Said Mosli Bouksiaa, François Trahay, and Gaël Thomas. Détection automatique d'interférences entre threads. In *Proceedings of the Conférence en Parallélisme, Architecture et Système, COMPAS'16*, page 7, Lorient, France, 2016.
- [40] Mohamed Said Mosli Bouksiaa, François Trahay, and Gaël Thomas. Détection automatique d'anomalies de performance. In *Proceedings of the Conférence en Parallélisme, Architecture et Système, COMPAS'15*, page 10, Lille, France, 2015.
- [41] Gauthier Voron, Gaël Thomas, Pierre Sens, and Vivien Quema. Optimisation mémoire dans une architecture NUMA : comparaison des gains entre natif et virtualisé. In *Proceedings of the Conférence en Parallélisme, Architecture et Système, COMPAS'15*, page 10, Lille, France, 2015. **Best paper award**,
- [42] Thomas Preud'Homme, Julien Sopena, Gaël Thomas, and Bertil Folliot. BatchQueue : file producteur / consommateur optimisée pour les multi-coeurs. In *Proceedings of the Conférence Française en Systèmes d'Exploitation, CFSE'11*, pages 1–12, Saint-Malo, France, 2011.
- [43] Nicolas Geoffray, Gaël Thomas, Gilles Muller, Pierre Parrend, Stéphane Frénot, and Bertil Folliot. I-JVM: une machine virtuelle java pour l'isolation de composants dans OSGi. In *Proceedings of the Conférence Française en Systèmes d'Exploitation, CFSE'09*, pages 1–12, Toulouse, France, 2009.
- [44] Nicolas Geoffray, Gaël Thomas, and Bertil Folliot. Distribution transparente et dynamique de code pour applications java. In *Proceedings of the Conférence Française en Systèmes d'Exploitation, CFSE'06*, pages 85–96, Perpignan, France, 2006.
- [45] Didier Donsez and Gaël Thomas. Propagation d'événements entre passerelles OSGi. In *Proceedings of the 2006 Atelier de travail OSGi*, pages 1–5, Paris, France, 2006.
- [46] Frédéric Ogel, Gaël Thomas, Antoine Galland, and Bertil Folliot. MVV : une plate-forme à composants dynamiquement reconfigurables – la machine virtuelle virtuelle. *Technique et Science Informatiques (TSI)*, 23(10/2004):1269–1299, 2004.
- [47] Assia Hachichi, Cyril Martin, Gaël Thomas, Simon Patarin, and Bertil Folliot. Reconfigurations dynamiques de services dans un intergiciel à composants CORBA CCM. In *Proceedings of the conférence francophone sur le Déploiement et la (Re)configuration de logiciels, DECOR'04*, pages 159–170, Grenoble, France, 2004.
- [48] Gaël Thomas, Bertil Folliot, and Frédéric Ogel. Jnvm : une plateforme java adaptable pour applications actives. In *Proceedings of the Conférence Française en Systèmes d'Exploitation, CFSE'03*, pages 1–12, La Colle sur Loup, France, 2003.
- [49] Gaël Thomas, Bertil Folliot, and Ian Piumarta. Les documents actifs basés sur une machine virtuelle. In *Proceedings of the 2002 Atelier journées des Jeunes Chercheurs en Systèmes, chapitre français de l'ACM-SIGOPS*, pages 441–447, Hammamet, Tunisie, 2002.
- [50] Bertil Folliot and Gaël Thomas. Protocole de membership hautement extensible : conception est expérimentations. In *Proceedings of the Conférence Française en Systèmes d'Exploitation, CFSE'01*, pages 25–36, 2001.

5 others

- [51] Lokesh Gidra, Gaël Thomas, Julien Sopena, and Marc Shapiro. Assessing the scalability of garbage collectors on many cores. *Best papers from PLOS '11, ACM SIGOPS Operating System Review (OSR)*, 45(3):15–19, 2011.

- [52] Jean-Pierre Lozi, Gaël Thomas, Julia Lawall, and Gilles Muller. Remote core locking (RCL): migration of critical section execution to improve performance. Poster at the EuroSys European Conference on Computer Systems, EuroSys '11, 2011.
- [53] Jean-Pierre Lozi, Gaël Thomas, Julia Lawall, and Gilles Muller. Remote core locking: Migrating critical section execution to improve the performance of multithreaded applications. Work in progress at the Symposium on Operating Systems Principles, SOSP '11, 2011.
- [54] Nicolas Geoffray, Gaël Thomas, Charles Clément, Bertil Folliot, and Gilles Muller. VMKit: a substrate for virtual machines. Poster at the conference on Architectural Support for Programming Languages and Operating Systems, ASPLOS '09, 2009.
- [55] Gaël Thomas, Frédéric Ogel, Antoine Galland, Bertil Folliot, and Ian Piumarta. Building a flexible java runtime upon a flexible compiler. *Special Issue on 'System & Networking for Smart Objects' of IASTED International Journal on Computers and Applications*, 27:28–47, 2005.

5 book chapters

- [56] Olivier Marin, Sébastien Monnet, and Gaël Thomas. Peer-to-peer storage. In Serge Haddad, Fabrice Kordon, Laurent Pautet, and Laure Petrucci, editors, *Distributed Systems: Design and Algorithms*, pages 59–80. John Wiley & Sons, Ltd., 2011.
- [57] Sébastien Monnet and Gaël Thomas. Large-scale peer-to-peer game applications. In Serge Haddad, Fabrice Kordon, Laurent Pautet, and Laure Petrucci, editors, *Distributed Systems: Design and Algorithms*, pages 81–103. John Wiley & Sons, Ltd., 2011.
- [58] Bertil Folliot and Gaël Thomas. Virtualisation logicielle : de la machine réelle à la machine virtuelle abstraite. In *Techniques de l'Ingénieur*, pages 1–15. Hermes, 2009.
- [59] Emmanuel Saint-James and Gaël Thomas. Applications pair-à-pair de partage de données. In F. Kordon, L. Pautet, and L. Petrucci, editors, *Systèmes répartis en action : de l'embarqué aux systèmes à large échelle*, pages 223–256. Hermes, 2008.
- [60] Frédéric Ogel, Gaël Thomas, Ian Piumarta, Antoine Galland, Bertil Folliot, and Carine Baillarguet. Towards active applications: the virtual virtual machine approach. In Mitica Craus, Dan Gâlea, and Alexandru Valachi, editors, *New Trends in Computer Science and Engineering*, pages 1–21. A92 Publishing House, polirom press edition, 2003.

2 thesis

- [61] Gaël Thomas. *Improving the design and the performance of managed runtime environments*. PhD thesis, UPMC Sorbonne Université, Paris, France, 2012.
- [62] Gaël Thomas. *Applications actives : construction dynamique d'environnements d'exécution flexibles homogène*. PhD thesis, Université Pierre et Marie Curie, Paris, France, 2005.