

ROMAIN JULIAN DEMANGEON

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Employment

09/2013 - current Maître de Conférences (Lecturer) at Université Pierre et Marie Curie (Paris 6)
03/2013 - 08/2013 Research Associate with Nobuko Yoshida at Imperial College
11/2010 - 02/2013 Research Assistant with Kohei Honda at Queen Mary, University of London
09/2007 - 10/2010 Teaching Assistant, ENS Lyon and Université Claude Bernard Lyon 1
09/2003 - 08/2007 *Elève Normalien* at ENS Lyon

Education

2007-2010 *Termination of concurrent systems* (defended 22/11/2010)
Phd thesis at *Laboratoire d'Informatique du Parallelisme*, ENS Lyon, with Daniel Hirschhoff and *Department of Computer Science* at Bologna University with Davide Sangiorgi
2004-2007 *Master degree* in Fundamental Computer Science of ENS Lyon with honours (*Mention Très Bien*)
2005-2006 *Agrégation de Mathématiques Option Informatique*
(french competitive exam granting first-class teaching position in Mathematics and Computer Science)
2003-2004 *Licence* in Fundamental Computer Science of ENS Lyon with honours (*Mention Très Bien*)
2003 Admitted at *Ecole Normale Supérieure de Lyon* (competitive examination).
2001-2003 Studied Mathematics and Physics in *Classes préparatoires* at *Lycée Henri Poincaré de Nancy*
2001 Scientific french *Baccalauréat*, with honours (*Mentions Très Bien, Section Européenne Allemand*)

Teaching

2013-current Lecturer at UPMC:
Recursive programming, Algorithm, Parallel Computing, Typability and Web Services.
2010-2012 Occasional teachings at Queen Mary, University of London:
Class Diagrams.
2007-2010 Teaching assistant at ENS Lyon and UCBL:
Functional programming, Semantics, Logics, Computability, Data structures.
2008 Supervision of the training period of an undergraduate student:
Development of an hybrid analyser for termination of π -processes
2006-2008 Computer science labs for students in *Classe Préparatoires*.

Internships

2007 6 months Research Internship at ENS Lyon with Daniel Hirschhoff
2005 8 weeks Research Internship at Uppsala Universitet with Paul Petersson
2004 6 weeks Research Internship at LORIA with Claude Kirchner.

Scholarships

2007-2010 PhD funding with teaching duties (*allocation couplée*) by ENS Lyon
2003-2007 Funded for higher education toward research by the French State and ENS Lyon.

Research Interests

I am interested in helping to design robust and secure distributed programs, applications and protocols by building efficient static analyses on faithful abstracted models of concurrent programming, guaranteeing a wide array of properties (termination, progress, non-interference, soundness).

Keywords: distributed systems, concurrency, mobile processes, formal methods, static analysis, type systems, session types, programming theory.

Presentations at international events

CONCUR'12, PLACES'12, CONCUR'11, DCW'11, FSEN'11, CONCUR'10, LAC-GEOCAL'10, TICS'10, WST'09, FSEN'09, NWPT'08, IFIP-TCS'08, TGC'07

Collaboration

Since 2009, I work with the Ocean Observatories Initiative, an international oceanography project, developing verification analyses for large, asynchronous, heterogenous networks through the design of a specification language for protocols, *Scribble*.

Publications

- [1] Laura Bocchi, Tzu-Chun Chen, Romain Demangeon, Kohei Honda, and Nobuko Yoshida. Monitoring networks through multiparty session types. In *FMOODS/FORTE (to appear)*, 2013.
- [2] Laura Bocchi, Romain Demangeon, and Nobuko Yoshida. A multiparty multisession logic. In *TGC (to appear)*, 2012.
- [3] Romain Demangeon, Daniel Hirschhoff, Naoki Kobayashi, and Davide Sangiorgi. On the complexity of termination inference for processes. In Gilles Barthe and Cédric Fournet, editors, *TGC*, volume 4912 of *Lecture Notes in Computer Science*, pages 140–155. Springer, 2007.
- [4] Romain Demangeon, Daniel Hirschhoff, and Davide Sangiorgi. Static and dynamic typing for the termination of mobile processes. In Giorgio Ausiello, Juhani Karhumäki, Giancarlo Mauri, and C.-H. Luke Ong, editors, *IFIP TCS*, volume 273 of *IFIP*, pages 413–427. Springer, 2008.
- [5] Romain Demangeon, Daniel Hirschhoff, and Davide Sangiorgi. Mobile processes and termination. In Jens Palsberg, editor, *Semantics and Algebraic Specification*, volume 5700 of *Lecture Notes in Computer Science*, pages 250–273. Springer, 2009.
- [6] Romain Demangeon, Daniel Hirschhoff, and Davide Sangiorgi. Termination in higher-order concurrent calculi. In Farhad Arbab and Marjan Sirjani, editors, *FSEN*, volume 5961 of *Lecture Notes in Computer Science*, pages 81–96. Springer, 2009.
- [7] Romain Demangeon, Daniel Hirschhoff, and Davide Sangiorgi. Termination in higher-order concurrent calculi. *J. Log. Algebr. Program.*, 79(7):550–577, 2010.
- [8] Romain Demangeon, Daniel Hirschhoff, and Davide Sangiorgi. Termination in impure concurrent languages. In Paul Gastin and François Laroussinie, editors, *CONCUR*, volume 6269 of *Lecture Notes in Computer Science*, pages 328–342. Springer, 2010.
- [9] Romain Demangeon, Daniel Hirschhoff, and Davide Sangiorgi. Strong normalisation in π -calculi with references. In Farhad Arbab and Marjan Sirjani, editors, *FSEN*, volume 7141 of *Lecture Notes in Computer Science*, pages 128–142. Springer, 2011.
- [10] Romain Demangeon and Kohei Honda. Full abstraction in a subtyped π -calculus with linear types. In Joost-Pieter Katoen and Barbara König, editors, *CONCUR*, volume 6901 of *Lecture Notes in Computer Science*, pages 280–296. Springer, 2011.
- [11] Romain Demangeon and Kohei Honda. Nested protocols in session types. In Maciej Koutny and Irek Ulidowski, editors, *CONCUR*, volume 7454 of *Lecture Notes in Computer Science*, pages 272–286. Springer, 2012.