Pierre-Alain Reynier

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French Citizenship
Birth date : April 29, 1980

Education

2004– : PhD Student in Computer Science in LSV (ENS Cachan) under the supervision of Patricia Bouyer and François Laroussinie : "Verification of timed systems : models, algorithms and implementability of timed automata". Defense planned on 21 June 2007.

2003–2004 : "DEA" in Computer Science (Master 2) with distinction TB (ranked 2/35).

2002–2003 : "Agrégation" in Mathematics (ranked 47/330).

2001–2002 : "Maîtrise" in Computer Science (Master 1) with distinction TB.
: "Maîtrise" in Mathematics (Master 1) with distinction TB.

2001–2005 : Admission and scholarship at "École Normale Supérieure de Cachan".

Research interests

My research works fall into the framework of the application of formal methods to software validation. More precisely, I am interested in the definition and the study of distributed and timed models, from their expressiveness to the development of dedicated model checking algorithms.

Projects I am/was involved in

- Participation to the ACI CORTOS (program of the French ministry of research) on control of timed systems, 2003–2006 (web site : http://www.lsv.ens-cachan.fr/aci-cortos/)
- Participation to the ANR DOTS (program of the French ministry of research) on distributed, open and timed systems, 2007–2010.

Stay in foreign countries

- One stay of two weeks at Aalborg University (BRICS & CISS, Denmark) in October 2005 for a collaboration on UppAal with Kim Larsen.

Implication in Research

- Reviewer for several international conferences (TACAS'05, FORMATS'05, CONCUR'06, FORMATS'06, TACAS'07).
- Participation to the organization of an international conference (FORMATS'06).

Teaching

I hold a position of Teaching Assistant in the department of Computer Science at "École Normale Supérieure de Cachan" between 2005 and 2007.

2006–2007 : Computability in L3 (ENS Cachan).
: Project of Programmation (C) in M1 (ENS Cachan).

2005–2006 : Language Theory in L3 (ENS Cachan).
: Project of Programmation (Java) in L3 (ENS Cachan).

2004–2005 : Computer Science in Lycée Lakanal (Sceaux) : initiation to Maple, programmation and applications to mathematics.
: Interrogations in Mathematics in Lycée Lakanal (Sceaux).

2003–2004 : Computer Science in Lycée Lakanal (Sceaux) : initiation to Maple, programmation and applications to mathematics.

Participation to international schools

- 7th School on Modeling and Verifying parallel Processes MOVEP'06, Bordeaux, France, June 2006.
- ARTIST2 Summer School on Component & Modelling, Testing & Verification, and Statical Analysis of Embedded Systems, Nässlingen, Sweden, Septembre - October 2005.
- 6th School on Modeling and Verifying parallel Processes MOVEP'04, Bruxelles, Belgium, December 2004.
- 32nd Spring School in Theoretical Computer Science, Marseille, France, April 2004.

Presentations and invited talks

International conferences :
- ATVA'06, Beijing, ROC, October 2006.
- ICALP'06, Venice, Italy, July 2006.
- FORMATS'05, Uppsala, Sweden, September 2005.
- MOVEP'04, Bruxelles, Belgium, December 2004.

Invited talks :
- Invited talk at LaBRI, Bordeaux, France, March 2007.
- Invited talk at ULB, Bruxelles, Belgium, December 2006.
- Invited talk « 68NQRT » at Irisa, Rennes, France, November 2006.
- Meeting of ACI Persée, Cortos and Versydis, Cachan, France, March 2006.
- Invited talk at LACL, Créteil, France, January 2005.

Misc

Administrative responsibilities
- Member of the organization committee of "RED 2006" (Meeting for PhD students of ENS Cachan).
- President of "Solidarité Normalienne" in 2001-2002, student association for sustainable development (`http://www.sono.ens-cachan.fr/`).

Foreign languages : english and german read and spoken fluently.

Publications

My publications can be downloaded from the following webpage :
`http://www.lsv.ens-cachan.fr/~reynier/mes_publis.php`

International conferences

[BHR06c] Patricia Bouyer, Serge Haddad, and Pierre-Alain Reynier. Timed unfoldings for networks of timed automata. In *Proc. 4th Int. Symp. on Automated Technology for Verification and Analysis (ATVA'06)*, vol. 4218 of *LNCS*, pages 292–306. Springer.

[BHR06b] Patricia Bouyer, Serge Haddad, and Pierre-Alain Reynier. Timed Petri nets and timed automata : On the discriminating power of Zeno sequences. In *Proc. 33rd Int. Coll. on Automata, Languages and Programming (ICALP'06) — Part II*, vol. 4052 of *LNCS*, pages 420–431. Springer.

[BHR06a] Patricia Bouyer, Serge Haddad, and Pierre-Alain Reynier. Extended timed automata and time Petri nets. In *Proc. 6th Int. Conf. on Application of Concurrency to System Design (ACSD'06)*, pages 91–100. IEEE Computer Society Press.

[BMR06] Patricia Bouyer, Nicolas Markey, and Pierre-Alain Reynier. Robust model-checking of linear-time properties in timed automata. In *Proc. 7th Latin American Symposium on Theoretical Informatics (LATIN'06)*, vol. 3887 of *LNCS*, pages 238–249. Springer.

[BLR05] Patricia Bouyer, François Laroussinie, and Pierre-Alain Reynier. Diagonal constraints in timed automata : Forward analysis of timed systems. In *Proc. 3rd Int. Conf. on Formal Modelling and Analysis of Timed Systems (FORMATS'05)*, vol. 3829 of *LNCS*, pages 112–126. Springer.

Invited paper

[AMRT05] Karine Altisen, Nicolas Markey, Pierre-Alain Reynier, and Stavros Tripakis. Implémentabilité des automates temporisés. In *Actes du 5ème Colloque sur la Modélisation des Systèmes Réactifs (MSR'05)*, pages 395–406. Hermès.

Other publications

[Rey07] Pierre-Alain Reynier. Diagonal Constraints handled efficiently in UppAal. Research Report LSV-07-02. 4 pages. 2007.

[Rey04b] Pierre-Alain Reynier. Forward Analysis of Timed Automata. In *Proc. 5th Winter School on Modelling and Verifying Parallel Processes (MOVEP'04)*, pages 52–57.

[Rey04a] Pierre-Alain Reynier. Analyse en avant des automates temporisés. Master's Thesis, DEA Algorithmique, Paris. 68 pages.

Submissions

[BHR07b] Patricia Bouyer, Serge Haddad, and Pierre-Alain Reynier. Undecidability Results for Timed Automata with Silent Transitions. 22 pages. Submitted for publication in Fundamenta Informaticae.

[BHR07a] Patricia Bouyer, Serge Haddad, and Pierre-Alain Reynier. Timed Petri nets and timed automata : On the discriminating power of Zeno sequences. 44 pages. Under revision for publication in Information and Computation.