

## Louis LATOUR



*Date of Birth* 12 March 1973  
*Nationality* Belgian  
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### EDUCATION

- 2000- present *Université de Liège, BELGIUM*  
Doctorat en Sciences Appliquées (PhD in applied sciences)  
Title: *Presburger arithmetic: from automata to formulas.*  
Supervisors: B. Boigelot and P. Wolper  
Expected in September 2005.
- 1998-2000 *Université de Liège, BELGIUM*  
Diplôme d'étude complémentaire en Informatique  
(Postgraduate degree in Computer Sciences, ~ MSc)  
Plus Grande Distinction (Highest Honors)  
Thesis: Created a computer front-end for the LASH tool, enabling state space exploration of systems described with IF formalism.
- 1997-1998 *Cranfield University, ENGLAND*  
MSc Engineering and Management of Manufacturing Sciences  
Thesis: Compared for Ford Motor Company different methods to simulate tasks on an assembly line via computer
- 1996-1997 *Solvay Business School, Université Libre de Bruxelles, BELGIUM*  
MBA, general management with multicultural teamwork experience  
High Honors. (GMAT score : 700)
- 1991-1996 *Université de Liège, BELGIUM*  
Diplôme d'ingénieur civil électricien et mécanicien  
(degree in Electromechanical Engineering)  
Grande Distinction (High Honors)  
Thesis: Devised and implemented a control system for a test bed specific to the measurement of torque and power of vehicles.

### COMPUTER SKILLS

Most codes written in C, but also familiar with Java, php/SQL, HTML, Scheme, . . . .

### LANGUAGES

French (mother tongue) , English (fluent), Flemish (good).

## WORK EXPERIENCE

1998 - present *Université de Liège, BELGIUM*

Research Engineer/Teaching Assistant (Verification and Databases group)

\* Lecturing practical part of courses (file systems, databases, computability, parallel systems), preparing and correcting assignments.

\* Developed several front-ends in the Liège Automata-based Symbolic Handler (LASH) toolset: the state space exploration front-end *siflash*, the Presburger arithmetic solver *presburger* and a visualization interface *NDDviewer*.

LASH is available at <http://www.montefiore.ulg.ac.be/boigelot/research/lash/>

\* Developed and implemented algorithms for generating quantifier-free Presburger formula of sets represented by automata (see publications).

\* Participated in two European projects aiming at developing new tools and methods in formal verification. Activities involve modeling complex communication protocols in IF and using LASH to analyze the models.

1993 - 1996 *Université de Liège, Belgium*

Student-assistant for the course on Graphical Communication

\* Helped students in practical exercises by conveying complex info in an understandable way.

\* Evaluated their work.

## PUBLICATIONS

- L. Latour *Computing affine hulls over  $\mathbb{Q}$  and  $\mathbb{Z}$  from sets represented by Number Decision Diagrams*, submitted to Conference on Implementations and Applications of Automata (CIAA), 2005.
- L. Latour *Automatic synthesis of formulas from Number Decision Diagrams representing the positive integer elements of convex polyhedra*, submitted to Logical Methods in Computer Science, 2004.
- L. Latour, *From Automata to Formulas: Convex Integer Polyhedra in  $\mathbb{Z}^n$* , Dixièmes Journées Montoises d'Informatique Théorique, Actes de la conférence, 2004, pages 260-281.
- L. Latour, *From Automata to Formulas: Convex Integer Polyhedra*. In Proc. of the 19th IEEE symposium on Logic in Computer Science LICS04, 2004, pages 120-129.
- B. Boigelot, L. Latour, *Counting the Solutions of Presburger Equations without Enumerating Them*. In Implementation and Application of Automata - Edited by B.W. Watson and D. Wood, Theoretical Computer Science, Volume 313, Issue 1, 16 February 2004, pages 17-29.
- B. Boigelot, L. Latour, *Counting the Solutions of Presburger Equations without Enumerating Them*. Proc. International Conference on Implementations and Applications of Automata (CIAA2001), Lecture Notes in Computer Science, LNCS2494, Pretoria, July 2001, Springer-Verlag, pages 40-51.
- L. Latour, *Development of a compiling front-end to the LASH-tool*, unpublished, Master Thesis, Université de Liège, 2000.

## OTHER ACTIVITIES

- Current hobbies include reading (mostly on geopolitics and sciences in general), swimming, gardening, and dancing.
- Former hobbies include scouting (member during 8 years, then cub scout leader during 6 years, first as assistant and then as principal, i.e., Akela, for the two last years), football (member of a regional team during 10 years), student activities (member of a student organization during 4 years, elected president the last year)