Ioana Paşca

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Current Situation

PhD Candidate, Computer Science   from October 2007
INRIA Sophia Antipolis   France
Topic: Formal Verification for Numerical Methods

My PhD advisor is Yves Bertot and my work is carried out in the Marelle team. My PhD is funded by the French Government. I am also part of the Mathematical Components project of the joint center INRIA - Microsoft Research.

Education

Master's Degree, Computer Science   February 2009
West University of Timişoara   Romania

Master's Degree, Computer Science   June 2007
University of Nice Sophia Antipolis   France
Programming: Models, Languages, Techniques

Bachelor Degree, Mathematics and Computer Science   July 2006
West University of Timişoara   Romania

Research Intersts

formal verification, proof assistants, type theory, formalization of mathematical theories, verification of computations and numerical methods

Publications

[1] Ioana Pasca. *Formally Verified Conditions for Regularity of Interval Matrices.* Submitted at Calculemus, 2010. Available at: `http://hal.inria.fr/inria-00464937/en/`

[2] Ioana Pasca. *Formal Proofs for Theoretical Properties of Newton's Method.* INRIA Research Report RR-7228, 2010.

[3] Nicolas Julien and Ioana Pasca. *Formal Verification of Exact Computations Using Newton's Method.* In Theorem Proving in Higher Order Logics (TPHOLs), 22nd International Conference, volume 5674 of LNCS, pages 408-423, Springer, 2009.

[4] Yves Bertot, Georges Gonthier, Sidi Ould Biha and Ioana Pasca. *Canonical Big Operators.* In Theorem Proving in Higher Order Logics (TPHOLs), 21st International Conference, volume 5170 of LNCS, pages 86-101, Springer, 2008.

[5] Ioana Pasca. *Formal Verification of Kantorovitch's Theorem.* In Journées Francophones des Langages Applicatifs (JFLA), January 2008.

Talks

Rencontres Arithmétique de l'Informatique Mathématique	October 2009
Vérification formelle et arithmétique réelle exacte	Lyon, France
Theorem Proving in Higher Order Logics	August 2009
Formal Verification of Exact Computations Using Newton's Method	Munich, Germany
Types Meeting	May 2009
Exact Computations with Newton's method in Coq	Aussois, France
Theorem Proving in Higher Order Logics	August 2008
Canonical Big Operators	Montreal, Canada
Mathlogaps Workshop	July 2008
Formal Proofs in Coq: Kantorovitch's Theorem	Manchester, United Kingdom
Ecole de Jeunes Chercheurs en Programmation	May 2008
Le processus de Newton dans Coq	Rennes, France
Journées Francophones des Langages Aplicatifs	January 2008
Vérification formelle du théorème de Kantorovitch	Étretat, France

Teaching

Teacher for computer science classes	February - June 2006
Grigore Moisil Highschool	Timişoara, Romania

After graduating from the university in July 2006 I obtained a permanent teaching position in computer science on middleschool and highschool level in Romania. I gave up this position when I started my PhD.

Lab sessions for Discrete Mathematics	September - December 2009
Institute of Technologies of the University of Nice Sophia Antipolis	Nice, France

Miscellaneous

Languages. I am fluent in English, French, and Romanian which is my mother tongue.

Organization skills. Starting from December 2008 I am in charge of organizing the Marelle team seminar.