23 June 2014

Małgorzata Biernacka

Personal Information

Date of Birth:	28 August 1977
Citizenship:	Polish
Marital Status:	Married to Dariusz Biernacki, one child
Current Position:	Assistant Professor, Institute of Computer Science, University of Wrocław
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Research Interests

semantics of programming languages, deductive verification, type theory, Curry-Howard isomorphism, normalization by evaluation, program transformation

Employment

Oct 2007 – present	Assistant Professor, Institute of Computer Science, University of Wrocław, Poland
Sep 2006 – Aug 2007	Post-doctoral Researcher, CNRS/INRIA Futurs, LRI, Orsay, France
2001 – 2002, Spring 2006	Research and Teaching Assistant, Zakład Informatyki, University of Maria Curie-Skłodowska, Lublin, Poland

Education

2002 – 2005	PhD in Computer Science, BRICS International PhD School, University of Aarhus, Denmark
Spring 2004	scientific visit to School of Computer Science, Carnegie Mellon University, Pittsburgh
1996 – 2001	MSc in Mathematics (major) and Computer Science (minor), University of Maria Curie-Skłodowska, Lublin, Poland

Professional Activities

- PC member for SOFSEM 2015
- PC member for IFL 2014

- PC member for TYPES 2014
- PC member for 21st International Symposium on Logic-Based Program Synthesis and Transformation
- PC member for ACM SIGPLAN Continuation Workshop 2011

Research Projects

1. "Structure and interpretation of programming languages in the proofs-as-programs paradigm" funded by the Polish National Science Centre, research grant 2011/03/B/ST6/00348 (2012-2015) – principal investigator
2. "Semantics of programming languages and program transformations: derivations and certification in the Coq type theory" funded by the Ministry of Science and Higher Education of Poland, research grant N N206 357436 (2009-2011)

Publications

1. An Operational Foundation for the Tactic Language of Coq. Wojciech Jedynak, Malgorzata Biernacka, and Dariusz Biernacki. In Ricardo Pena and Tom Shrijvers, editors, Proceedings of the 15th International Symposium on Principles and Practice of Declarative Programming (PPDP 2013), pp. 25-36, Madrid, Spain, September 2013. ACM Press.
2. Proving Termination of Evaluation for System F with Control Operators. Malgorzata Biernacka, Dariusz Biernacki, Serguei Lenglet, and Marek Materzok. In U. de'Liguoro and A. Saurin, editors, Proceedings of the 1st Workshop on Control Operators and their Semantics (COS 2013), pp. 15-29, Eindhoven, The Netherlands, June 2013. EPTCS 127, 2013.
3. Typing Control Operators in the CPS Hierarchy. Magorzata Biernacka, Dariusz Biernacki and Sergue Lenglet. 13th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming (PPDP 2011), Odense, Denmark, July 2011.
4. Automating Derivations of Abstract Machines from Reduction Semantics: A Generic Formalization of Refocusing in Coq. Filip Sieczkowski, Małgorzata Biernacka and Dariusz Biernacki. 22nd Symposium on Implementation and Application of Functional Languages, Utrecht, the Netherlands, September 2010.
5. Towards Compatible and Interderivable Semantic Specifications for the Scheme Programming Language, Part II: Reduction Semantics and Abstract Machines. Małgorzata Biernacka and Olivier Danvy. Festschrift in the honour of Peter Mosses. LNCS 5700:162-185, September 2009.
6. Context-based proofs of termination for typed delimited-control operators. Małgorzata Biernacka and Dariusz Biernacki. 11th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming, (PPDP'09), Coimbra, Portugal, September 2009.
7. A context-based approach to proving termination of evaluation. Małgorzata Biernacka and Dariusz Biernacki. Twenty-fifth Conference on the Mathematical Foundations of Programming Semantics (MFPS XXV), Oxford, UK, April 2009.
8. Towards compatible and interderivable semantic specifications for the Scheme programming language, part II: reduction semantics and abstract machines. Małgorzata Biernacka and Olivier Danvy. 2008 Workshop on Scheme and Functional Programming.

9. Formalizing Constructions of Abstract Machines for Functional Languages in Coq. Małgorzata Biernacka and Dariusz Biernacki. Preliminary results presented at 7th International Workshop on Reduction Strategies in Rewriting and Programming, Paris, June 2007.

10. A Syntactic Correspondence between Context-Sensitive Calculi and Abstract Machines. Małgorzata Biernacka and Olivier Danvy. Theoretical Computer Science, 375:76-108, 2007.

11. A Concrete Framework for Environment Machines. Małgorzata Biernacka and Olivier Danvy. ACM Transactions on Computational Logic, 9(1):6, 2007.

12. An Operational Foundation for Delimited Continuations in the CPS Hierarchy. Małgorzata Biernacka, Dariusz Biernacki and Olivier Danvy. Logical Methods in Computer Science, 1(2:5):1-39, November 2005.

13. Program Extraction from Proofs of Weak Head Normalization. Małgorzata Biernacka, Olivier Danvy and Kristian Stvring. In M. Escard, editor, Proceedings of the 21st Conference on the Mathematical Foundations of Programming Semantics, Electronic Notes in Theoretical Computer Science, Birmingham, UK, May 2005. Elsevier Science Publishers.

14. An Operational Foundation for Delimited Continuations. Małgorzata Biernacka, Dariusz Biernacki and Olivier Danvy. In Hayo Thielecke, editor, Proceedings of the Fourth ACM SIGPLAN Workshop on Continuations, Technical report CSR-04-1, Department of Computer Science, Queen Mary's College, pages 25-33, Venice, Italy, January 2004.