

PERSONAL INFORMATION	Surname(s) / First name(s) Nationality(-ies) Date of birth Gender Marital status	BÜHNOVÁ, Barbora Czech Republic 18th February 1981 Female Married, née ZIMMEROVÁ, one child
CONTACT INFORMATION	Faculty of Informatics Masaryk University Botanická 68a 602 00 Brno, Czech Republic	<i>Phone:</i> +420 549 494 494 <i>Skype:</i> bara.buhnova <i>E-mail:</i> buhnova@fi.muni.cz <i>WWW:</i> www.fi.muni.cz/~buhnova
PROFESSIONAL INTERESTS	Formal methods in software engineering, component-based software architecture, quality attributes of software systems (reliability, performance).	
UNIVERSITY POSITIONS	Assistant Professor Faculty of Informatics, Masaryk University, Brno, Czech Republic Department of Computer Systems and Communications From July 2009 to present Specialist Faculty of Informatics, Masaryk University, Brno, Czech Republic Highly Parallel and Distributed Computing Systems & Department of Computer Graphics and Design From January 2005 to June 2009 External Teacher Faculty of Informatics, Masaryk University, Brno, Czech Republic Department of Computer Science & Department of Computer Systems and Communications Courses – IB108 Algorithm Design II, IB102 Automata and Grammars, PB007 Systems Analysis and Design, PV167 Project in Object-oriented Design of Information Systems From February 2003 to June 2008 Disciplinary Committee member Faculty of Informatics, Masaryk University, Brno, Czech Republic From November 2006 to November 2008	
INDUSTRIAL EXPERIENCE	Web-based software analyst INSPIRE CZ s.r.o, Brno, Czech Republic Analysis and design of IS (UML, WebML, A&D Patterns), consultancy From January 2003 to December 2004 Web-based software developer INSPIRE CZ s.r.o, Brno, Czech Republic Programing in Java, PHP, HTML, CSS, JavaScript, Flash From April 2001 to January 2003	
UNIVERSITY EDUCATION AND DEGREES	Ing. – University master degree Faculty of Business and Economics, Mendel University, Brno, Czech Republic From September 2006 to January 2009 Ph.D. – University doctoral degree	

Faculty of Informatics, Masaryk University, Brno, Czech Republic
From **September 2004** to **October 2008**

RNDr. – Rerum Naturalium Doctor degree
Faculty of Informatics, Masaryk University, Brno, Czech Republic
In **May 2008**

Mgr. – University **master** degree
Faculty of Informatics, Masaryk University, Brno, Czech Republic
From **September 1999** to **June 2004**

RESEARCH
FELLOWSHIPS AND
AFFILIATIONS

Leading member – Lab of Software Architectures and Information Systems (LaSArIS)
Faculty of Informatics, Masaryk University, Brno, Czech Republic
From **June 2009** to **present**

Guest member – Parallel and Distributed Systems Laboratory (ParaDiSe)
Faculty of Informatics, Masaryk University, Brno, Czech Republic
From **September 2004** to **present**

Visiting researcher – Swinburne University of Technology, Melbourne, Australia
Faculty of Information and Communication Technologies, Group of Dr. Lars Grunske
From **April 2009** to **May 2009**

PostDoc researcher – Research Centre for Inf. Technology (FZI), Karlsruhe, Germany
Department of Software Engineering (SE/SEQ), Group of Prof. Dr. Ralf H. Reussner
From **September 2008** to **February 2009**

Guest researcher – Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
Chair for Software Design and Quality (SDQ)
From **April 2007** to **June 2007**

RESEARCH
PROJECTS

Realistic application of formal methods in component systems
Investigated jointly by FI MU, FMP CU Prague, and ICS ASCR
From **January 2005** to **December 2009**

Integrated approach to education of PhD students in the area of parallel and distributed systems
Investigated jointly by FI MU, and FIT TU Brno
From **April 2005** to **December 2008**

ORGANIZED
CONFERENCES

CompArch 2011-2012: Federated Events on Component-Based Software Engineering and Software Architecture
2011 (Boulder, Colorado, USA), 2012 (Bertinoro, Italy)
Role – Steering Committee member

QoSA 2012: 8th International Conference on the Quality of Software Architectures
Federated event of CompArch 2012 (Bertinoro, Italy)
Role – Program committee co-chair, Conference co-organizer

FESCA 2009-2012: 6th-9th International Workshop on Formal Engineering approaches to Software Components and Architectures
Satellite event of ETAPS 2009 (York, UK), 2010 (Paphos, Cyprus), 2011 (Saarbrücken, Germany), 2012 (Tallin, Estonia)
Role – Program committee co-chair, Workshop co-organizer

WCOP 2010-2012: 15-17th International Doctoral Symposium on Components and Architecture

Doctoral Symposium of CompArch 2010 (Prague, Czech Republic), 2011 (Boulder, Colorado, USA), 2012

Role – Program committee co-chair, Workshop co-organizer

PC MEMBERSHIP AND REVIEWING

Journals

Journal of Software Maintenance and Evolution: Research and Practice (2011, Wiley, IF 0.971)

Science of Computer Programming (2009, Elsevier, IF 1.269)

Conferences and workshops

ASE (2010), CBSE (2010), FMICS (2005, 2007), MEMICS (2008), QEST (2009), QOSA (2011), SOFSEM (2007), TAMC (2010), WCOP (2010)

Projects

GAUK (2010-2011, Charles University in Prague)

SELECTED PUBLICATIONS

Books and Chapters

- [1] B. Buhnova. *Application of the Automata Theory to Economic Systems: Modelling, Simulation and Analysis*, 168 pages. LAP Lambert Academic Publishing, April 2010. ISBN 978-3838350547.
- [2] B. Zimmerova, P. Vařeková, N. Beneš, I. Černá, L. Brim, and J. Sochor. *The Common Component Modeling Example: Comparing Software Component Models*, chapter Component-Interaction Automata Approach (CoIn), volume 5153 of LNCS, pages 146–176. Springer-Verlag, August 2008.

Journal Articles

- [3] N. Beneš, L. Brim, B. Buhnova, I. Černá, J. Sochor, and P. Vařeková. Partial Order Reduction for State/Event LTL with Application to Component-Interaction Automata. In *Science of Computer Programming* journal (IF 1.459), Volume 76, Issue 10, pages 877-890. Elsevier, October 2011. ISSN 0167-6423.
- [4] I. Meedeniya, B. Buhnova, A. Aleti, and L. Grunske. Reliability-driven deployment optimization for embedded systems. In *Journal of Systems and Software* (IF 1.340), Volume 84, Issue 5, pages 835-846. Elsevier, May 2011. ISSN 0164-1212.
- [5] P. Vařeková, B. Zimmerova, P. Moravec, and I. Černá. Formal Verification of Systems with an Unlimited Number of Components. In *IET Software* journal (IF 0.542), Volume 2, Issue 6, pages 532–546. Institution of Engineering and Technology (IET), December 2008.
- [6] L. Brim, I. Černá, P. Vařeková, and B. Zimmerova. Component-Interaction Automata as a Verification-Oriented Component-Based System Specification. *ACM SIGSOFT Software Engineering Notes*, Volume 31, Issue 2, Article No. 4, 8 pages. ACM Press, March 2006.

Conferences and Workshops

- [7] F. Brosch, B. Buhnova, H. Koziolok, and R. Reussner. Reliability Prediction for Fault-Tolerant Software Architectures. In *Proceedings of the International Conference on the Quality of Software Architectures (QoSA'11)*. To Appear in ACM, 2011.
- [8] F. Brosch, H. Koziolok, B. Buhnova, and R. Reussner. Parameterized Reliability Prediction for Component-based Software Architectures. In *Proceedings of the International Conference on the Quality of Software Architectures (QoSA'10)*, volume 6093 of LNCS, pages 36-51. Springer-Verlag, 2010.

- [9] I. Meedeniya, B. Buhnova, A. Aleti, and Lars Grunske. Architecture-Driven Reliability and Energy Optimization for Complex Embedded Systems. In *Proceedings of the International Conference on the Quality of Software Architectures (QoSA '10)*, volume 6093 of LNCS, pages 52-67. Springer-Verlag, 2010.
- [10] L. Kapova, B. Buhnova, A. Martens, J. Happe, and R. H. Reussner. State Dependence in Performance Evaluation of Component-Based Software Systems. In *Proceedings of the Joint WOSP/SIPEW International Conference on Performance Engineering (ICPE10)*, pages 37-48. ACM, January 2010. ISBN 978-1-60558-563-5.
- [11] N. Beneš, L. Brim, I. Černá, J. Sochor, P. Vařeková and B. Zimmerova. Partial Order Reduction for State/Event LTL. In *Proceedings of the International Conference on Integrated Formal Methods (IFM'09)*, volume 5423 of LNCS, pages 307–321. Springer-Verlag, February 2009.
- [12] I. Černá, P. Vařeková, and B. Zimmerova. Component Substitutability via Equivalencies of Component-Interaction Automata. In *Proceedings of the Workshop on Formal Aspects of Component Software (FACS'06)*, volume 182 of ENTCS, pages 39–55. Elsevier Science Publishers, June 2007.
- [13] L. Brim, I. Černá, P. Vařeková, and B. Zimmerova. Component-Interaction Automata as a Verification-Oriented Component-Based System Specification. In *Proceedings of the ESEC/FSE Conference on Specification and Verification of Component-Based Systems (SAVCBS'05)*, pages 31–38. Iowa State University, USA, September 2005.

Barbora Bůhnová is a (co-)author of over 20 papers published in renowned journals and international proceedings.