

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, two children
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	Software engineering, formal methods, component-based software architectures, quality attributes of software systems (reliability, performance), reliability engineering, software support of smart grid management, smart cities, embedded systems.	
UNIVERSITY EDUCATION AND DEGREES	<p>Ing. – University master degree Faculty of Business and Economics, Mendel University, Brno, Czech Republic From September 2006 to January 2009</p> <p>Ph.D. – University doctoral degree Faculty of Informatics, Masaryk University, Brno, Czech Republic From September 2004 to October 2008</p> <p>RNDr. – Rerum Naturalium Doctor degree Faculty of Informatics, Masaryk University, Brno, Czech Republic In May 2008</p> <p>Mgr. – University master degree Faculty of Informatics, Masaryk University, Brno, Czech Republic From September 1999 to June 2004</p>	
UNIVERSITY POSITIONS	<p>Deputy Head of the Department of Computer Systems and Communications Faculty of Informatics, Masaryk University, Brno, Czech Republic From September 2014 to present</p> <p>Assistant Professor Faculty of Informatics, Masaryk University, Brno, Czech Republic Department of Computer Systems and Communications <i>Teaching</i> – PB007 Software Engineering I, PV167 Project in Object-oriented Design of IS, PV226 Seminar LaSARIS, PV260 Software Quality, DPITS Enterprise IT Systems and Services <i>Coordination</i> – PV178 Introduction to Development in C#/.NET, PV179 Selected Topics in .NET Technologies, PV239 Mobile Application Development From July 2009 to present</p> <p>Specialist Faculty of Informatics, Masaryk University, Brno, Czech Republic Highly Parallel and Distributed Computing Systems From January 2005 to June 2009</p>	

External Teacher

Faculty of Informatics, Masaryk University, Brno, Czech Republic
Department of Computer Science
& Department of Computer Systems and Communications
Teaching – IB102 Automata and Grammars, IB108 Algorithm Design II, 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**

OTHER EMPLOYMENTS

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**

RESEARCH FELLOWSHIPS AND AFFILIATIONS

Team lead – Lab of Software Architectures and Information Systems (LaSArIS)

Faculty of Informatics, Masaryk University, Brno, Czech Republic
From **June 2009** to **present**

Member – Parallel and Distributed Systems Laboratory (ParaDiSe)

Faculty of Informatics, Masaryk University, Brno, Czech Republic
From **September 2004** to **September 2011**

Visiting researcher – Swinburne University of Technology, Melbourne, Australia

Faculty of Information and Communication Technologies, Group of Dr. Lars Grunskoe
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

Application of Bayesian Belief Networks in the Smart Grid Domain

Funded by the South Moravian Innovation Centre, Czech Republic
From **July 2014** to **June 2015**
Project lead

PCM REL, Reliability Prediction for Component-based Software Architectures

Project with Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
URL https://sdqweb.ipd.kit.edu/wiki/Reliability_Prediction_for_Component-based_Software_Architectures
From **September 2008** to **September 2012**
Researcher

ArcheOpterix, An Extendable Tool for Architecture Optimization

Project with Swinburne University of Technology, funded by AutoCRC, Australia
From **April 2009** to **December 2009**

Researcher

SLA@SOI Project

Funded by EU RP7-216556

URL <http://sla-at-soi.eu/>

From **September 2008** to **December 2009**

Researcher

Realistic Application of Formal Methods in Component Systems

Project with FMP CU Prague and ICS ASCR, funded by the Academy of Sciences of the
Czech Republic

From **January 2005** to **December 2009**

Researcher

Coctail Project

Funded by German Federal Ministry of Education and Research

URL <http://www.cocktail-projekt.de/>

From **September 2008** to **February 2009**

Researcher

TEACHING
PROJECTS

Advancement of the Teaching of Software Quality at FI MU

Funded by FRMU, Masaryk University, Brno, Czech Republic

From **January 2015** to **December 2015**

Project leader

MobiMU, Teaching of Mobile Development at FI MU

Funded by FRMU, Masaryk University, Brno, Czech Republic

From **March 2014** to **December 2014**

Project guarantor

Inovation of Doctoral Studies at FI MU

Funded by the Ministry of Education, Youth and Sports of the CR / Operational Programme Education for Competitiveness

From **September 2011** to **December 2011** and from **April 2013** to **September 2013**

Contributor

Inovation of Master Studies at FI MU

Funded by the Ministry of Education, Youth and Sports of the CR / Operational Programme Education for Competitiveness

From **July 2009** to **December 2011**

Contributor

Introductory Study Materials on .NET Development for Czech Audience

Project with Microsoft, Czech Republic

From **January 2010** to **March 2010**

Project lead

Integrated Approach to Education of PhD Students in the Area of Parallel and Distributed Systems

Project with FIT TU Brno, funded by the Czech Science Foundation

From **April 2005** to **December 2008**

Contributor

INDUSTRIAL
COOPERATION
PROJECTS

Modelling and Simulation in Smart Grid Design
Cooperation with MyCroft Mind, Brno, Czech Republic
From **September 2013** to **present**
Lead researcher

Quality Assurance through Testing, Static Analysis and Metrics
Cooperation with Honeywell, Automation and Control Solutions (ACS), Switzerland & Czech Republic
From **January 2012** to **present**
Consultant

ORGANIZED
CONFERENCES

CompArch 2011-2016: Federated Events on Component-Based Software Engineering and Software Architecture
2011 (Boulder, Colorado, USA), 2012 (Bertinoro, Italy), 2013 (Vancouver, Canada), 2014 (Lille, France), 2015 (Montreal, Canada), 2016 (Venice, Italy)
Steering Committee member

FESCA 2009-2016: 6th-13th 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), 2013 (Rome, Italy), 2014 (Grenoble, France), 2015 (London, UK), 2016 (Eindhoven, Netherlands)
Program committee co-chair, Workshop co-organizer

WCOP 2010-2016: 15-21th International Doctoral Symposium on Components and Architecture
Doctoral Symposium of CompArch 2010 (Prague, Czech Republic), 2011 (Boulder, Colorado, USA), 2012 (Bertinoro, Italy), 2013 (Vancouver, Canada), 2014 (Lille, France), 2015 (Montreal, Canada), 2016 (Venice, Italy)
Program committee co-chair, Symposium co-organizer

MOBILESoft 2016: IEEE/ACM International Conference on Mobile Software Engineering and Systems
Co-located with ICSE 2016 (Austin, TX, USA)
Tutorials & Technical Briefings chair

ESEC/FSE 2013: 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering
(Saint Petersburg, Russia)
Workshop selection co-chair, Local organization assistant

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

PC MEMBERSHIP
AND REVIEWING

Journals
TSE: IEEE Transactions on Software Engineering (IEEE, 2012 IF 2.588) - Reviewer
JSS: Journal of Systems and Software (Elsevier, IF 1.293) - Reviewer
SCP: Science of Computer Programming (Elsevier, IF 1.269) - Guest editor of the Special Issue on Component-Based Software Engineering and Software Architecture, Reviewer
SME: Journal of Software Maintenance and Evolution: Research and Practice (Wiley, IF 0.971) - Reviewer
SoSyM: Software and Systems Modeling (Springer, IF 1.250) - Reviewer

Conferences and workshops

ASE (2010), ASWEC (2013, 2014, 2015), BCI (2012), CBSE (2010), DeMobile (2014), DoCEIS (2016), FASSI (2015), FMICS (2005, 2007), ICSE (2012, 2014, 2015), MB4SP (2015), MEMICS (2008), QEST (2009), QOSA (2011, 2013, 2014), SANCS (2015), SERENE (2015), SOFSEM (2007), TAMC (2010), WCOP (2010)

Project boards and reviewing

GAUK (2010-2011, Charles University in Prague)

SELECTED TOP PUBLICATIONS

- [1] L. Happe, B. Buhnova and R. Reussner. Stateful component-based performance models. In *Software and Systems Modeling* journal (2012 IF 1.250), Volume 13, Issue 4, pages 1319-1343. Springer-Verlag, October 2014. ISSN 1619-1374.
- [2] A. Aleti, B. Buhnova, L. Grunske, A. Koziolok and I. Meedeniya. Software Architecture Optimization Methods: A Systematic Literature Review. In *IEEE Transactions on Software Engineering* journal (2012 IF 2.588), Volume 5, Issue 39, pages 658-683. IEEE Computer Society, May 2013. ISSN 0098-5589.
- [3] F. Brosch, H. Koziolok, B. Buhnova and R. Reussner. Architecture-Based Reliability Prediction with the Palladio Component Model. In *IEEE Transactions on Software Engineering* journal (2012 IF 2.588), Volume 38, Issue 6, pages 1319-1339. IEEE Computer Society, Nov.-Dec. 2012. ISSN 0098-5589.
- [4] 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 (2010 IF 1.306), Volume 76, Issue 10, pages 877-890. Elsevier, October 2011. ISSN 0167-64
- [5] I. Meedeniya, B. Buhnova, A. Aleti, and L. Grunske. Reliability-driven deployment optimization for embedded systems. In *Journal of Systems and Software* (2010 IF 1.293), Volume 84, Issue 5, pages 835-846. Elsevier, May 2011. ISSN 0164-1212.
- [6] P. Vařeková, B. Zimmerova, P. Moravec, and I. Černá. Formal Verification of Systems with an Unlimited Number of Components. In *IET Software* journal (2009 IF 0.650), Volume 2, Issue 6, pages 532-546. Institution of Engineering and Technology (IET), December 2008.
- [7] 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.

Barbora Bůhnová is a (co-)author of over 30 papers in renowned journals and proceedings. Find the complete list in Google Scholar, under “Barbora Buhnova” author profile.

LANGUAGE SKILLS

Native in Czech

Proficiency in English

Intermediate Level in German and French