

CONTACT INFORMATION	Masaryk University, Faculty of Informatics, Parallel and Distributed Systems Laboratory, Botanická 68a, 602 00, Brno, Czech Republic
	<i>E-mail:</i> svorenova@mail.muni.cz <i>Phone:</i> +420 734 238 549 <i>Homepage:</i> svorenova.bam.sk
PERSONAL	<i>Date of Birth:</i> January 26th, 1987 <i>Gender:</i> Female <i>Nationality:</i> Slovak
RESEARCH INTERESTS	Computer science, formal methods, model checking, control strategy synthesis, games on graphs, temporal logics, systems with uncertainty, receding horizon control, optimal control, formal methods in robotics, high-level robot motion planning.
UNIVERSITY EDUCATION	<b>Doctoral Degree Program (Ph.D.)</b> Sep 2011 – present <b>Masaryk University (MU)</b> , Faculty of Informatics (FI), Brno, Czech Republic <i>Topic:</i> Formal Methods in Optimal Discrete Path Planning with Uncertainty <i>Advisor:</i> Ivana Černá <i>Expected graduation date:</i> May 2015 <b>Rerum Naturalium Doctor Degree. (RNDr.)</b> awarded May 2013.
	<b>Master Degree (Mgr.)</b> Sep 2008 – Feb 2011 <b>Masaryk University</b> , Faculty of Science, Brno, Czech Republic <i>Master thesis:</i> Concatenation Hierarchies <i>Specialization:</i> Algebra and Discrete Mathematics
	<b>Bachelor Degree (Bc.)</b> Sep 2007 – Feb 2010 <b>Masaryk University</b> , Faculty of Informatics, Brno, Czech Republic <i>Bachelor thesis:</i> Verification of Hybrid Systems <i>Specialization:</i> Mathematical Informatics
	<b>Bachelor Degree (Bc.)</b> Sep 2005 – Jun 2008 <b>Masaryk University</b> , Faculty of Science, Brno, Czech Republic <i>Bachelor thesis:</i> Semisimple Algebras <i>Specialization:</i> Mathematics
VISITING POSITIONS	<b>Boston University</b> , MA, USA Feb – May 2012, Oct 2013 – Feb 2014, Sep 2014 Visiting Research Scholar <i>Supervisor:</i> Calin Belta <i>Topic:</i> Optimal control of systems with uncertainties under temporal constraints
	<b>IST Institute of Science and Technology Austria</b> , Austria May 2014 Visiting Graduate Student <i>Host:</i> Krishnendu Chatterjee <i>Topic:</i> Stochastic games in control of linear systems under temporal constraints

	<b>KTH Royal Institute of Technology</b> , Stockholm, Sweden	May 2014
	Visting Graduate Student <i>Host:</i> Dimos Dimarogonas <i>Topic:</i> Control of distributed multi-agent systems under temporal constraints	
	<b>University of Luxembourg</b> , Luxembourg	Feb – Jun 2011
	Visting Undergraduate Student (Student Exchange Program Socrates Erasmus) Faculty of Science, Technology and Communication	
AWARDS	<b>Best Presentation Award at ACC 2013</b>	2013
	For paper entitled Optimal Receding Horizon Control for Finite Deterministic Systems with Temporal Logic Constraints, with Ivana Černá and Calin Belta	
	<b>Šanca pre talenty Stipend</b>	2010
	Student travel and study grant awarded by Nadácia Orange foundation, Slovakia	
	<b>Program Hlavička Stipend</b>	2010
	Student travel and study grant awarded by Nadácia SPP foundation, Slovakia	
	<b>Support of Students' Quality Creative Results</b>	2009 – 2014
	Scholarship program at FI MU, awarded repeatedly	
RESEARCH ACTIVITIES	<b>Research Grant Participant</b>	2011 – present
	Czech Ministry of Education, Youth and Sports (LH Kontakt II Program): Control Synthesis and Formal Verification of Complex Hybrid Systems (LH110065)	
	<b>Parallel and Distributed Systems Laboratory Member</b>	2008 – present
	Masaryk University, Faculty of Informatics, Brno, Czech Republic <i>Research Topics:</i> Verification of hybrid systems, Control strategy synthesis with temporal logic specifications	
EDUCATIONAL ACTIVITIES	<b>Teaching Assistant</b>	2005 – present
	FI MU:	
	<ul style="list-style-type: none"> <li>• Mathematics I (Fall semesters in 2008, 2009)</li> <li>• Foundations of Mathematics (Fall semester 2009)</li> <li>• Automata and Grammars (Fall semesters in 2008, 2010, 2011, 2014)</li> <li>• Algorithms and data structures II (Spring semesters 2013, 2015)</li> </ul>	
	MU, Support Center for Students with Special Needs:	
	<ul style="list-style-type: none"> <li>• Mathematics I (Fall semester 2010)</li> <li>• Automata and Grammars (Fall semester 2011)</li> <li>• Introduction to Informatics (Fall semester 2012, Spring semester 2013)</li> <li>• Computational Complexity (Spring semester 2015)</li> </ul>	
	<b>Supervision</b>	2013 – present
	FI MU, Master thesis co-supervisor:	
	<ul style="list-style-type: none"> <li>• Juraj Beníček: In-door localization and navigation using Bluetooth 4.0 technology for Android platform, in progress</li> <li>• Adéla Otte: Analysis of in-door movement using Bluetooth 4.0 technology, in progress</li> <li>• Lukáš Mařica: Graphical interface for robot control synthesis tool, 2013</li> </ul>	

OTHER ACTIVITIES **Additional Education**

- EATCS Young Researchers School on Automata, Logic, Games  
Telč, Czech republic, 1 week in Jul 2014
- Summer School on Cyber-Physical Systems  
Grenoble, France, 1 week in Jul 2014
- Workshop on Formal Verification of Embedded Control Systems  
Lund, Sweden, 1 week in Apr 2013

**Professional Activities**

- Reviewer
  - Journals: IEEE Transactions on Automatic Control
  - Conferences: IEEE Conference on Decision and Control (CDC), International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM), IEEE Multi-conference on Systems and Control (MSC), Conference on Hybrid Systems: Computation and Control (HSCC)
- Professional Society Member
  - IEEE member, IEEE Women in Engineering member

**Departmental Activities**

- Member of Academic Senate
  - FI MU, Brno, Czech Republic, 2012 – 2014
- Member of Accommodation Board
  - MU, Brno, Czech Republic, Sep 2012 – Sep 2013

## PUBLICATIONS

**Journal Papers**

- [J1] Mária Svoreňová, Ivana Černá, Calin Belta. *Optimal Temporal Logic Control for Deterministic Transition Systems with Probabilistic Penalties*. IEEE Transactions on Automatic Control, 2015, in print.

**Conference Proceedings**

- [C1] Mária Svoreňová, Jan Křetínský, Martin Chmelík, Krishnendu Chatterjee, Ivana Černá, Calin Belta. *Temporal Logic Control for Stochastic Linear Systems using Abstraction Refinement of Probabilistic Games*. International Conference on Hybrid Systems: Computation and Control (HSCC), 2015, to appear.
- [C2] Mária Svoreňová, Martin Chmelík, Kevin Leahy, Hasan Ferit Eniser, Krishnendu Chatterjee, Ivana Černá, Calin Belta. *Temporal Logic Motion Planning using POMDPs with Parity Objectives*. International Conference on Hybrid Systems: Computation and Control (HSCC), 2015, to appear.
- [C3] Mária Svoreňová, Ivana Černá, Calin Belta. *Optimal Control of MDPs with Temporal Logic Constraints*. IEEE Conference on Decision and Control (CDC), 2013.
- [C4] Mária Svoreňová, Ivana Černá, Calin Belta. *Optimal Receding Horizon Control for Finite Deterministic Systems with Temporal Logic Constraints*. American Control Conference (ACC), 2013.
- [C5] Mária Svoreňová, Jana Tůmová, Ivana Černá, Jiří Barnat. *Attraction-Based Receding Horizon Path Planning with Temporal Logic Constraints*. IEEE Conference on Decision and Control (CDC), 2012.

**Conference Abstracts**

- [A1] Mária Svoreňová, Ivana Černá, Calin Belta. *Optimal Temporal Logic Control for Deterministic Transition Systems with Probabilistic Penalties*. Annual Doctoral Workshop on Mathematical and Engineering Methods in Computer Science (MEMICS), 2014.
- [A2] Mária Svoreňová, Ivana Černá, Calin Belta. *Optimal Control of MDPs with Temporal Logic Constraints*. Highlights of Logic, Games and Automata, 2013.
- [A3] Mária Svoreňová, Jana Tůmová, Ivana Černá, Jiří Barnat. *Attraction-Based Receding Horizon Path Planning with Temporal Logic Constraints*. Annual Doctoral Workshop on Mathematical and Engineering Methods in Computer Science (MEMICS), 2012.