

Curriculum vitae

Person Identification

- prof. RNDr. Ivana Černá, CSc.

Workplace

- Department of Computer Science, Faculty of Informatics, Masaryk University, Botanická 68a, 602 00 Brno, Czech Republic

Employment Position

- Professor
- Department of Computer Science, department head

Education and Academic Qualifications

- 2007: Professor in Computer Science, Masaryk University, Brno
- 2003: Associate Professor (Docent) in Computer Science, Fac.of Informatics, Masaryk University, Brno; habilitation thesis: "Model Checking: Approaches to the State Explosion Problem"
- 1992: CSc. (PhD) in Computer Science, Faculty of Mathematics and Physics, Comenius University, Bratislava, Slovakia; thesis: "Some Properties of Reversal Computational Complexity"
- 1986: RNDr. (M.Sc.) in Computer Science, Faculty of Mathematics and Physics, Comenius University, Bratislava, Slovakia; thesis: "Boolean Circuits"
- 1986: graduated (with honors) in Computer Science, Faculty of Mathematics and Physics, Comenius University, Bratislava, Slovakia

Employment Summary

- 2007 - now: Professor, Dept. of Computer Science, Faculty of Informatics, Masaryk University, Brno
- 2003 - 2007: Associate Professor (Docent), Dept. of Computer Science, Faculty of Informatics, Masaryk University, Brno
- 1994 - 2003: Professor assistant, Dept. of Computer Science, Faculty of Informatics, Masaryk University, Brno;
- 1986 - 1994: Assistent, Faculty of Mathematics and Physics, Comenius University, Bratislava, Slovakia;

Pedagogical Activities

- Courses: Algorithms and Data Structures I, Algorithms and Data Structures II, Algorithmics for Hard Problems, Formal Languages and Automata, Computational and Structural Complexity, GEB -- limits of formal systems,
- Laboratory of Parallel and Distributed Systems
- Bc, MSc and PhD Thesis Advisor

Scientific and Research Activities

- **Specialisation:** Theory of communicating and parallel systems, formal verification and synthesis, verification tools, design and verification of component-based and embedded systems, algorithm design and analysis, complexity theory

- **Projects:**

2018 -2023 "Centrum excellence pro kyberkriminalitu, kyberbezpečnost a ochranu kritických informačních infrastruktur" Ministerstvo školství, mládeže a tělovýchovy ČR OP Výzkum, vývoj a vzdělávání (OP VVV) PO 1 Posilování kapacit pro kvalitní výzkum , (CZ.02.1.01/0.0/0.0/16_019/0000822)

2018 -2020 "Abstrakce a jiné techniky v semi-symbolické verifikaci programů" Grant Agency of The Czech Republic, grant no. GA18-02177S

2018 "Modulární distribuovaná robotická platforma" MU Development Fund MUNI/FR/0970/2017)

2015 - 2017 "Correctness Analysis of C and C++ Programs with Threads: Grant Agency of The Czech Republic, grant no. GA15-08772S

2013 - 2016 "Critical System Engineering Acceleration" European Union / 7th Specific RTD Programme (7H13001)

2011 - 2013 "Řízení a ověřování vlastností komplexních hybridních systémů" Program KontaktII, grant no. LH11065

2011 - 2014 "Software Components in Embedded Systems: Development and Verification" Grant Agency of The Czech Republic, grant no. GAP202/11/0312

2009 - 2011 "Verification and Analysis of Large-Scale Computer Systems" Grant Agency of The Czech Republic, grant no. GA201/09/1389

2007 - 2010 "Scalable Modeling and Analysis Techniques to Study Emergent Cell Behavior - understanding the E. coli stress response", Sixth Framework Programme, Research Activity: NEST, EC-MOAN, NO 043235.

2005 - 2011 "Highly Distributed and Parallel Systems", Ministry of Education of The Czech Republic, Research Intent of Faculty of Informatics, grant no. MSM 0021622419

2005 - 2009 "Techniques for Automatic Verification and Validation of Software and Hardware Systems", Grant Agency of The Czech Academy of Science, grant no. 1ET408050503

2005 - 2009 "Institut of Theoretical Computer Science", Ministry of Education of The Czech Republic, grant no. 1M0021620808

2005 - 2009 "Realistic Application of Formal Methods in Component Systems", Grant Agency of The Czech Academy of Science, grant no. 1ET400300504

2005 - 2008 "Integrated Approach to Education of PhD Students in the Area of Parallel and Distributed Systems", Grant Agency of The Czech Republic, grant no. 102/05/H050

2004 - 2008 "Advanced Real-Time Systems", Sixth Framework Programme, IST-004527 ARTIST2 Network of Excellence on Embedded Systems Design.

2003 - 2005 "Automatic Verification of Parallel and Distributed Systems", Grant Agency of The Czech Republic, grant no. 201/03/0509

1999 - 2003 "Models of Nonsequential Computing", Ministry of Education of The Czech Republic, Research Intent of Faculty of Informatics, grant no. CEZ: J07/98:143300001

2000 - 2002 Infinite State Concurrent Systems -- Models and Verification", Grant Agency of The Czech Republic, grant no. 201/00/0400

2000 - 2002 "Algorithms and Tools for Practical Verification of Concurrent Systems", Grant Agency of The Czech Republic, grant no. 201/00/1023

1997 - 1999 "Algorithmic Verification Boundaries for Infinite State Systems", Grant Agency of The Czech Republic, grant no. 201/97/0456

- **Publications:** More than 100 journal and conference papers, and research reports.

More than 1000 citations in journals and proceedings of international conferences (according to <http://scholar.google.com/>)

Academical Stays

- Short-term stays at Institut für Informatik, Technische Universität Magdeburg, Germany; Fachbereich Informatik, Dortmund Universität, Germany; Boston University, USA

University Activities

- 2017 - now: member of the Academic Senate MU
- 2015 - now: member of the Academic Senate FI MU
- 2006 - now: member of the Scientific Board MU
- 2004 - now: member of the Scientific Board FI MU
- 2017 - 2022 : member of the Internal Evaluation Board MU
- 2015 - 2021: member of the Research Ethics Committee MU
- 2011 - 2015: vice-rector for studies MU
- 2006 - 2011: vice-rector for information technologies MU
- 2004 - 2006: vice-dean for education FI MU
- 1996 - 2004: member of the Academic Senate FI MU

Extrauniversity Activities

- 2019 - now: member of the Scientific Board FMFI UK Bratislava
- 2019 - now: member of the Scientific Board UPOL Olomouc

Appreciation of Science Community

- Committee member of international conferences and workshops Tools Day (2002, chair), PDMC (2006, 2007 chair), MTCoord (2006, co-chair, 2007), SOFSEM (2006, 2011, 2012), FESCA (2009, 2010, 2011), QEST (2009, 2010), MEMICS 2011, FACS 2017, FM 2021, FMCAD 2021, DATE 2022, CAV 2022, DATE 2023

Selected Publications

- J. Bendík, A. Sencan, E.A. Gol a I. Černá. Timed Automata Robustness Analysis via Model Checking. *Logical Methods in Computer Science*. 2022, roč. 18, č. 3, s. 1-32. ISSN 1860-5974. doi:10.46298/lmcs-18(3:12)2022. [URL](#) [URL](#) [info](#)
- J. Bendík, A. Sencan, E.A. Gol a I. Černá. Timed Automata Relaxation for Reachability. In Friso Groote and Kim Guldstrand Larsen. *27th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS'21)*. Part I vol. 12651. Heidelberg: Springer, 2021. s. 291-310. ISBN 978-3-030-72015-5. doi:10.1007/978-3-030-72016-2_16. [URL](#) [info](#)
- J. Bendík a I. Černá. MUST: Minimal Unsatisfiable Subsets Enumeration Tool. In Armin Biere and David Parker. *Tools and Algorithms for the Construction and Analysis of Systems*. Neuv eden: Springer International Publishing, 2020. s. 135-152. ISBN 978-3-030-45189-9. doi:10.1007/978-3-030-45190-5_8. [info](#)
- J. Bendík a I. Černá. Rotation Based MSS/MCS Enumeration. In Elvira Albert and Laura Kovacs. *LPAR 2020: 23rd International Conference on Logic for Programming, Artificial Intelligence and Reasoning*. Neuv eden: EPiC Series in Computing, 2020. s. 120-137. ISSN 2398-7340. doi:10.29007/8btb. [URL](#) [info](#)
- J. Bendík a I. Černá. Replication-Guided Enumeration of Minimal Unsatisfiable Subsets. In Helmut Simonis. *26th International Conference on Principles and Practice of Constraint Programming*. Neuv eden: Springer, Cham, 2020. s. 37-54. ISBN 978-3-030-58474-0. doi:10.1007/978-3-030-58475-7_3. [info](#)
- J. Bendík, E. Ghassabani, M. Whalen a I. Černá. Online Enumeration of All Minimal Inductive Validity Cores. In Einar Broch Johnsen and Ina Schaefer. *Software Engineering and Formal Methods - 16th International Conference*. LNCS 10886. Neuv eden: Springer International Publishing, 2018. s. 189-204. ISBN 978-3-319-92969-9. doi:10.1007/978-3-319-92970-5_12. [info](#)
- J. Bendík, N. Beneš a I. Černá. Finding Regressions in Projects under Version Control Systems. In Leszek A. Maciaszek and Marten van Sinderen. *13th International Conference on Software Technologies*. Proceedings of the 13th Inte. Porto: SciTePress, 2018. s. 186-197.

- ISBN 978-989-758-320-9. doi:10.5220/0006864401860197. [URL info](#)
- P. Bezděk, N. Beneš, I. Černá a J. Barnat. On clock-aware LTL parameter synthesis of timed automata. *Journal of Logical and Algebraic Methods in Programming*. ELSEVIER SCIENCE INC, 360 PARK AVE SOUTH: Elsevier, 2018, roč. 99, Oct, s. 114-142. ISSN 2352-2208. doi:10.1016/j.jlamp.2018.05.004. [URL](#) [URL](#) [URL info](#)
 - J. Bendík, I. Černá a N. Beneš. Recursive Online Enumeration of All Minimal Unsatisfiable Subsets. In Shuvendu Lahiri and Chao Wang. *Automated Technology for Verification and Analysis - 16th International Symposium, {ATVA} 2018, Los Angeles, CA, USA, October 7-10, 2018, Proceedings*. Los Angeles: Springer, 2018. s. 143-159. ISBN 978-3-030-01089-8. doi:10.1007/978-3-030-01090-4_9. [URL info](#)
 - J. Bendík a I. Černá. Evaluation of Domain Agnostic Approaches for Enumeration of Minimal Unsatisfiable Subsets. In Gilles Barthe and Geoff Sutcliffe and Margus Veanes. *LPAR-22, 22nd International Conference on Logic for Programming, Artificial Intelligence and Reasoning*. Awassa, Etiopie: EPiC Series in Computing, 2018. s. 131-142. ISSN 2398-7340. doi:10.29007/sxzb. [URL info](#)
 - P. Ročkai, V. Štill, I. Černá a J. Barnat. DiVM: Model checking with LLVM and graph memory. *Journal of Systems and Software*. Elsevier, 2018, roč. 143, Oct, s. 1-13. ISSN 0164-1212. doi:10.1016/j.jss.2018.04.026. [URL info](#)
 - M. Svoreňová, J. Křetínský, M. Chmelík, K. Chatterjee, I. Černá a C. Belta. Temporal logic control for stochastic linear systems using abstraction refinement of probabilistic games. *Nonlinear Analysis: Hybrid Systems*. Elsevier, 2017, roč. 23, February 2017, s. 230-253. ISSN 1751-570X. doi:10.1016/j.nahs.2016.04.006. [info](#)
 - J. Barnat, I. Černá, P. Ročkai, V. Štill a K. Zákopčanová. On verifying C++ programs with probabilities. In Sascha Ossowski. *Proceedings of the 31st Annual ACM Symposium on Applied Computing*. Pisa: ACM New York, NY, USA, 2016. s. 1238-1243. ISBN 978-1-4503-3739-7. doi:10.1145/2851613.2851721. [URL info](#)
 - J. Bendík, N. Beneš, J. Barnat a I. Černá. Finding Boundary Elements in Ordered Sets with Application to Safety and Requirements Analysis. In Rocco De Nicola, Eva Křetínská. *Software Engineering and Formal Methods - 14th International Conference, SEFM 2016*. Berlin: Lecture Notes in Computer Sciences in Computer Science, 9763, 2016. s. 121-136. ISBN 978-3-319-41590-1. doi:10.1007/978-3-319-41591-8_9. [URL info](#)
 - P. Bezděk, N. Beneš, J. Barnat a I. Černá. LTL Parameter Synthesis of Parametric Timed Automata. In Rocco De Nicola, Eva Křetínská. *Software Engineering and Formal Methods - 14th International Conference, SEFM 2016*. Berlin: Lecture Notes in Computer Sciences in Computer Science, 9763, 2016. s. 172-187. ISBN 978-3-319-41590-1. doi:10.1007/978-3-319-41591-8_12. [URL info](#)
 - E. Tesařová, M. Svoreňová, J. Barnat a I. Černá. Optimal observation mode scheduling for systems under temporal constraints. In *2016 American Control Conference (ACC)*. Boston: IEEE Conference Publications, 2016. s. 1099-1104. ISBN 978-1-4673-8682-1. doi:10.1109/ACC.2016.7525062. [URL info](#)
 - J. Bendík, N. Beneš, I. Černá a J. Barnat. Tunable Online MUS/MSS Enumeration. In Akash Lal, S. Akshay, Saket Saurabh, Sandeep Sen. *Foundations of Software Technology and Theoretical Computer Science - 36th International Conference, FSTTCS 2016*. 65. vyd. Dagstuhl, Germany: Schloss Dagstuhl--Leibniz-Zentrum fuer Informatik, 2016. s. 661-673. ISBN 978-3-95977-027-9. doi:10.4230/LIPIcs.FSTTCS.2016.50. [info](#)
 - M. Svoreňová, I. Černá a C. Belta. Optimal Temporal Logic Control for Deterministic Transition Systems with Probabilistic Penalties. *IEEE Transactions on Automatic Control*. IEEE Control Systems Society, 2015, roč. 60, č. 6, s. 1528-1541. ISSN 0018-9286. doi:10.1109/TAC.2014.2381451. [info](#)
 - M. Svoreňová, J. Křetínský, M. Chmelík, K. Chatterjee, I. Černá a C. Belta. Temporal Logic Control for Stochastic Linear Systems using Abstraction Refinement of Probabilistic Games. In *Proceedings of ACM international conference on Hybrid Systems: Computation and Control*. Seattle, Washington, USA: Association for Computing Machinery (ACM), 2015. s. 259-268. ISBN 978-1-4503-3433-4. doi:10.1145/2728606.2728608. [info](#)

- M. Svoreňová, M. Chmelík, K. Leahy, H.F. Eniser, K. Chatterjee, I. Černá a C. Belta. Temporal Logic Motion Planning using POMDPs with Parity Objectives. In *Proceedings of ACM international conference on Hybrid Systems: Computation and Control*. Seattle, Washington, USA: Association for Computing Machinery (ACM), 2015. s. 233-238. ISBN 978-1-4503-3433-4. doi:10.1145/2728606.2728617. [info](#)
- J. Barnat, N. Beneš, T. Bureš, I. Černá, T. Keznikl a F. Plášil. Towards Verification of Ensemble Based Component Systems. In José Luiz Fiadeiro, Zhiming Liu, Jinyun Xue. *Formal Aspects of Component Software*. Neueden: Springer International Publishing, 2014. s. 41-60. ISBN 978-3-319-07601-0. doi:10.1007/978-3-319-07602-7_5. [info](#)
- P. Bezděk, N. Beneš, V. Havel, J. Barnat a I. Černá. On Clock-Aware LTL Properties of Timed Automata. In Gabriel Ciobanu, Dominique Méry. *Theoretical Aspects of Computing – ICTAC 2014*. Neueden: Springer International Publishing, 2014. s. 43-60. ISBN 978-3-319-10881-0. doi:10.1007/978-3-319-10882-7_4. [info](#)
- P. Bezděk, N. Beneš, J. Barnat a I. Černá. LTL Model Checking of Parametric Timed Automata. In Petr Hliněný, Zdeněk Dvořák, Jiří Jaroš, Jan Kofroň, Jan Kořenek, Petr Matula, Karel Pala. *MEMICS 2014*. Brno, Czech Republic: NOV PRESS, 2014. s. 28-39. ISBN 978-80-214-5022-6. [info](#)
- M. Svoreňová, I. Černá a C. Belta. Optimal Receding Horizon Control for Finite Deterministic Systems with Temporal Logic Constraints. In *Proceedings of The 2013 American Control Conference*. Neueden: Institute of Electrical and Electronics Engineers (IEEE), 2013. s. 4399-4404. ISBN 978-1-4799-0177-7. doi:10.1109/ACC.2013.6580517. [URL](#) [info](#)
- B. Yordanov, J. Tůmová, I. Černá, J. Barnat a C. Belta. Formal analysis of piecewise affine systems through formula-guided refinement. *Automatica*. Elsevier, 2013, roč. 49, č. 1, s. 261-266. ISSN 0005-1098. doi:10.1016/j.automatica.2012.09.027. [info](#)
- M. Svoreňová, I. Černá a C. Belta. Optimal Control of MDPs with Temporal Logic Constraints. In *Proceedings of The 52nd IEEE Conference on Decision and Control*. Neueden: Omnipress for the IEEE Control Systems Society, 2013. s. 3938-3943. ISBN 978-1-4673-5714-2. doi:10.1109/CDC.2013.6760491. [URL](#) [info](#)
- J. Barnat, N. Beneš, I. Černá a Z. Petruchová. DCCL: Verification of Component Systems with Ensembles. In *CBSE '13 Proceedings of the 16th International ACM Sigsoft symposium on Component-based software engineering*. New York, NY, USA: ACM, 2013. s. 43-52. ISBN 978-1-4503-2122-8. doi:10.1145/2465449.2465453. [URL](#) [info](#)
- B. Yordanov, J. Tůmová, I. Černá, J. Barnat a C. Belta. Temporal Logic Control of Discrete-Time Piecewise Affine Systems. *IEEE Transactions on Automatic Control*. PISCATAWAY, 2012, roč. 57, č. 6, s. 1491-1504. ISSN 0018-9286. doi:10.1109/TAC.2011.2178328. [info](#)
- J. Barnat, I. Černá a J. Tůmová. Timed Automata Approach to Verification of Systems with Degradation. In *MEMICS 2011*. LNCS 7119. Heidelberg: Springer, 2012. s. 84 - 93. ISBN 978-3-642-25928-9. doi:10.1007/978-3-642-25929-6_8. [info](#)
- M. Svoreňová, J. Tůmová, J. Barnat a I. Černá. Attraction-Based Receding Horizon Path Planning with Temporal Logic Constraints. In *Proceedings of the 51st IEEE Conference on Decision and Control*. Neueden: Omnipress for the IEEE Control Systems Society, 2012. s. 6749-6754. ISBN 978-1-4673-2066-5. doi:10.1109/CDC.2012.6426041. [URL](#) [info](#)
- N. Beneš, B. Bůhnová, I. Černá a R. Ošlejšek. Reliability analysis in component-based development via probabilistic model checking. In *Proceedings of the 15th ACM SIGSOFT symposium on Component Based Software Engineering (CBSE '12)*. New York, NY, USA: ACM, 2012. s. 83-92. ISBN 978-1-4503-1345-2. doi:10.1145/2304736.2304752. [info](#)
- J. Barnat, I. Černá a J. Tůmová. Verification of Systems with Degradation. *Computing and Informatics*. 2012, roč. 31, č. 3, s. 507-530. ISSN 1335-9150. [info](#)
- N. Beneš, I. Černá a F. Štefaňák. Factorization for Component-Interaction Automata. In *SOFSEM 2012: Theory and Practice of Computer Science*. Berlin Heidelberg: Springer Berlin Heidelberg, 2012. s. 554-565. ISBN 978-3-642-27659-0. doi:10.1007/978-3-642-27660-6_45. [info](#)
- N. Beneš, L. Brim, B. Bůhnová, I. Černá, J. Sochor a P. Moravcová Vařeková. Partial Order

Reduction for State/Event LTL with Application to Component-Interaction Automata. *Science of Computer Programming*. Elsevier, 2011, roč. 76, č. 10, s. 877-890. ISSN 0167-6423. doi:10.1016/j.scico.2010.02.008. [URL info](#)

- I. Černá a B. Haverkort. Parallel and Distributed Methods in Verification. *Journal of logic and computation*. Oxford: Oxford University Press, 2011, roč. 2011, č. 21, s. 1-3. ISSN 0955-792X. doi:10.1093/logcom/exp001. [info](#)
- P. Collins, L. Habets, J. van Schuppen, I. Černá, J. Fabriková a D. Šafránek. Abstraction of Biochemical Reaction Systems on Polytopes. In *Proceedings of the 18th IFAC World Congress*. Milano: IFAC, 2011. s. 14869-14875. ISBN 978-1-1234-7890-2. [URL info](#)
- N. Beneš, I. Černá a J. Křetínský. Modal Transition Systems: Composition and LTL Model Checking. In *ATVA 2011 - Automated Technology for Verification and Analysis: 9th International Symposium*. Heidelberg Dordrecht London New York: Springer, 2011. s. 228-242. ISBN 978-3-642-24371-4. [info](#)
- N. Beneš, I. Černá a M. Křivánek. CoInDiVinE: Parallel Distributed Model Checker for Component-Based Systems. In Jiří Barnat and Keijo Heljanko. *Proceedings 10th International Workshop on Parallel and Distributed Methods in verification*. Neuv eden: Open Publishing Association, 2011. s. 63-67. ISSN 2075-2180. doi:10.4204/EPTCS.72. [URL info](#)
- J. Tůmová, B. Yordanov, C. Belta, I. Černá a J. Barnat. A Symbolic Approach to Controlling Piecewise Affine Systems. In *Proceedings of the 49th IEEE Conference on Decision and Control (CDC)*. Neuv eden: Omnipress for IEEE Control Systems Society, 2010. s. 4230-4235. ISBN 978-1-4244-7744-9. [info](#)
- B. Yordanov, J. Tůmová, C. Belta, I. Černá a J. Barnat. Formal Analysis of Piecewise Affine Systems through Formula-Guided Refinement. In *Proceedings of the 49th IEEE Conference on Decision and Control (CDC)*. Neuv eden: Omnipress for IEEE Control Systems Society, 2010. s. 5899-5904. ISBN 978-1-4244-7744-9. [info](#)
- J. Barnat, L. Brim, I. Černá, S. Dražan, J. Fabriková a D. Šafránek. On Algorithmic Analysis of Transcriptional Regulation by LTL Model Checking. *Theoretical Computer Science*. 2009, roč. 2009, č. 410, s. 3128-3148, 20 s. ISSN 0304-3975. [URL info](#)
- N. Beneš, L. Brim, I. Černá, J. Sochor, P. Vařeková a B. Zimmerová. Partial Order Reduction for State/Event LTL. In *Proceedings of the International Conference on Integrated Formal Methods (IFM'09)*. Berlin / Heidelberg, Germany: Springer Verlag, 2009. s. 307-321. ISBN 978-3-642-00254-0. doi:10.1007/978-3-642-00255-7_21. [info](#)
- J. Barnat, L. Brim, I. Černá, S. Dražan, J. Fabriková a D. Šafránek. Computational Analysis of Large-Scale Multi-Affine ODE Models. In *International Workshop on High Performance Computational Systems Biology*. Los Alamitos (California): IEEE Computer Society, 2009. s. 81-90. ISBN 978-0-7695-3809-9. [URL info](#)
- J. Barnat, L. Brim, I. Černá, M. Češka a J. Tůmová. Local Quantitative LTL Model Checking. In *Formal Methods for Industrial Critical Systems*. Neuv eden: Springer Berlin / Heidelberg, 2009. s. 53-68. ISBN 978-3-642-03239-4. doi:10.1007/978-3-642-03240-0_8. [URL info](#)
- J. Barnat, I. Černá a J. Tůmová. Quantitative Model Checking of Systems with Degradation. In *2009 Sixth International Conference on the Quantitative Evaluation of Systems*. Los Alamitos (California): IEEE Computer Society, 2009. s. 21-30. ISBN 978-0-7695-3808-2. [URL URL info](#)
- B. Zimmerová, P. Vařeková, N. Beneš, I. Černá, L. Brim a J. Sochor. Component-Interaction Automata Approach (CoIn). In *The Common Component Modeling Example: Comparing Software Component Models*. Berlin / Heidelberg, Germany: Springer Verlag, 2008. s. 146-176. LNCS 5153. ISBN 978-3-540-85288-9. [URL info](#)
- J. Barnat, L. Brim, I. Černá, S. Dražan a D. Šafránek. Parallel Model Checking Large-Scale Genetic Regulatory Networks with DiVinE. In *Electronic Notes in Theoretical Computer Science*. Vol. 194/3. Elsevier: Elsevier Science, 2008. s. 35-50, 15 s. ISSN 1571-0661. [info](#)
- N. Beneš, I. Černá, J. Sochor, P. Moravcová Vařeková a B. Bůhnová. A Case Study in Parallel Verification of Component-Based Systems. *Electronic Notes in Theoretical Computer Science*. Neuv eden: Elsevier, 2008, roč. 220, č. 2, s. 67-83, 16 s. ISSN 1571-0661. [info](#)

- J. Barnat, L. Brim, I. Černá, S. Dražan a D. Šafránek. From Simple Regulatory Motifs to Parallel Model Checking of Complex Transcriptional Networks. In *Proceedings of PDMC 2008 - Parallel and Distributed Methods in Verification*. Budapest: Ivana Cerna and Gerald Luetzgen, 2008. s. 83-96, 15 s. ISSN 1571-0661. [info](#)
- N. Beneš, L. Brim, I. Černá, J. Sochor, P. Vařeková a B. Zimmerová. The CoIn Tool: Modelling and Verification of Interactions in Component-Based Systems. In *Pre-proceedings of the International Workshop on Formal Aspects of Component Software (FACS'08)*. Málaga, Spain: Department of Computer Science, University of Málaga, 2008. s. 221-225. ISSN 1571-0661. [info](#)
- P. Moravcová Vařeková, I. Vařeková a I. Černá. Automated Computing of the Maximal Number of Handled Clients for Client-Server Systems. In *Proceedings of the International Workshop on Formal Aspects of Component Software (FACS'08)*. Málaga, Spain: Department of Computer Science, University of Málaga, 2008. s. 41-55. ISSN 1571-0661. [info](#)
- P. Moravcová Vařeková a I. Černá. Model Checking of Control-User Component-Based Parametrised Systems. In *Lecture Notes in Computer Science 5282*. Germany: Springer Verlag, 2008. s. 146-162. ISBN 978-3-540-87890-2. [info](#)
- J. Barnat, L. Brim, I. Černá, M. Češka a J. Tůmová. ProbDiVinE-MC: Multi-core LTL Model Checker for Probabilistic Systems. In *QEST '08: Proceedings of the 2008 Fifth International Conference on Quantitative Evaluation of Systems*. Washington, DC, USA: IEEE Computer Society, 2008. s. 77-78. ISBN 978-0-7695-3360-5. [info](#)
- P. Vařeková, B. Zimmerová, P. Moravec a I. Černá. Formal verification of systems with an unlimited number of components. *IET Software journal*. Inst. of Engineering and Technology, 2008, Volume 2, Issue 6, s. p. 532-546, 15 s. ISSN 1751-8806. [URL](#) [info](#)
- I. Černá, P. Vařeková a B. Zimmerová. Component Substitutability via Equivalencies of Component-Interaction Automata. *Electronic Notes in Theoretical Computer Science*. Elsevier, 2007, roč. 182, č. 1, s. 39-55. ISSN 1571-0661. [info](#)
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