

# Jan Strejček

## Curriculum Vitae

### Personal Data

Date and Place of Birth: May 21, 1977, Brno, Czechoslovakia  
Family Status: Married, 1 child

### Education and Academic Qualifications

- 2000: Mgr. (master's degree) in Mathematics, graduated with honors on Faculty of Science, Masaryk University, Brno. Thesis: *Constrained Rewrite Transition Systems*. Supervisor: *Luboš Brim*.
- 2001: Mgr. (master's degree) in Informatics, graduated with honors on Faculty of Informatics, Masaryk University, Brno. Thesis: *Models of Infinite-State Systems with Constraints*. Supervisor: *Antonín Kučera*.
- 2005: Ph.D. in Computer Science, Faculty of Informatics, Masaryk University, Brno. Thesis: *Linear Temporal Logic: Expressiveness and Model Checking*. Supervisor: *Mojmír Křetínský*.
- 2007: RNDr. in Informatics, Faculty of Informatics, Masaryk University, Brno.

### Employment

- February 2005 - August 2005: Assistant professor at Dept. of Computer Science, Faculty of Informatics, Masaryk University, Brno.
- September 2005 - August 2006: Post-doc at LaBRI, University of Bordeaux 1.
- September 2006 - now: Assistant professor at Dept. of Computer Science, Faculty of Informatics, Masaryk University, Brno.

### Pedagogical Activities

- Automata and Grammars - lecturer and seminar tutor (2006 - now).
- Formal Verification Methods - lecturer (2008).
- Computational Logic - seminar tutor (2007, 2008).
- Formal Languages and Automata I - seminar tutor (2007, 2008).
- Design of Algorithms I - seminar tutor (2008).
- Computability and Complexity - seminar tutor (2003, 2004, 2006).
- Computability - seminar tutor (1998 - 2002).

## Research Interests

- Properties of modal and temporal logics and their fragments.
- Formal verification of concurrent systems (especially model checking).
- Models of infinite-state systems, their expressiveness and decidability issues.

## Academic Awards

- 1999: Annual prize of Section of Mathematics, Faculty of Science, Masaryk University, Brno.
- 2000: Annual rector's prize, Masaryk University, Brno.
- 2001: Annual dean's prize, Faculty of Informatics, Masaryk University, Brno.
- 2001: 2nd place in SVOČ (a Czech mathematical research contest for undergraduate students), category Theoretical Informatics.
- 2007: Dean's award for distinguished PhD thesis, Faculty of Informatics, Masaryk University, Brno.

## Academic Stays

- Three months at the Institute of Formal Methods in Computer Science, University of Stuttgart, Germany (March - May 2005).
- One week at Laboratoire d'Informatique Algorithmique: Fondements et Applications (LIAFA), Paris 7 University, France (November 2005).

## Attended Summer Schools

- 2001: School on Formal Methods for the Design of Computer, Communication and Software Systems: Process Algebras (SFM-01:PA), Bertinoro, Italy.
- 2002: Summer school on MOdelling and VERification of Parallel processes (MOVEP'02), Nantes, France.
- 2004: Summer school Marktoberdorf 2004: Engineering Theories of Software Intensive Systems, Marktoberdorf, Germany.
- 2005: Spring school on Infinite Games and Their Applications, Bonn, Germany.
- 2006: Summer school on MOdelling and VERification of Parallel processes (MOVEP'06), Bordeaux, France.

## Other activities

- 1999 - now: Member of *ParaDiSe - Parallel and Distributed Systems Laboratory*, Faculty of Informatics, Masaryk University, Brno.
- 2002 - now: Member of development team of *YAHODA - Verification tools database*, <http://www.fi.muni.cz/yahoda>
- 1998 - 1999: beta-tester of the programming language REBOL.

## Publications

### Journal Articles

1. Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. Petri nets are less expressive than state-extended PA. *Theoretical Computer Science*, 394(1–2):134–140, 2008.
2. Antonín Kučera and Jan Strejček. The stuttering principle revisited. *Acta Informatica*, 41(7–8):415–434, 2005.

### International Conference and Workshop Papers

1. Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. On decidability of LTL+past model checking for process rewrite systems. In *INFINITY 2007*, Electronic Notes in Theoretical Computer Science. Elsevier Science Publishers, 2008. To appear.
2. Laura Bozzelli, Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. On decidability of LTL model checking for process rewrite systems. In *FSTTCS 2006*, volume 4337 of *Lecture Notes in Computer Science*, pages 248–259. Springer-Verlag, 2006.
3. Ahmed Bouajjani, Jan Strejček, and Tayssir Touili. On symbolic verification of weakly extended PAD. In *Proceedings of the 13th International Workshop on Expressiveness in Concurrency (EXPRESS 2006)*, volume 175(3) of *Electronic Notes in Theoretical Computer Science*, pages 47–64. Elsevier Science Publishers, 2007.
4. Ahmed Bouajjani, Javier Esparza, Stefan Schwoon, and Jan Strejček. Reachability analysis of multithreaded software with asynchronous communication. In R. Ramanujam and S. Sen, editors, *FSTTCS 2005*, volume 3821 of *Lecture Notes in Computer Science*, pages 348–359. Springer-Verlag, 2005.
5. Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. Reachability of Hennessy-Milner properties for weakly extended PRS. In R. Ramanujam and S. Sen, editors, *FSTTCS 2005*, volume 3821 of *Lecture Notes in Computer Science*, pages 213–224. Springer-Verlag, 2005.
6. Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. Refining the undecidability border of weak bisimilarity. In Scott A. Smolka and Jiří Srba, editors, *INFINITY 2005*, volume 149 of *Electronic Notes in Theoretical Computer Science*, pages 17–36. Elsevier Science Publishers, 2006.
7. Radek Pelánek and Jan Strejček. Deeper connections between LTL and alternating automata. In *CIAA 2005*, volume 3845 of *Lecture Notes in Computer Science*, pages 238–249. Springer-Verlag, 2006.
8. Antonín Kučera and Jan Strejček. Characteristic patterns for LTL. In *SOFSEM 2005*, volume 3381 of *Lecture Notes in Computer Science*, pages 239–249. Springer-Verlag, 2005.
9. Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. Extended process rewrite systems: Expressiveness and reachability. In Philippa Gardner and Nobuko Yoshida, editors, *CONCUR 2004 - Concurrency Theory*, volume 3170 of *Lecture Notes in Computer Science*, pages 355–370. Springer-Verlag, 2004.

10. Mojmír Křetínský, Vojtěch Řehák, and Jan Strejček. On extensions of process rewrite systems: Rewrite systems with weak finite-state unit. In Philippe Schnoebelen, editor, *INFINITY 2003: 5th International Workshop on Verification of Infinite-State Systems*, volume 98 of *Electronic Notes in Theoretical Computer Science*, pages 75–88. Elsevier Science Publishers, 2004.
11. Antonín Kučera and Jan Strejček. The stuttering principle revisited: On the expressiveness of nested X and U operators in the logic LTL. In Julian Bradfield, editor, *CSL '02: 11th Annual Conference of the European Association for Computer Science Logic*, volume 2471 of *Lecture Notes in Computer Science*, pages 276–291. Springer-Verlag, 2002.
12. Jan Strejček. Rewrite systems with constraints. In Luca Aceto and Prakash Panangaden, editors, *EXPRESS '01: 8th International Workshop on Expressiveness in Concurrency*, volume 52 of *Electronic Notes in Theoretical Computer Science*. Elsevier Science Publishers, 2002.

### Other Publications

1. Jitka Crhová, Pavel Krčál, Jan Strejček, David Šafránek, and Pavel Šimeček. YAHODA: verification tools database. In Ivana Černá, editor, *Tools Day, Proceedings*, FIMU-RS-2002-05, pages 99–103. Faculty of Informatics, Masaryk University in Brno, 2002. URL: <http://anna.fi.muni.cz/yahoda/>.
2. Jan Strejček. Boundaries and efficiency of verification. In *Proceedings of summer school on MOdelling and VERification of Parallel processes (MOVEP '02)*, pages 403–408. IRCCyN, Ecole Centrale de Nantes, 2002.

March 3, 2008

Jan Strejček