

## Selected Publications by Markus Roggenbach

### Journals

1. F G Moller, H N Nguyen, M Roggenbach: *Simulating Timed CSP*, 20 pages, submitted.
2. S Chadwick, J Clarke, A Iliasov, Y Isobe, P James, F Moller, M Roggenbach, A Romanovsky: *The SafeCap Project – Overcoming railway capacity challenges without undermining rail network safety*, 8 pages, submitted.
3. A Gimblett, T Kahsai, L O'Reilly, M Roggenbach: *A survey on CSP-CASL*, 18 pages. **Electronic Communications of the EASST**, 18 pages, EASST, to appear.
4. P James, M Roggenbach: *Automatically Verifying Railway Interlockings using SAT-based Model Checking*, **Electronic Communications of the EASST**, 18 pages, EASST, 2010.
5. L O'Reilly, Y Isobe, M Roggenbach: *CSP-CASL-Prover - A generic tool for process and data refinement*. **Electronic Notes in Theoretical Computer Science** 250 (2), pp. 69–84, Elsevier, 2009.
6. G Samuel, Y Isobe, M Roggenbach: *The stable revivals model in CSP-Prover*. **Electronic Notes in Theoretical Computer Science** 250 (2), pp. 119–134, Elsevier, 2009.
7. Y Isobe, M Roggenbach: *CSP-Prover - A Proof Tool for the Verification of Scalable Concurrent Systems*. **Journal of Computer Software** 25 (4), pp. 85–92, Japanese Society for Software Science and Technology, 2008.
8. M. Roggenbach: *CSP-CASL — A new integration of process algebra and algebraic specification*. **Theoretical Computer Science** 354, pp. 42–71, Elsevier, 2006.
9. T. Mossakowski, L. Schröder, M. Roggenbach und H. Reichel: *Algebraic-coalgebraic specification in CoCASL*. **Journal of Logic and Algebraic Programming** 67 (1-2), pp. 146– 197, Elsevier, 2006.
10. T. Mossakowski, M. Roggenbach, L. Schröder: *CoCASL at Work – Modelling Process Algebra*. **Electronic Notes in Theoretical Computer Science** 82 (1), Elsevier 2003.
11. M. Roggenbach and M. Majster-Cederbaum: *Towards a unified view of bisimulation: a comparative study*. **Theoretical Computer Science** 238, pp. 81–130, Elsevier 2000.
12. M. Majster-Cederbaum and M. Roggenbach: *Transition systems from event structures revisited*. **Information Processing Letters** 67(3), pp. 119–124, Elsevier 1998.

## Editor

13. J Bendispoto, M Leuschel, M Roggenbach (Eds): *Automated Verification of Critical Systems (AVoCS '10)*. Special issue of **Science of Computer Programming**, Elsevier, to appear.
14. M Roggenbach (Ed): *Automated Verification of Critical Systems (AVoCS '09)*. Special issue of **Science of Computer Programming**, Elsevier, to appear.
15. L Schröder, T Mossakowski, M Roggenbach (Eds): Festschrift in honour of Bernd Krieg-Brückner. **Electronic Communications of the EASST**, EASST, to appear.
16. J Bendispoto, M Leuschel, M Roggenbach (Eds): Proceedings of **AVoCS '10. Electronic Communications of the EASST**, EASST, 2010.
17. M Roggenbach (Ed): Proceedings of **AVoCS '09. Electronic Communications of the EASST (23)**, EASST, 2009.
18. JL Fiadeiro, N Harman, M Roggenbach, J Rutten (Eds): *Algebra and Coalgebra in Computer Science*. Proceedings of **CALCO '05**. LNCS 3629, Springer 2005.

## Contributions to Books

19. M Roggenbach, T Mossakowski, L Schröder: Standard Library of Basic Datatypes in CASL. In P Mosses (Ed): **CASL Reference Manual**. LNCS 2960 (IFIP Series), Springer, 2004.
20. T Beth, K Homann, A Klappenecker, J Müller-Quade, A. Nüchel, M. Roggenbach: *Computer Algebra in Computer Science*. In J. Grabmeier, E. Kaltofen, V. Weispfenning (Eds): **Computer Algebra Handbook — Foundations, Applications, Systems**. Springer 2003.
21. M Roggenbach: *Determinization of Büchi-Automata*. In E Grädel, W Thomas, T Wilke (Eds): **Automata, Logics, and Infinite Games**. LNCS 2500 (Tutorial Series), pp. 43–60, Springer 2002.

## Contributions to a Festschrift

22. A Gimblett, T Kahsai, L O'Reilly, M Roggenbach: *The whereabouts of CSP-CASL*. 18 pages. In Festschrift for B Krieg-Brückner, Bremen, **2009**.
23. Y Isobe, M Roggenbach: *Verifying the Uniform Candy Distribution Puzzle with CSP-Prover*. In Festschrift for D Kourie, Pretoria, **2008**.

## Keynote Address

24. M Roggenbach: *Tools for CSP*. Proceedings of **SEFM '08**, IEEE, 2008.

## Refereed Conference Papers

25. P James, A Beckmann, M Roggenbach: *Domain Specific Languages and Verification in the Railway Domain*, submitted.
26. M Fontaine, A Gimblett, F Moller, HN Nguyen, M Roggenbach: *Timed CSP Simulator*, submitted.
27. F Moller, HN Nguyen, M Roggenbach, S Schneider, H Treharne: *Using ProB and CSP  $\parallel B$  for railway modelling*, submitted.
28. F Moller, HN Nguyen, M Roggenbach, S Schneider, H Treharne: *Combining event-based and state-based modelling for railway verification*, submitted.
29. Y Isobe, F Moller, HN Nguyen, M Roggenbach: *Safety and Line Capacity in Railways An approach in Timed CSP*. Proceedings of **iFM'12**, Springer, LNCS, to appear.
30. Y Isobe, HN Nguyen, M Roggenbach: *Towards safe capacity in the railway domain – An experiment in Timed-CSP*. Proceedings of the Dependable System Workshop **DSW'11**, 2011.
31. M Dragon, A Gimblett, M Roggenbach: *A Simulator for Timed CSP*. PreProceeding of **AVoCS'11**, Technical Report, Newcastle University, 2011.
32. P James, M Roggenbach: *Designing Domain Specific Languages for Verification: First Steps*. 1st Workshop on Automated Theory Engineering **ATE'11**, CEUR Workshop Proceedings, 2011.
33. L O'Reilly, T Mossakowski, M Roggenbach: *Compositional Reasoning for Processes and Data*, Proceedings of the 18th Workshop on Automated Reasoning **ARW'11**. TR-2011-327, University of Glasgow, 2011.
34. AP Maldonado, L Monteiro, M Roggenbach: *Towards Bi-Algebraic Semantics for the Linear Time – Branching Time Spectrum*, 15 pages, Proceedings of **WADT'10**, LNCS, Springer, to appear.
35. L O'Reilly, T Mossakowski, M Roggenbach: *Compositional Modelling and Reasoning in an Institution for Processes and Data*, 15 pages, Proceedings of **WADT'10**, LNCS, Springer, to appear.
36. G Holland, T Kahsai, M Roggenbach, BH Schlingloff: *Towards formal testing of jet engine Rolls-Royce BR725*. Proceeding of **CSP'09**, Krakow, Poland, 2009.
37. T Kahsai, M Roggenbach: *Property preserving refinement for CSP-CASL*. Proceedings of **WADT'08**. LNCS 5486, Springer 2009.
38. S Gruner, D G Kourie, M Roggenbach, T Strauss, B W Watson: *A new CSP operator for optional parallelism*. Proceedings of **CSSE '08**, IEEE 2008.
39. T Kahsai, M Roggenbach, B-H Schlingloff: *Specification-based testing for software product lines*. Proceedings of **SEFM '08**, IEEE, 2008.

40. Y. Isobe and M. Roggenbach: *Proof Principles of CSP - CSP-Prover in Practice*. Proceedings of **LDIC '07**, Springer, 2008.
41. L O'Reilly, Y Isobe, M Roggenbach: *CSP-CASL-Prover - Tool integration and algorithms for automated proof generation*. **CALCO-jnr '07**, Department of Informatics University of Bergen, 2008.
42. T. Kahsai, M. Roggenbach, and H. Schlingloff: *Specification-based test generation for refinement*. Proceedings of **SEFM '07**, pp. 237–247, IEEE, 2007.
43. D G Samuel, Y Isobe, M Roggenbach: *Reasoning on Responsiveness - Extending CSP-Prover by the Model R*. Proceedings of **NWPT'07 / FLACOS'07**, Research Report 366, Universitetet i Oslo, 2007.
44. T. Mossakowski and M. Roggenbach: *Structured CSP - A Process Algebra as an Institution*. Proceedings of **WADT '06**. LNCS 4409, Springer, 2007.
45. Y Isobe, M Roggenbach: *A complete axiomatic semantics for the CSP stable-failures model*. Proceedings of **CONCUR '06**. LNCS 4137, Springer 2006.
46. Y Isobe, M Roggenbach, S Gruner: *Extending CSP-Prover by deadlock-analysis: Towards the verification of systolic arrays*. Proceedings of **FOSE '05**, Japanese Lecture Notes Series, Kindai kagaku sha, 2005.
47. Y Isobe, M Roggenbach: *A generic theorem prover of CSP refinement*. Proceedings of **TACAS '05**. LNCS 3440, Springer 2005.
48. A Gimblett, M Roggenbach, BH Schlingloff: *Towards a Formal Specification of an Electronic Payment System in CSP-CASL*. Proceedings of **WADT '04**. LNCS 3423, Springer 2005.
49. C Lüth, M Roggenbach, L Schröder: *CCC – The CASL Consistency Checker*. Proceedings of **WADT '04**. LNCS 3423, Springer 2005.
50. T Mossakowski, H Reichel, M Roggenbach, L Schröder: *Algebraic-coalgebraic specification in CoCASL*. Proceedings of **WADT '02**. LNCS 2755, Springer 2003.
51. B Krieg-Brückner, D Hutter, A Lindow, C Lüth, A Mahnke, E Melis, P Meier, A Poetzsch-Heffter, M Roggenbach, G Russel, JG Smaus, M Wirsing: *MultiMedia Instruction in Safe and Secure Systems*. Proceedings of **WADT '02**. LNCS 2755, Springer 2003.
52. M Roggenbach, L Schröder: *Towards Trustworthy Specifications I: Consistency Checks*. Proceedings of **WADT '01**. LNCS 2267, Springer 2001.
53. M Roggenbach, L Schröder, T Mossakowski: *Specifying Real Numbers in CASL*. Proceedings of **WADT '99**. LNCS 1827, Springer 2000.