

Research Publications of

Professor Karl Meinke

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Citation counts according to **Google Scholar**.

Top Five Cited Publications

(1) K. Meinke and J.V. Tucker, Universal Algebra, pp. 189-411 in: S. Abramsky, D. Gabbay and T.S.E. Maibaum (eds), *Handbook of Logic in Computer Science: Volume 1*, Oxford University Press, 1993. Citations 189

(26) K. Meinke, Universal algebra in higher types, *Theoretical Computer Science*, 100, (1992), 385-417. Citations 67

(21) K. Meinke, Automated Black-Box Testing of Functional Correctness using Function Approximation, pp 143-153 in: G. Rothermel (ed) *Proc. ACM SIGSOFT Int. Symp. on Software Testing and Analysis*, ISSA 2004, Software Engineering Notes 29 (4), ACM Press, 2004. Citations 18

(13) K. Meinke and L.J. Steggles, Specification and verification in higher-order algebra: a case study of convolution, pp. 189-222 in: J. Heering et al (eds), *HOA '93, an International Workshop on Higher-Order Algebra, Logic and Term Rewriting*, Lecture Notes in Computer Science 816, Springer Verlag, Berlin, 1994. Citations 15

(33) K. Meinke, Proof Theory of Higher-Order Equations: Conservativity, Normal Forms and Term Rewriting, *Journal of Computer and Systems Sciences*, 67, 127-173, 2003. Citations 11

Major Surveys

(1) K. Meinke and J.V. Tucker, Universal Algebra, pp. 189-411 in: S. Abramsky, D. Gabbay and T.S.E. Maibaum (eds), *Handbook of Logic in Computer Science: Volume 1*, Oxford University Press, 1993. Citations 189

(2) K. Meinke, *A Survey of Higher-Order Algebra*, Technical Report, UUDM 1995:39, ISSN 1101-3591, Department of Mathematics, University of Uppsala, 1995. Citations 2

Edited Works

(3) K. Meinke and J.V. Tucker (eds), *Many-Sorted Logic and its Applications*, John Wiley, Chichester, 1993, ISBN 0471 93485 2. Citations 41

(4) J. Heering, K. Meinke, B. Möller, T. Nipkow (eds), *HOA '93: Proc. First Int.*

Workshop on Higher-Order Algebra, Logic and Term Rewriting, [Lecture Notes in Computer Science 816](#), Springer Verlag, Berlin, 1994.

(5) E. Börger, Y. Gurevich and K. Meinke (eds), *CSL '93: Proc. 7th International Workshop on Computer Science Logic*, Lecture Notes in Computer Science 832, Springer Verlag, Berlin, 1994.

(6) J. Heering, K. Meinke, B. Möller, T. Nipkow (eds), *HOA '95: Proc. First Int. Workshop on Higher-Order Algebra, Logic and Term Rewriting*, [Lecture Notes in Computer Science 1074](#), Springer Verlag, Berlin, 1996.

(7) M. Hanus, J. Heering and K. Meinke (eds), *Proceedings of the Eighth International Conference on Algebraic and Logic Programming and the Third International Workshop on Higher-Order Algebra, Logic and Term Rewriting*, ALP '97 and HOA '97, LNCS 1298, Springer Verlag, 1997.

(8) C. Palamidessi, H. Glaser and K. Meinke, *Proceedings International Conference in Programming Languages, Logics and Implementations of Programs*, PLILP '98, LNCS 1490, Springer Verlag, 1998.

Conference Proceedings

(9) K. Meinke and J.V. Tucker, Specification and representation of synchronous concurrent algorithms, pp163-181 in: F.H. Vogt (ed), *Concurrency '88*, Lecture Notes in Computer Science 335, Springer Verlag, Berlin, 1988. Citations 7

(10) K. Meinke, Universal algebra in higher types (extended abstract), pp. 185-203 in: H. Ehrig et al (eds), *Recent Trends in Data Type Specification*, Lecture Notes in Computer Science 534, Springer Verlag, Berlin, 1991. Citations 6

(11) K. Meinke, Equational specification of abstract types and combinators, pp. 257-271 in: E. Börger et al (eds), *Proc. Computer Science Logic '91*, Lecture Notes in Computer Science 626, Springer Verlag, Berlin, 1992. Citations 9

(12) K. Meinke, Algebraic semantics of rewriting terms and types, pp. 1-20 in: J.L. Remy and M. Rusinowitch (eds), *Proc. Third International Workshop on Conditional Term Rewriting Systems*, Lecture Notes in Computer Science 656, Springer Verlag, Berlin, 1993. Citations 5

(13) K. Meinke and L.J. Steggles, Specification and verification in higher-order algebra: a case study of convolution, pp. 189-222 in: J. Heering et al (eds), *HOA '93, an International Workshop on Higher-Order Algebra, Logic and Term Rewriting*, Lecture Notes in Computer Science 816, Springer Verlag, Berlin, 1994. Citations 15

(14) B.M. Hearn and K. Meinke, ATLAS: A Typed Language for Algebraic Specifications, pp. 146-168 in: J. Heering et al (eds), *HOA '93, an International*

Workshop on Higher-Order Algebra, Logic and Term Rewriting, Lecture Notes in Computer Science 816, Springer Verlag, Berlin, 1994. Citations 6

(15) K. Meinke, Topological Methods for algebraic specification (extended abstract), pp. 368-388 in: E. Astesiano, G. Reggio and A. Tarlecki (eds), *Recent Trends in Data Type Specification*, Lecture Notes in Computer Science 906, Springer Verlag, Berlin, 1994. Citations 1

(16) K. Meinke, Higher-order equational logic for specification, simulation and testing, pp. 124-143 in: J. Heering et al (eds), *HOA '95, an International Workshop on Higher-Order Algebra, Logic and Term Rewriting*, Lecture Notes in Computer Science 1074, Springer Verlag, Berlin, 1996. Citations 11

(17) K. Meinke, An Axiomatic Semantics for Statecharts using Non-deterministic Synchronous Concurrent Algorithms, in: B. Möller and M. Sheeran (eds), *Proc. Int. Workshop on Formal Techniques for Hardware and Hardware-like Systems*, Tech. Report, Chalmers Institute of Technology, 1998. Citations 2

(18) P. Abdulla, E. Ciapessoni, P. Marmo, K. Meinke and E. Ratto, FAST: an integrated tool for verification and validation of real-time system requirements, electronic proceedings publication FM99, *Proc. Formal Methods Europe*, Springer Verlag, 1999. Citations 0

(19) K. Meinke, Validation and test case generation for MSCs using a propositional SAT solver, in S. Graaf (ed), *Proc. Second International Workshop on SDL and MSCs*, 2000. Citations 0

(20) C. Berg, R. Ekström and K. Meinke, Automatic Test Case Generation for Option Pricing Programs, in: *Proceedings of Test Congress 2000*, SQE Press, London, 2000. Citations 0

(21) K. Meinke, Automated Black-Box Testing of Functional Correctness using Function Approximation, pp 143-153 in: G. Rothermel (ed) *Proc. ACM SIGSOFT Int. Symp. on Software Testing and Analysis*, ISSTA 2004, Software Engineering Notes 29 (4), ACM Press, 2004. Citations 18

(22) K. Meinke, A Stochastic Theory of Black-Box Software Testing, pp.578-595 in K. Futatsugi et al. (eds) *Goguen Festschrift*, LNCS 4060, Springer Verlag, 2006. Citations 0

(23) S. Hu, K. Meinke, L. Huang and O. Huajiang, Fault-tolerant Fitting and Online Diagnosis of faults in SISO Processes, in: *Proc. 6th IFAC Symp. on Fault detection, Supervision and Safety of Technical Processes*, 2006. Citations 0

(23) K. Meinke and F. Niu, A Learning-Based Approach to Unit Testing of Numerical Software, pp 221-235 in A. Petrenko et al. (eds) *Proc. 22nd IFIP Int. Conf. on Testing Software and Systems (ICTSS 2010)*, LNCS 6435, Springer Verlag, 2010. Citations 3

(24) K. Meinke, CGE: a Sequential Learning Algorithm for Mealy Automata, pp 148-162 in J.M. Sempere and P. Garcia (eds), *Proc. 10th Int. Colloquium on Grammatical Inference*, (ICGI 2010), LNCS 6339, Springer Verlag, 2010. Citations 6

(25) K. Meinke and M. Sindhu, Incremental Learning-Based Testing for Reactive Systems, pp 134-151 in: M. Gogolla and B. Wolff (eds), *Proc: Fifth Int. Conf. on Tests and Proofs* (TAP 2011), LNCS 6706, Springer, 2011.

(26) K. Meinke and F. Niu, *Learning-Based Testing for Reactive Systems using Term Rewriting Technology*, pp 97-114 in B. Wolff and F Zaidi (eds) Proc. 23rd IFIP Int. Conf. on Testing Software and Systems (ICTSS 2011), LNCS 7019, Springer Verlag, 2011.

(27) Shaolin Hu, Xiaofeng Wang, Karl Meinke and Huajiang Ouyang: *Outlier-Tolerant Fitting and Online Diagnosis of Outliers in Dynamic Process Sampling Data Series*, pp 195-203 in: Hepu Deng, Duoqian Miao, Jingsheng Lei, Fu Lee Wang (Eds.): Artificial Intelligence and Computational Intelligence - Third International Conference, AICI 2011, Proceedings, Part III, LNCS 7004, Springer Verlag, 2011, ISBN 978-3-642-23895-6

Journal Publications and Book Contributions

(28) K. Meinke, Universal algebra in higher types, *Theoretical Computer Science*, 100, (1992), 385-417. Citations 67

(29) K. Meinke, Subdirect representation of higher-order algebras, 135-146 in: K. Meinke and J.V. Tucker (eds), *Many-Sorted Logic and its Applications*, John Wiley, Chichester, 1993. Citations 1

(30) K. Meinke, A recursive second-order initial algebra specification of primitive recursion, *Acta Informatica*, 31, (1994), 329-340. Citations 11

(31) P. Kosiuczenko and K. Meinke, On the power of higher-order algebraic specification methods, *Information and Computation*, 124, (1995), 85-101. Citations 9

(32) K. Meinke, Topological methods for algebraic specification, *Theoretical Computer Science*, 166, (1996), 263-290. Citations 7

(33) K. Meinke, A completeness theorem for the expressiveness of higher-order algebraic specifications, *Journal of Computer and Systems Sciences*, 54, (1997), 502-518. Citations

- (34) K. Meinke and L.J. Steggle, Correctness of Dataflow and Systolic Algorithms: using Algebras of Streams, *Acta Informatica*, 38, 45-88, 2001. Citations 5
- (35) K. Meinke, Proof Theory of Higher-Order Equations: Conservativity, Normal Forms and Term Rewriting, *Journal of Computer and Systems Sciences*, 67, 127-173, 2003. Citations 11
- (36) S. Hu, K. Meinke, R Chen, O. Huajiang, Iterative estimators of parameters in linear models with partially variant coefficients, *International Journal of Applied Mathematics and Computer Science*, Vol 17, No 2, 179-187, 2007. Citations 1

Unpublished Reports

- (37) K. Meinke, A Stochastic Calculus for Program Correctness and Software Testing, departmental report, NADA, KTH, 2004, <http://www.nada.kth.se/~karlm/stochcalc.pdf>.
- (38) K. Meinke and M. Sindhu, On the Correctness and Performance of the Incremental ID Algorithm for Learning Finite Automata, submitted for journal publication, 2010.

Book Collaborations

- (39) H. Kleine Buning and T. Lettmann with K. Meinke (as english translator), Propositional Logic: Deduction and Algorithms, Cambridge University Press, 1999. Citations 131.

Book Reviews

- (40) review of G. Huet (ed), Logical Foundations of Functional Programming, *Journal of Symbolic Logic*, 59, (1994), 1439-1441.