

Publications of Florian Kammüller

Book

- F. Kammüller. *Interactive Theorem Proving in Software Engineering*. VDM Müller, 2008.

Journals (9)

- L. Henrio, F. Kammüller, and B. Lutz. ASP_{fun}: A Typed Functional Active Object Calculus. *Science of Computer Programming*. Elsevier, in print, 2011.
- A. Fleck and F. Kammüller. Privacy by Flexible Parameterization with Erlang Active Objects. *International Journal of Advance in Software*, **3**(3+4), 2011.
- F. Kammüller. Mechanical Analysis of Finite Idempotent Relations. *Fundamenta Informaticae*. **107**, pages 1–23. IOS Press, 2011.
- F. Kammüller and R. Kammüller. Security Analysis of Private Data Enquiries in Erlang. *International Journal on Advances in Security*. **2**(2+3), 2009.
- F. Kammüller. Formalizing Non-Interference for A Small Bytecode-Language in Coq. *Formal Aspects of Computing*: **20**(3):259–275. Springer, 2008.
- F. Kammüller and S. Preibusch. An Industrial Application of Symbolic Model Checking – The TWIN-Elevator Case Study. *Informatik Forschung und Entwicklung*: **22**(2):95–108, Springer, 2007.
- Book review : Automated Theorem Proving in Software Engineering, by J.M. Schumann, Springer Verlag. In *Journal of Software Testing, Verification and Reliability*: **12**(3): 188–189. Wiley 2002.
- J. Burghardt, F. Kammüller, J. W. Sanders. On the Antisymmetry of Galois Embeddings. *Information Processing Letters*, Vol. 79, Issue 2, Elsevier, June 2001.
- F. Kammüller and L. C. Paulson. A Formal Proof of Sylow’s First Theorem - An Experiment in Abstract Algebra with Isabelle HOL. *Journal of Automated Reasoning*: **23**(3). Elsevier, November 1999.

International Conferences with Peer-Review (20)

- F. Kammüller, G. Mapp, S. Patel. A. S. Sani. Engineering Security Protocols with Modelchecking – Radius-SHA256 and Secured Simple Protocol. *International Conference on Internet Monitoring and Protection*, 2012.
- F. Kammüller. A Security Model for Functional Active Objects. *First International Symposium on Communicability, Computer Graphics and Innovative Design for Interactive Systems, CCGIDIS'11*, Proceedings to appear in Springer LNCS, 2011.
- F. Kammüller and S. Patel. Radius-SHA256 – Verified Remote Authentication with Secure Hashing. *First Global Conference on Communication, Science and Information Engineering, CCSIE'11*. IEEE UK, 2011.
- Ludovic Henrio, Florian Kammüller, and Muhammad Uzair Khan. A Framework for Reasoning on Component Composition. *Formal Methods for Components and Objects, FMCO'2009*. Vol. 6268, LNCS, Springer 2011.
- F. Kammüller. Using Functional Active Objects to Enforce Privacy. Accepted at *5th Conf. on Network Architectures and Information Systems Security*. Menton, 2010.
- A. Fleck and F. Kammüller. Implementing Privacy with Erlang Active Objects. Accepted at *Fifth International Conference on Internet Monitoring and Protection, ICIMP 2010*, IEEE. An extended version appears in *International Journal on Advances in Software*, 2011.
- L. Henrio, F. Kammüller, and M. Rivera. An Asynchronous Distributed Component Model and its Semantics. *Formal Methods for Components and Objects, FMCO'2008*. Vol. 5751, LNCS, Springer, 2010.
- F. Kammüller and R. Kammüller. Enhancing Privacy Implementations of Database Enquiries. *The Fourth International Conference on Internet Monitoring and Protection*. IEEE Computer Press, 2009.
- F. Kammüller and H. Sudhof. Composing safely – A Type System for Aspects. *7th International Symposium on Software Composition, SC'08*. Satellite to ETAPS'08. Vol. 4954, LNCS, Springer, 2008.
- S. Preibusch and F. Kammüller. Checking the TWIN Elevator System by Translating Object-Z to SMV. *Formal Methods for Industrially Critical Systems, FMICS 2007*. Vol. 4916, LNCS, Springer 2008.
- L. Henrio and F. Kammüller. A Mechanized Model of the Theory of Objects. *9th IFIP International Conference on Formal Methods for Open Object-Based Distributed Systems, FMOODS'07*. Vol. 4468, LNCS, Springer, 2007.

- S. Helke and F. Kammüller. Property Preserving Abstraction for Statecharts. In *25th IFIP WG 6.1 International Conference on Formal Techniques for Networked and Distributed Systems, FORTE 2005*, Taipei, Taiwan. Vol. 3731, LNCS, Springer 2005.
- F. Kammüller and J. W. Sanders. Idempotent Relations in Isabelle/HOL. *First International Colloquium on Theoretical Aspects of Computing, ICTAC 2004*, Guiyang, China. Vol. 3407, LNCS, Springer 2005.
- F. Kammüller and J. W. Sanders. Heuristics for Refinement Relations. In *2nd IEEE Int. Conf. on Software Engineering and Formal Methods SEFM04*, Beijing. ISBN 0-7695-2222-X, IEEE 2004.
- M. Bittner and F. Kammüller. Translating Fusion/UML to Object-Z. In Gupta, R. K. (eds.), *First ACM and IEEE International Conference on Formal Methods and Models, MEMOCODE '03*, Mt St. Michel, France. ISBN 0-7695-1923-7/03, IEEE, 2003.
- G. Smith, F. Kammüller, and T. Santen. Encoding Object-Z in Isabelle/HOL. In D. Bert, J. P. Bowen, M. C. Henson, and K. Robinson (Eds.), *The 2nd International Z and B Conference*, Grenoble, France. Vol. 2272, LNCS, Springer 2002.
- S. Helke and F. Kammüller. Representing Hierarchical Automata in Interactive Theorem Provers, in R. J. Boulton, P. B. Jackson (eds.), *Theorem Proving in Higher Order Logics, 14th International Conference, TPHOLs 2001*, Edinburgh, Scotland, UK. Vol. 2152, LNCS, Springer 2001.
- F. Kammüller, Modular Reasoning in Isabelle. In D. MacAllester (ed.), *17th International Conference on Automated Deduction, CADE-17*, Pittsburgh, Pennsylvania, USA. Vol. 1831, LNAI, Springer, 2000.
- F. Kammüller, M. Wenzel, and L.C. Paulson. Locales - a Sectioning Concept for Isabelle. In Y. Bertot, G. Dowek, A. Hirschowitz, C. Paulin, and L. They (eds.), *Theorem Proving in Higher Order Logics, 12th International Conference, TPHOLs'99*, Nice, France. Vol. 1690, LNCS, Springer, 1999.
- F. Kammüller. Modular Structures as Dependent Types in Isabelle. In T. Altenkirch, W. Naraschewski, and B. Reus (Eds.), *Types for Proofs and Programs International Workshop, TYPES '98*, Kloster Irsee, Selected Papers. Vol. 1657, LNCS, Springer, 1998.

In Books

- F. Kammüller, C. Probst, and F. Raimondi. Application of Verification Techniques to Safety and Security – Modelchecking Insider Attacks. *SETECEC 2012*, Key Note.

- A. Fleck and F. Kammüller. A Security Model for Functional Active Objects with an Implementation in Erlang. *Computational Informatics, Social Factors and New Information Technologies: Hypermedia Perspectives and Avant-Garde Experiences in the Era of Communicability Expansion*. Blue Herons, 2011.
- F. Kammüller and H. Sudhof. Compositionality of Aspect Weaving. *Autonomous Systems – Self-Organisation, Management, and Control*. B. Mahr, Z. Sheng (Eds.), Springer, 2008.
- T. Santen, F. Kammüller, M. Beyer, and S. Jähnichen. Formalization of Algebraic Specification in the Development Language Deva. In M. Broy and S. Jähnichen (eds.) : *KORSO, Correct Software by Formal Methods*. Vol. 1009, LNCS, Springer, 1995.

Workshops with Peer-Review (15)

- F. Kammüller. Privacy Enforcement and Analysis for Functional Active Objects. *Data Privacy Management, DPM'10*. Fifth International Workshop. Satellite Event to ESORICS 2010. Vol. 6514, LNCS, Springer, 2011.
- F. Kammüller, A. Rein, and M.-O. Reiser. Feature Link Propagation Across Variability Representations with Isabelle/HOL. *Product Line Approaches in Software Engineering, PLEASE 2010*, in conjunction with ICSE 2010, ACM Press 2010.
- L. Henrio, F. Kammüller, B. Lutz and H. Sudhof. A Locally Nameless Theory of Objects. wird beim Workshop SAFA: Sophia-Antipolis Formal Analysis Group. SAFA Annual Workshop on Formal Techniques (SAFA'2010).
- F. Kammüller and H. Sudhof. A Mechanized Theory of Aspects. *Theorem Proving in Higher Order Logics*. 22nd International Conference, Emerging Trends. Munich, August, 2009.
- L. Henrio and F. Kammüller. Functional Active Objects: Typing and Formalisation. *8th International Workshop on the Foundations of Coordination Languages and Software Architectures, FOCLASA '09*. Satellite to ICALP'09. ENTCS **255**:83–101, Elsevier, 2009. Extended version in *Science of Computer Programming*, Elsevier, 2011.
- F. Kammüller and S. Preibusch. Modelchecking Nonfunctional Requirements for Interface Specifications. *Foundations of Interface Technologies, FIT 2008*. Satellite to ETAPS'08, Budapest 2008.
- F. Kammüller and H. Sudhof. A Mechanized Framework for Aspects in Isabelle/HOL. *ACM Workshop on Mechanizing Metatheory*, Freiburg, 2007.

- F. Kammüller. CSP Revisited. *Theorem Proving in Higher Order Logics, TPHOLs 2007*, Emerging Trends, Universität Kaiserslautern, 2007.
- F. Kammüller and M. Vösgen. Towards Type Safety of Aspect-Oriented Languages. In *Foundations of Aspect-Oriented Languages*, Satellite Workshop to AOSD 06, March 2006.
- F. Kammüller. Exploring New OO-Paradigms in HOL : Aspects and Collaborations, *Theorem Proving in Higher Order Logics, TPHOLs 2005*, Emerging Trends. University of Oxford, 2005.
- S. Helke and F. Kammüller. A Framework for Property Preservation Based on Galois Connections. In *Theorem Proving for Higher Order Logics, 16th International Conference TPHOLs 2003*. Proceedings as Technical Report N 187, Universität Freiburg, Aracne, 2003.
- S. Helke and F. Kammüller. Verification of Statecharts Including Dataspaces. In *Theorem Proving for Higher Order Logics, 16th International Conference TPHOLs 2003*. Proceedings as Technical Report N 187, Universität Freiburg, Aracne 2003.
- J. Burghardt, S. Jähnichen, F. Kammüller, C. Stühl, and K. Winter, Techniken der rigorosen Analyse. *Rigorese Entwicklung Software-Intensiver Systeme*. Technical Report N 0005, LMU München, 2000.
- F. Kammüller and S. Helke. Mechanical Analysis of UML State Machines and Class Diagrams. In *Workshop on Precise Semantics for the UML, ECOOP 2000*, Cannes, June 2000.
- F. Kammüller, M. Simons, G. Keller, and M. Weber. Structured Presentation of Formal Proofs : Experiments with Isabelle. In L. C. Paulson (ed.) *Proceedings of the First Isabelle User's Workshop*. Technical Report 379, University of Cambridge, 1995.

Workshops and Technical Reports

- L. Henrio and F. Kammüller. *Functional Active Objects: Noninterference and Distributed Consensus*. Technische Universität Berlin, Technical Report N 2009-19, 2008.
- F. Kammüller. *Counting Idempotent Relations*. Technische Universität Berlin, Technical Report N 2008-15, 2008.
- L. Henrio, F. Kammüller and H. Sudhof. ASPfun: A Functional and Distributed Object Calculus Semantics, Type-system and Formalization. INRIA Research Report N. 6353, November 2007

- F. Kammüller and H. Sudhof. *Formalizing Aspects for the ς -calculus in Isabelle/HOL*. TR 2007-20, Technische Universität Berlin, 2007.
- F. Kammüller and L. Henrio. A Formalization of the Theory of Objects in Isabelle/HOL. Technical Report RR-6079, INRIA Sophia-Antipolis, 2006.
- F. Kammüller. Exploring New OO-Paradigms in HOL : Aspects and Collaborations, *Theorem Proving in Higher Order Logics, TPHOLs 2005*, Emerging Trends. Proceedings as Technical Report PRG-RR-05-02, University of Oxford, 2005.
- F. Kammüller and J.W. Sanders. Idempotent Relations in Isabelle/HOL. Technische Universität Berlin, Technical Report N 2004-04, 2004.
- M. Bittner and F. Kammüller. Controlling Consistency in UML with Fusion and Object-Z. Technische Universität Berlin, Technical Report N 2003-06, 2003.
- S. Helke, F. Kammüller, and J. W. Sanders. Synthesizing Refinements from Predicate Translations. *Can Formal Methods Cope with Software Intensive Systems?* Dagstuhl Seminar Report N 359, 2002.
- G. Smith, F. Kammüller, and T. Santen. Formalizing Reference Semantics of Object-Z in Isabelle/HOL. *Can Formal Methods Cope with Software Intensive Systems?* Dagstuhl Seminar Report N 308, 2001.
- J. Burghardt, F. Kammüller, and J. W. Sanders, *Isomorphism of Galois Embeddings*, 73 pages, GMD Report 122, 2000.
- F. Kammüller, Locales, A Sectioning Concept for Isabelle. In *Rigorous Analysis and Design for Software Intensive Systems*. Dagstuhl Seminar Report N 258, 1999.
- F. Kammüller, *Modular Reasoning in Isabelle*. PhD thesis, Computer Laboratory, University of Cambridge, Technical Report 470, August 1999.
- F. Kammüller and L. C. Paulson, A Formal Proof of Sylow's First Theorem – An Experiment in Abstract Algebra with Isabelle HOL. Computer Laboratory, University of Cambridge, Technical Report 452, October 1998.
- F. Kammüller and M. Wenzel. Locales – A Sectioning Concept for Isabelle, Computer Laboratory, University of Cambridge. Technical Report 449, November 1998.

Online

- F. Kammüller. Reviews of the American Mathematical Society (MR 2817882) of *Russell O'Connor. Classical Mathematics for a Constructive World. MSCS (21): 861–882, Cambridge University Press. 2010*
- S. Helke and F. Kammüller. A Formalization of Statecharts containing Data. *Archive of Formal Proof*. 2010.
- L. Henrio, F. Kammüller, B. Lutz, and H. Sudhof. A Locally-Nameless Formalisation of the Sigma Calculus in Isabelle/HOL. *Archive of Formal Proofs*, 2010.
- Contributions to *Formalizing 100 Theorems*.
- Counting Idempotents. *Encyclopedia of Integer Sequences*.