

Curriculum Vitae

Name Benzmüller, Christoph Ewald

Academic Degrees (Prof.), Habil., Dr.-Ing., Dipl.-Inf.

Nationality German

Family Status Married, three children

Date/Place of Birth — not given here —



Contact Addresses

— not given here —

— not given here —

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Current/Recent Affiliations

Freie Universität Berlin, 14195 Berlin, Germany (Heisenberg Fellow of the German Research Foundation)

Saarland University, 66041 Saarbrücken, Germany (Privatdozent)

Education

A-levels (Abitur), Auguste Victoria Gymnasium, Trier, Germany (1988)

Intermediate diploma, Computer Science, Saarland University, Germany (1992)

Diploma (Dipl.-Inform.), Computer Science, Saarland University, Germany (1995)

Dissertation (Dr.-Ing.), Computer Science, Saarland University, Germany (1999)

Habilitation, Computer Science, Saarland University, Germany (2007)

Social Activities — Military Service, Sports, and Politics

Basic military service in sports supporting group (Sportsoldat), Warendorf, Germany (10/1988–12/1989)

Best German participant in Military Cross Country World Championships, Tunis, Tunisia (1989)

Elected ombudsman of company, basic military service (1989)

German champion, long distance running, cross country team (1990)

Member/athlete of the German Olympic Center in Saarbrücken, Germany (1989–1992)

Parental Leave in combination with DFG grant BE 2501/6-1 ONTOLEO (02/2010–02/2011)

Languages German, English, (Latin, Luxemburgian)

Number of Scientific Publications

Chapters in Handbooks: 1 published, 1 in preparation

Chapters in Books: 11 published

Articles in Journals: 15 published (+ 5 ENTCS), 3 forthcoming, 3 submitted

Edited Proceedings or Books: 12 published

International Conferences: 33 published

International Workshops: 46 published

Technical Reports, Project Proposals and Others: > 50

see also: <http://www.ags.uni-sb.de/~chris/cv-texmacs/cv-publications.html>

Technical Skills (selection) Objective Caml, ML, Java, Common Lisp, Scheme, Prolog, λ -Prolog, Modula-2, Shell Scripting, Emacs, TeXmacs, HTML, XML, Perl, SVN and CVS versioning, operating systems: Macintosh, Linux, Unix, Windows

Appointments

Heisenberg Fellow of the German Research Foundation, Freie Universität Berlin, Germany (2/2012–)
Senior Researcher, Freie Universität Berlin, Germany (DFG Research Grant) (5/2011–10/2011)
Senior Researcher, Articulate Software, Angwin, CA, USA & DFG Research Grant (11/2008–4/2011)
Full Professor, International University in Germany, Bruchsal, Germany (11/2008–12/2009)
Senior Research Fellow, Computer Science, University of Cambridge, UK (10/2006–10/2007)
Freelancer, German Research Center for AI (DFKI), Germany (01/2007–09/2007)
Associate Professor (C2), Computer Science, Saarland University, Germany (04/2004–10/2008)
Assistant Professor (C1), Computer Science, Saarland University, Germany (01/2001–03/2004)
Postdoctoral Research Fellow, Computer Science, University of Birmingham, UK (8 months in 2000)
—, School of Informatics, University of Edinburgh, UK (4 months in 2000)
—, DFG Graduate College Cognitive Science, Saarland University, Germany (01/1999–12/1999)
Researcher (Wiss. Mitarbeiter), Computer Science, Saarland University, Germany (04/1995–12/1998)
Student Researcher, German Research Center for AI (DFKI), Germany (1992–1995)
—, Computer Science, Saarland University, Germany (1990–1994)
Freelancer for daily newspaper 'Trierischer Volksfreund' (1988–1989)

Research Awards and Honors

Heisenberg Fellowship of the German Research Foundation, Freie Universität Berlin, Germany (2012)
Winner of CASC-J5 World Championships in HO Automated Theorem Proving (2010)
Visiting Senior Research Fellow, St. Edmund's College, Cambridge, UK (10/2006–10/2007)
Member of DFG Collaborative Research Center SFB 378, Germany (2001–2008)
Postdoctoral Research Fellow, Graduate College Cognitive Science, Saarland University, Germany (1999)
Visiting Researcher, Carnegie Mellon University, Pittsburgh, USA (08/1996–04/1997)
PhD scholarship of the German National Academic Foundation (Studienstiftung) (1996–1998)

List Positions in Professorship Applications

— not given here —
— not given here —
— not given here —

Selected Research Topics and Research Interests

Formal Specification (1990–)
Interactive Verification (1992–)
Higher-Order Automated Theorem Proving (1995–)
Semantics and Proof Theory (not only) of Higher-Order Logic (1995–)
Implementation of Higher-Order Automated Theorem Provers LEO, LEO-II (1998–)
Agent-based Architectures (1998–)
Design and Implementation of Mathematics Assistance System OMEGA (1998–)
Proof Transformation (1998–)
User Interfaces for Theorem Provers (1998–)
Integration of Heterogeneous Reasoning Systems (1998–)
Natural Language based Tutorial Dialog (not only) on Mathematical Proofs (2001–)
E-Learning and E-Tutoring Systems (2001–)
Natural Language Processing (2001–)
Knowledge Representation (2001–)
Proof Planning and Abstract Assertion Level Reasoning (2001–)

Resource-Adaptive Reasoning Systems	(2001–)
Deep Inference	(2001–)
Document Centric Theorem Proving	(2001–)
Empirical Studies/Wizard of Oz Experiments	(2001–)
Machine Learning in Theorem Proving and Proof Tutoring	(2002–)
Granularity and Relevance in Theorem Proving and Proof Tutoring	(2003–)
Cooperative Higher-Order–First-Order Theorem Proving	(2006–)
International Infrastructure for Higher-Order Automated Theorem Proving	(2006–)
Semantic Embeddings in Higher-Order Logic: Quantified Modal Logics, Intuitionistic Logics, Security Logics, Logics for Rational Agency, Logics for Temporal and Spatial Reasoning, etc.	(2007–)
Uniform Mechanization and Automation of Classical and Non-Classical Logics within Classical Higher-Order Logic	(2008–)
Automation of Ontology Reasoning	(2008–)
Modeling and Automation of Combinations of Classical and Non-Classical Logics	(2009–)
Reasoning about Logics and Combinations of Logics in Higher-Order Logics	(2009–)

Research Grants

Germany, DFG Heisenberg Fellowship BE 2501/9-1	(~180,000 €, 02/2012–01/2015)
Germany, DFG Return Grant BE 2501/8-1 (ONTOLEO): Higher-Order Ontology-Reasoning with LEO-II; principal investigator	(~12,000 €, 04/2011–10/2011)
Germany, DFG Research Grant BE 2501/6-1 (ONTOLEO): Higher-Order Ontology-Reasoning with LEO-II; principal investigator	(~90,000 €, 07/2009–04/2011)
EU, FP7 IIF grant PIIF-GA-2008-219982 (THFTPTP): An Infrastructure for Typed Higher-order Form Automated Theorem Proving; principal investigator; joint work with Prof. G. Sutcliffe, U. Miami	(~130,000 €, 07/2008–08/2009)
UK, EPSRC grant EP/D070511/1 (LEO-II): An Effective Higher-Order Theorem Prover, joint work with principal investigator Prof. Larry Paulson, U. Cambridge	(~93,000 £; 10/2006–10/2007)
Germany, DFG Collaborative Research Center SFB 378 on Resource-adaptive Cognitive Processes, joint principal investigator of four projects: OMEGA – Resource-Adaptive Proof Planning (2001–2004), DIALOG – Tutorial Dialogue with a Mathematics Assistance System (2001–2004), OMEGA – Agent-oriented Proof Planning (2005–2008), DIALOG – Natural Language-based Interaction with a Mathematics Assistance System (2005–2008)	(~1,800,000 €; 01/2001–12/2008)
Germany/UK, DAAD ARC exchange grant, joint principal investigator,	(~7,000 €, 2004–2007)
EU, IST grant for CALCULEMUS Autumn School in Pisa, principal investigator	(~20,000 €, 2002)
EU, 25 Comenius grants for CALCULEMUS Autumn School, principal investigator,	(~30,000 €, 2002)
EU, Research Training Network: CALCULEMUS – Systems for integrated Computation and Deduction (I became co-coordinator in 2001 after RTN was granted)	(~1,500,000 €, 2001–2004)
UK, EPSRC grant GR/M99644: Agent-Oriented Theorem Proving; joint work with principal investigator Dr. Manfred Kerber, U. Birmingham	(~56,000 £, 2000)
Germany, PhD scholarship of the German National Academic Foundation (Studienstiftung des Deutschen Volkes)	(1996–1998)

Selected International and Interdisciplinary Contacts and Collaborators

Computer Science — Prof. Geoff Sutcliffe (U. Miami, USA), Prof. Larry Paulson (U. Cambridge, UK), Prof. Jörg Siekmann, Dr. Serge Autexier, Dr. Dieter Hutter (all DFKI, Germany), Dr. Chad Brown (Saarland U., Germany), Prof. Michael Kohlhase (Jabobs U., Germany), Prof. Alan Bundy (U. Edinburgh, UK), Prof. Frank Pfenning (CMU, USA), Prof. Fairouz Kamareddine (Heriot Watt U., UK), Dr. Volker Sorge and Dr. Manfred Kerber (all U. Birmingham, UK), Prof. Henk Barendregt and Prof. Herman Geuvers (Radboud U., Netherlands), Prof. Fausto Giunchiglia and Dr. Alessandro Cimatti (ITC-IRST/DIT, Italy), Prof. Alessandro Armando (U. Genova, Italy), Prof. Andrei Trybulec (U. Bialystok, Poland)

Computer Science Industry — Adam Pease (Rearden Commerce & Articulate Software, USA), Michael Dreusicke (Paux Technologies, Germany)

Mathematics — Prof. Peter B. Andrews (CMU, USA), Prof. Bruno Buchberger (RISC Linz, Austria), Prof. Jacques Calmet (U. Karlsruhe, Germany), Prof. Arjeh Cohen (U. Eindhoven, Netherlands), Prof. James Davenport (U. Bath, UK),

Computational Linguistics — Prof. Manfred Pinkal and Dr. Ivana Kruijff-Korbayov (Saarland U., Germany), Prof. Patrick Blackburn (INRIA Nancy)

Philosophy — Prof. Wilfried Sieg (CMU, USA), Prof. Dana Scott (CMU, USA)

Memberships in Computer Science Organizations

GI – Gesellschaft für Informatik, Germany
DHV – Deutscher Hochschulverband, Germany
AAR – Association for Automated Reasoning
AAAI – American Association for Artificial Intelligence

Memberships on Boards

Executive officer of IFCOLOG – The International Federation for Computational Logic (2010–)
Editorial board member of the Journal of Algorithms in Cognition, Informatics and Logic (2009–)
Editorial board member of the Logic Journal of the IGPL (2008–)
Elected trustee of CADE – Conference on Automated Deduction (2008–2011)
Editorial board member of the Journal of Applied Logic (JAL) (2006–)
Steering committee member of UITP – User Interfaces for Theorem Provers (2006–)
Invited editor, JAL Special Issue 'Towards Computer Aided Mathematics' (2006)
Steering committee member of IJCAR – Intl. Joint Conference for Automated Reasoning (2004)
Trustee of CALCULEMUS – Symbolic Computation and Mechanised Reasoning (2004–2006)

Organization/Co-Organization of Scientific Events, Conference and Workshop Chair

Organizer of Doctoral Programme at CICM'08 conferences: AISC, CALCULEMUS, MKM (2008)
ESHOL'08 Workshop at IJCAR'08 – Evaluation of Systems for Higher-Order Logic (2008)
UITP'08 Workshop at TPHOLS'08 – User Interfaces for Theorem Provers (2008)
CADE'07 Workshop and Tutorial Chair – Conference on Automated Deduction (2007)
IWIL'06 Workshop at LPAR'06 – International Workshop on the Implementation of Logics (2006)
UITP'06 Workshop at IJCAR'06 – User Interfaces for Theorem Provers (2006)
MathDIALOG'06 Workshop – Tutorial Natural Language Dialog in Mathematics (2006)
ESHOL'05 Workshop at LPAR'05 – Emp. Successful Automated Higher-Order Reasoning (2005)
THEOREMA-ULTRA-OMEGA Workshop (2005)
First Saarbrücken-Nancy Workshop on Higher-Order Logics and Hybrid Logics (2005)
IJCAR'04 Workshop on Computer-Supported Mathematical Theory Development (2004)
SFB 378 Evaluation at Saarland University (2004)
CALCULEMUS Workshop at the Symposium on Mathematics on the Semantic Web (2003)
Meeting of the German Interest Groups on Deduction Systems and on Logics in Computer Science (2004)
Organizer and Chair of the EU CALCULEMUS RTN Midterm Review Meeting (2003)
Organizer and Chair of the EU CALCULEMUS Autumn School in Pisa (2002)
Meeting of the German Interest Group on Deduction Systems (2000)

Memberships in Programme Committees

ICAART'12 – Intl. Conference on Agents and Artificial Intelligence (2012)
CICM'11 – Conference on Intelligent Computer Mathematics (2011)
PxTP'11 – Workshop of Proof Exchange for Theorem Proving (2011)
ARCOE'11 – IJCAI-11 WS on Autom. Reasoning about Context and Ontology Evolution (2011)
ICAART'11 – Intl. Conference on Agents and Artificial Intelligence (2011)
AISC'10 – Intl. Conference on Artificial Intelligence and Symbolic Computation (2010)
IJCAR'10 – Intl. Joint Conference on Automated Reasoning (2010)

IFIP SEC'10 – IFIP Intl. Information Security Conference	(2010)
AIA'10 – IASTED Intl. Conference on Artificial Intelligence and Applications	(2010)
UITP'10 – Intl. Workshop on User Interfaces for Theorem Provers	(2010)
EMS+QMS'10 – Evaluation Methods for Solvers and Quality Metrics for Solutions	(2010)
TPHOLS'09 – Intl. Conference on Theorem Proving in Higher Order Logics	(2009)
Tableaux'09 – Conference on Automated Reasoning with Analytic Tableaux and ...	(2009)
IWIL'08 – Intl. Workshop on the Implementation of Logics	(2008)
KEAPPA'08 – Intl. Workshop on Knowledge Exchange – Automated Provers and ...	(2008)
PAAR'08 – Intl. Workshop on Practical Aspects of Automated Reasoning	(2008)
CASC'08 Panel Member – The ATP System Competition at IJCAR'08	(2008)
AISC'08 – Intl. Conference on Artificial Intelligence and Symbolic Computation	(2008)
CALCULEMUS'08 – Symp. on Integration of Symbolic Computation and Mechanized Reasoning	(2008)
IJCAR'08 – Intl. Joint Conference on Automated Reasoning	(2008)
CASC'07 Panel Member – The ATP System Competition at CADE'07	(2007)
CADE'07 – Conference on Automated Deduction	(2007)
KI'07 – German Conference on Artificial Intelligence	(2007)
CALCULEMUS'07 – Symp. on Integration of Symbolic Computation and Mechanized Reasoning	(2007)
Deduktionstreffen'07 – Meeting of the German Interest Group on Deduction Systems	(2007)
LPAR'06 – Intl. Conference on Logic for Programming Artificial Intelligence and Reasoning	(2006)
CALCULEMUS'06 – Symp. on Integration of Symbolic Computation and Mechanized Reasoning	(2006)
LARARL'06 – Workshop on Logic for Automated Reasoning and Automated Reasoning for Logic	(2006)
ICoS'06 – Workshop on Inference in Computational Semantics	(2006)
LPAR'05 – Intl. Conference on Logic for Programming Artificial Intelligence and Reasoning	(2005)
MKM'05 – Intl. Conference on Mathematical Knowledge Management	(2005)
IJCAR'03 – Intl. Joint Conference on Automated Reasoning	(2004)
IJCAI'03-WS – Workshop on Agents and Automated Reasoning	(2003)
CALCULEMUS'03 – Symp. on Integration of Symbolic Computation and Mechanized Reasoning	(2003)
CADE'02 – Conference on Automated Deduction	(2002)
CALCULEMUS'02 – Symp. on Integration of Symbolic Computation and Mechanized Reasoning	(2002)
IJCAR'01-WS – Workshop on Future Directions in Automated Reasoning	(2001)

Further Reviewing

JWS – Journal of Web Semantics	(2011)
JAR – Journal of Automated Reasoning	(2002, 2005, 2006, 2008, 2009, 2010, 2011)
LMCS – Logical Methods in Computer Science	(2010)
AICom – AI Communications	(2009)
DIGITEO – Recherche en sciences & technologies de l'information, France	(2009)
AMAI – Annals of Mathematics and Artificial Intelligence	(2008)
MCS – Mathematics in Computer Science	(2008)
ISSAC – Intl. Symposium on Symbolic and Algebraic Computation	(2008)
NSERC – Natural Sciences and Engineering Research Council of Canada	(2008)
CSL – Conference on Computer Science and Logic	(2007, 2009)
ACM TOCL – Transactions on Computational Logic	(2007, 2008)
LMS – LMS Journal of Computation and Mathematics	(2004, 2005)
JSC – Journal of Symbolic Computation	(2000, 2001)
CADE – Conference on Automated Deduction	(1996, 2002, 2005)
LICS – IEEE Symposium on Logic in Computer Science	(2000, 2001)
ECAI – European Conference on Artificial Intelligence	(2000, 2002)
KI – German Conference on Artificial Intelligence	(2001)
JELIA – European Conference on Logics in Artificial Intelligence	(2000)
FLAIRS – The Florida Artificial Intelligence Research Society Conference	(2000)
CL – Intl. Conference on Computational Logic	(2000)
CALCULEMUS – Symbolic Computation and Mechanized Reasoning	(2001, 2002, 2003)

LPAR – Intl. Conference on Logic for Programming Artificial Intelligence and Reasoning (2002)
Various other Intl. Workshops

System Development (Selection)

LEO: Automated Theorem Prover for Classical Higher-Order Logic (1995-2005)
Programming languages: Lisp
Role: Supervisor and main developer
Selected publications: C03, J05

OMEGA: Interactive Proof Assistant & Automated Proof Planner (1992-2006)
Programming languages: Lisp, Oz
Role: Developer and (later) co-supervisor of a team of approx. 8-10 developers
Selected publications: B01, B03, B10, J12

OANTS: Agent-oriented Reasoning System (1998-2006)
Programming languages: Lisp
Role: Supervisor and co-developer
Selected publications: C04, C08, J16

DIALOG Demonstrator: Tutorial NL Dialog on Proofs (2000-2008)
Programming languages: Lisp, various others
Role: Supervisor
Selected publications: B11, J19, C31

LEO-II: Automated Theorem Prover for Higher-Order Logic, First-Order Logic, Multimodal Logics, Security Logics, Intuitionistic Logics, etc. (2006-)
Programming languages: Objective Caml
Role: Supervisor and main developer
Selected publications: C26, C27, J25
Comments: CASC World Champion 2010, LEO-II is currently being integrated with Isabelle/HOL

Lecture Courses

Working with Automated Reasoning Tools (in English) – block lecture with Prof. G. Sutcliffe, Saarland University, Germany (2008)

Semantics of Higher-Order Logic (in English) – invited block lecture, IT University, Kopenhagen, Denmark (2008)

Semantics of Higher-Order Logic (in English) – invited block lecture with Dr. C. Brown, ESSLLI 2006, Malaga, Spain (2006)

Automated Theorem Proving in Higher-Order (in German, 3 SWS + exercises) – invited lecture (Gastvorlesung), Technical University Darmstadt, Germany (2006)

Semantics and Mechanization of Classical Higher-Order Logic (in English, 4 SWS + exercises) – lecture course with Dr. C. Brown, Saarland University, Germany (2005)

Introduction to Artificial Intelligence (in English, 4 SWS + exercises) – lecture course with Prof. J. Siekmann and Dr. S. Autexier, Saarland University, Germany (2005)

Mathematical Assistance Systems (in English, 4 SWS + exercises) – lecture course with Prof. J. Siekmann, Dr. S. Autexier, Dr. C. Brown, Dr. A. Fiedler, and Dr. C.-P. Wirth, Saarland University, Germany (2004)

Automated Theorem Proving in First-Order and Higher-Order Logic (in English, 2 SWS + exercises) – lecture course, Saarland University, Germany (2004)

Human-Oriented Theorem Proving (in German, 4 SWS + exercises) – lecture course with Dr. Claus-Peter Wirth and Dr. Armin Fiedler, Saarland University, Germany (2003)

Introduction to Artificial Intelligence (in German, 4 SWS + exercises) – lecture course with Prof. J. Siekmann and Dr. Erica Melis, Saarland University, Germany (2003)

From Natural Deduction Calculus to Sequent Calculus and back (in English) – invited lecture, CALCULEMUS Autumn School, Pisa, Italy (2002)

Automated Theorem Proving in First-Order and Higher-Order Logic (in English, 2 SWS + exercises) – lecture course, Saarland University, Germany (2002)

Introduction to Artificial Intelligence (in German, 4 SWS + exercises) – lecture course with Prof. J. Siekmann, Saarland University, Germany (2001)

Introduction to Artificial Intelligence (in German, 4 SWS + exercises) – lecture course with Prof. J. Siekmann, Saarland University, Germany (1999)

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Moreover, I have held several seminars and practical trainings which are not listed here.

Student Supervision/Co-Supervision of PhD projects, Memberships in PhD Committees, and Positions as Scientific Tutor (wissenschaftlicher Begleiter)

— PhD —

Marvin Schiller (PhD, supervisor) – Granularity Analysis for Tutorial Mathematical Proofs, PhD scholarship of the Studienstiftung des Deutschen Volkes, PhD scholarship of the Graduate School of Computer Science at Saarland University, and SFB 378 (completed 10/2010)

Dominik Dietrich (PhD, scientific tutor) – Assertion Level Proof Planning with Compiled Strategies, DFKI Bremen, Saarland University, SFB 378 (completed 10/2011)

Priya Gopalan (PhD, member of PhD committee) – Distributed Theorem Proving/Proof Planning, University of Edinburgh, UK (under evaluation)

Frank Theiss (PhD, supervisor) – On Higher-Order Term Indexing, International University of Germany and Saarland University (on hold)

Marc Wagner (PhD, scientific tutor) – A Change-Oriented Architecture for Mathematical Authoring Assistance, PhD scholarship of the Studienstiftung des Deutschen Volkes, PhD scholarship of the Graduate School of Computer Science at Saarland University, SFB 378 (completed 11/2010)

Marc Buckley (PhD, unofficial co-supervisor only in earlier phase) – On Dialogue Modelling for Tutorial Dialogue Systems, Saarland University, SFB378 (ongoing)

Jürgen Zimmer (PhD, scientific tutor and unofficial supervisor) – MathServe – A Framework for Semantic Reasoning Services, Saarland University, SFB 378 (completed in 2008)

Stefano Zacchiroli (PhD, member of PhD committee) – User Interaction Widgets for Interactive Theorem proving, University of Bologna, Italy (completed in 2007)

Axel Schairer (PhD, scientific tutor) – Transformations of Specifications and Proofs to Support an Evolutionary Formal Software Development, DFKI, Saarland University (completed in 2005)

Tim Priesnitz (PhD, member of PhD committee) – Subtype Satisfiability and Entailment, Saarland University (completed in 2005)

Volker Sorge (PhD, scientific tutor and unofficial supervisor) – A Blackboard Architecture for the Integration of Reasoning Techniques into Proof Planning (completed in 2001)

Armin Fiedler (PhD, member of PhD committee) – User-Adaptive Proof Explanation, Saarland University, SFB 378 (completed in 2001)

Karsten Konrad (PhD, unofficial co-supervisor) – Model Generation for Natural Language Interpretation and Analysis, Saarland University, SFB 378 (completed in 2000)

— Diploma, Masters, and Bachelor —

Yecheng Gu (Bachelor, co-supervisor) – Integration of Rippling into the OMEGA System, Saarland University (completed in 2009)

Jonathan Osthof (Bachelor, co-supervisor) – Orchestration of Distributed Strategies in Interactive and Automated Theorem Proving, Saarland University (completed in 2008)

Valentin Dimitrov (Diploma, only assessment) – UbiSpot: An In- and Outdoor Positioning Client for Symbian OS, Saarland University (completed in 2008)

Stephanie Ehrbächer (Masters, supervisor) – An Application of the Frame-based Mathematical Database MaKE in Proof Planning, Saarland University, SFB 378 (completed in 2007)

Robert Vollmann (Bachelor, co-supervisor) – Implementation of a Scalable GameMaster to Illustrate and Evaluate AI Techniques, Saarland University (completed in 2006)

Dominik Dietrich (Diploma, co-supervisor) – Multi-Strategy Proof-Planning based on CORE, Saarland University, SFB 378 (completed in 2006)

Marc Wagner (Diploma, co-supervisor) – Abstract Verification of Mathematical Proofs, Saarland University, SFB 378 (completed in 2006)

Marc Buckley (Diploma, supervisor) – An Agent-oriented Approach to Dialog Management, Saarland University, SFB 378 (completed in 2005)

Marvin Schiller (Diploma, supervisor) – Tutorial Proof Step Evaluation wrt Granularity and Relevance, Saarland University, SFB 378 (completed in 2005)

Frank Theiss (Diplom, supervisor) – On the White Box Integration of Computer Algebra Algorithms into a Deduction System, Saarland University, SFB 378 (completed in 2005)

Stephanie Ehrbächer (Bachelor, supervisor) – Term Data Structures and Theory Unification for a Frame-based Mathematical Database, Saarland University, SFB 378 (completed in 2005)

Andreas Franke (Diploma, co-supervisor) – Inhaltsorientierte Verwaltung mathematischen Wissens, Saarland University, SFB 378 (completed in 2005)

Malte Hübner (Diploma, supervisor) – Interactive Theorem Proving with Indexed Formulas, Saarland University, SFB 378 (completed in 2005)

Stephan Hess (Diploma, co-supervisor) – Software-Ergonomie in einer Beweisentwicklungsumgebung, Saarland University, SFB 378 (completed in 1999)

Invited Presentations

Mechanization and Automation of Combinations of Classical and Non-Classical Logics in Classical Higher Order Logics, Colloquium New Trends in Computational Logic, TU Dresden, Germany (2011)

Higher-Order Logic, Theorem Proving, and Ontologies — Relevant for Configuration? Siemens AG Österreich, CT CEE Vienna, Austria (2010)

Three presentations at Dagstuhl Seminar 10412 QSTRLib – A Benchmark Problem Repository for Qualitative Spatial and Temporal Reasoning: Reasoning within and about Combinations of Logics in Simple Type Theory (talk and system demonstration), Participant Introduction Talk, and QSTRLib Use Case: Educational Question Answering on Spatial Configurations of Countries, States, and Cities. (2010)

Adaptive Assertion-Level Proofs, IJCAR 2010 Workshop on Evaluation Methods for Solvers and Quality Metrics for Solutions, Edinburgh, UK (2010)

(Winner Presentation) LEO-II – A Cooperative Higher-Order-First-Order ATP, CASC-J5 at IJCAR'10, Edinburgh, UK (2010)

Combining Logics in Simple Type Theory (and an Application in Ontology Reasoning), SRI International, Menlo Park, USA (2010)

Automating Access Control Logics and Multimodal Logics in the Automatic Higher-Order Theorem Prover LEO-II, Pure and Applied Logic Seminar, Carnegie Mellon University, Pittsburgh, USA (2008)

Automating Access Control Logics and Multimodal Logics in the Automatic Higher-Order Theorem Prover LEO-II, Kestrel Institute, Palo Alto, USA (2008)

LEO-II - A Cooperative Automatic Theorem Prover for Classical Higher-Order Logic, Microsoft Research, Redmond, USA (2008)

Tool Support for Formalized Mathematics: Cooperative Higher-Order Theorem Proving with LEO-II, Tutorial Dialogues on Proofs with the DIALOG demonstrator, and the PLATO/OMEGA Proof Assistant Plug-in for TeXmacs, Formal Mathematics Seminar, University of Bonn, Germany (2008)

Exploring Properties of Multimodal Logics with the Cooperative Automatic Higher-Order Theorem Prover LEO-II, SRI International, Menlo Park, USA (2008)

Effiziente Automatisierung von Logik höherer Stufe – realisierbarer Traum oder ewiger Albtraum? Antrittsvorlesung (Habilitation), Saarland University, Germany (2007)

Challenges for Automated Theorem Proving in Classical Higher Order Logics, The University of Edinburgh, UK (2007)

Challenges for Automated Theorem Proving in Classical Higher Order Logics, University of St. Andrews, St. Andrews, UK, (2007)

Challenges for Automated Theorem Proving in Classical Higher Order Logics, Heriot-Watt University, Edinburgh, UK (2007)

Classical Higher-Order Logic – Theory, Applications and Problems, Saarland University (Wiss. Habilitationsvortrag), Germany (2006)

Classical Higher-Order Logic – Semantics, Proof Theory and Automation, University of Potsdam, Germany (2006)

Service Oriented Architectures for Mathematics Assistance Systems, Fachhochschule Frankfurt am Main, Germany (2006)

Logik höherer Stufe: Ein geeignetes Fundament für die Mathematik und für Formale Methoden?, Universität Darmstadt, Germany (2005)

A Structured Set of Higher-Order Problems, Dagstuhl Seminar 05431: Deduction and Applications, Schloss Dagstuhl, Germany (2005)

Can a Higher-Order and a First-Order Theorem Prover Cooperate?, LORIA, Nancy, France (2005)

Three Approaches for Guiding the Cooperation of Mathematical Reasoning Systems: Proof Planning, Agent-based Reasoning, and Autometa Composition of Reasoning Web Services, QSL Theme day: Integration of deductive tools. LORIA, Nancy, France (2005)

OMEGA: A Mathematical Assistance System, Automated Reasoning Group, Cambridge University, Cambridge, UK, phantombla (2004)

OMEGA: From Proof Planning towards Mathematical Knowledge Management, MKM Symposium 2003, Edinburgh, UK (2003)

From Natural Deduction to Sequent Calculus and back, CALCULEMUS Autumn School 2002, Pisa, Italy (2002)

Tutorial Dialog with a Mathematical Assistant System, Computer Science Department, The University of Birmingham, UK (2002)

Agent-oriented Reasoning with O-ANTS, Pure and Applied Logic Seminar, Carnegie Mellon University, Pittsburgh, PA, USA (2001)

Agent-oriented Reasoning with O-ANTS, Dep. of Computer Science, Cornell University, Ithaca, NY, USA (2001)

Panel member of the IJCAR 2001 Workshop Future Directions in Automated Reasoning – Problems and Ideas for a New Millennium, Siena, Italy (2001)

An Agent-based Approach to Reasoning, AISB'01 Convention Agents & Cognition in conjunction with 8th Workshop on Automated Reasoning: Bridging the Gap between Theory and Practice, University of York, UK (2001)

Concurrent Resource Guided Deduction, Theoretical Computer Science Seminar, School of Computer Science, The University of Birmingham, Birmingham, UK (2001)

Resource Guided Concurrent Deduction with O-ANTS, School of Informatics, The University of Edinburgh, UK (2000)

OMEGA, MATHWEB & Friends, School of Informatics, The University of Edinburgh, UK (2000)

Towards Agent based Theorem Proving and Proof Planning in OMEGA, Department of Computer Science, The University of York, UK (2000)

OANTS – An Open Approach at Combining Interactive and Automated Theorem Proving, Centre for Agent Research and Development CARD, Department of Computer Science, Manchester Metropolitan University, Manchester, UK (2000)

A two layered Agent Approach for Guiding Interactive Proofs, Theoretical Computer Science Seminar, School of Computer Science, The University of Birmingham, UK (1999)

Extensional Higher Order Resolution, Paramodulation and RUE-Resolution, Theoretical Computer Science Seminar, School of Computer Science, The University of Birmingham, UK (1999)

— Other Presentations —

There is a total of **more than 100 presentations**; see <http://www.ags.uni-sb.de/~chris/cv-texmacs/cv-talks.html>.