

# Curriculum Vitae

## Wolfgang Schreiner

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## 1 Personal Data

<b>Full Name:</b>	Wolfgang SCHREINER
<b>Academic Degree:</b>	Associate Professor, Ph.D. (A.Univ.Prof. Dipl.-Ing. Dr. tech.)
<b>Birth Date:</b>	September 28, 1967 (Linz, Austria)
<b>Citizenship:</b>	Austria
<b>Personal Status:</b>	Unmarried
<b>Languages:</b>	German (native speaker), English (fluently).

## 2 Education

- **Habilitation in Practical Computer Science (November 2001)**  
Associate professor (“Universitätsdozent”) for Practical Computer Science (“Praktische Informatik”) at the Johannes Kepler University, Linz, Austria, November 2001. Habilitation Thesis: “Parallel Software and Algorithms for Symbolic Computation”.
- **Ph.D. in Computer Science with Distinction (December 1995)**  
Graduation *sub auspiciis praesidentis* (in the presence of the Federal President of the Republic of Austria); Ph.D. Thesis: “Parallel Functional Programming for Computer Algebra”; Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Ph.D. Student of Technical Sciences (November 1990 – September 1994)**  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **M.Sc. in Computer Science with Distinction (November 1990)**  
Diploma Thesis: “ADAM & EVE — An Abstract Dataflow Machine and Its Programming Language”; Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Graduate Student of Computer Science (July 1988 – November 1990)**  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Undergraduate Student of Computer Science (October 1986 – July 1988)**  
Johannes Kepler University, Linz, Austria.
- **High School Exam (Matura) with Distinction (June 1986)**  
Bundesgymnasium 3, Linz, Austria.
- **Classical Education (September 1978 – June 1986)**  
Bundesgymnasium 3, Linz, Austria.

### 3 Positions

- **Associate Professor** (since September 2004)  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Lecturer for Computer Science and Mathematics** (since September 2004)  
Degree Programme “Engineering for Computer-based Learning”, Upper Austria University of Applied Sciences at Hagenberg.
- **Austrian Delegate in PRACE Council** (August 2013 – December 2016)  
PRACE “Partnership for Advanced Computing in Europe”.
- **Vice Institute Chair** (September 2004 – September 2007)  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Degree Programme Director (Studiengangsleiter)** (September 2001 – August 2004)  
Degree Programme (Studiengang) “Engineering for Computer-based Learning”, Upper Austria University of Applied Sciences (Fachhochschule) at Hagenberg.  
Students 2004: 64, budget: 520.000 EUR.  
Coordinator of the working group “eLearning” of the Upper Austria University of Applied Science.
- **Assistant Professor** (January 1998 – August 2001)  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Project Director and Independent Researcher** (September 1996 – December 1997)  
Project P11414-ÖTE “HPGP — High Performance Generic Programming”, Austrian Science Foundation (FWF).
- **Assistant Professor** (June 1995 – August 1996)  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Military Service** (October 1994 – May 1995)  
Staff training and system evaluation in the Computing Center of the Military Headquarters of Upper Austria, Linz.
- **Research Assistant** (October 1989 – September 1994)  
Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.
- **Programmer** (February 1989 – September 1989)  
AIS — Automation and Information Systems, Linz, Austria.
- **Programmer** (July 1988 – August 1988)  
VOEST Alpine AG, Department for Data Bases, Linz, Austria.

- **Instructor and Tutor** (October 1987 – June 1989)  
Institute for Mathematics, Johannes Kepler University, Linz, Austria.
- **Programmer** (July 1987 – August 1987)  
VOEST Alpine AG, Department for Data Bases, Linz, Austria.

## 4 Awards and Grants

- **2012 Best Student Award Paper**, Muhammad Taimoor Khan and Wolfgang Schreiner: Towards Formal Specification and Verification of Maple Programs, Conferences on Intelligent Computer Mathematics (CICM) 2012, July 9-13, 2012, Bremen, Germany.
- **2000 TRACS Research Visit Grant**, Training and Research on Advanced Computing Systems, Edinburgh Parallel Computing Centre, UK (GBP 800).
- **1998 Marktoberdorf Grant**, Advanced Study Institute, 1998 International Summer School on Computational System Design (DM 1.300).
- **1996 EU HCM Euroconferences Grant** CSL '96 Conference of the European Association of Computer Science Logic (ECU 1.000).
- **1995 Appreciation Award** of the Austrian Federal Ministry for Science and Research for Excellent Studies (ATS 25.000).
- **1995 Graduation** *sub auspiciis praesidentis rei publicae* (i.e. in presence of the Federal President of the Republic of Austria).
- **1991 Promotion Award** of the Austrian Computer Society (OCG) for the best Austrian diploma thesis in computer science (ATS 10.000).
- **1991 Appreciation Award** of the Austrian Federal Ministry for Science and Research for Excellent Studies (ATS 25.000).

## 5 Research Areas

- Formal methods in computer science,
- Parallel and distributed computing,
- Generic programming,
- Parallel functional programming.

## 6 Funded Research and Development Projects

- **LOGTECHEDU: Logic Technology for Computer Science Education (2018–2020)**  
Project partner; Linz Institute of Technology (LIT), Johannes Kepler University Linz;  
total project grant: EUR 209,620.
- **Supercomputer MACH-2 (2017–2021)**  
JKU representative and overall project coordinator; Austrian Federal Ministry for Science,  
Research, and Economy (BMWFV); grant: EUR 1,600,000.
- **PRACE 4-IP: Partnership for Advanced Computing in Europe**  
Director of JKU/RISC participation; March 2015 - February 2017, European Union,  
Budget for JKU/RISC contribution: EUR 258,488.
- **LogicGuard II: The Efficient Checking of Time-Quantified Logic Formulas with Applications in Computer Security (RISC, RISC Software, SecureGUARD)**  
Scientific director; October 2014 – September 2016; BRIDGE program of the Austrian  
Research Promotion Agency (FFG), Budget: EUR 319,300.
- **LogicGuard: The Efficient Checking of Time-Quantified Logic Formulas with Applications in Computer Security (RISC, RISC Software, SecureGUARD)**  
Scientific director; January 2012 – December 2013; BRIDGE program of the Austrian  
Research Promotion Agency (FFG), Budget: EUR 263,500.
- **PRACE 3-IP: Partnership for Advanced Computing in Europe**  
Director of RISC participation; July 2012 - June 2016, European Union, Budget for RISC  
contribution: EUR 228,228.
- **DK W1214 Project “Formally Specified Computer Algebra Software”**  
Project in the frame of the Doctoral Program (DK) W1214: Computational Mathematics,  
October 2008 – September 2011, Johannes Kepler University Linz, Austria.
- **Austrian Grid 2 Subproject “Distributed Supercomputing in the Grid”**  
Subproject director; October 2007 – December 2009; Austrian Federal Ministry for Science  
and Research (BMWFV), Budget for subproject: EUR 145,174.
- **EGEE-II: Enabling Grids for E-Science in Europe**  
Director of RISC participation; April 2006–March 2008, European Union, Budget for  
RISC contribution: EUR 69,100.
- **MathBroker II: Brokering Distributed Mathematical Services**  
Project director; January 2005–December 2007; Austrian Science Foundation (FWF,  
Austria), Project P17643-NO4, Budget: EUR 124,698.
- **Austrian Grid Subproject “SEE-GRID”(RISC, Upper Austrian Research, Upper Austria University of Applied Sciences)**  
Subproject director; April 2004 – December 2006; Austrian Federal Ministry for Education,  
Science and Culture (BMBWK); Budget: EUR 100,000.

- **Digital Media - Modular Education for Designers** (University of Arts in Linz, Department of Engineering for Computer-based Learning (CBL) of the University of Applied Sciences in Hagenberg)  
Project leader for CBL participation; 2002–2004; Austrian Federal Ministry for Education, Science and Culture (BMBWK), Budget: EUR 70,000 for CBL.
- **A Framework for Brokering Distributed Mathematical Services (RISC)**  
Project director; December 2001–November 2003; Austrian Science Foundation (FWF, Austria), Project P15183, Budget: EUR 186,539.
- **Integrating Temporal Specifications as Runtime Assertions into Parallel Debugging Tools (RISC, Department of Graphics and Parallel Processing of the Johannes Kepler University, MTA SZTAKI Research Institute, Budapest)**  
Project leader for group RISC; 2001 – 2002, Austrian-Hungarian Cooperation Office, Budget: Ft. 360,000 plus traveling costs.
- **COOPERATE — Distributed Meeting Software** (Department for Advanced Computer Engineering of the University of Vienna, Department of Graphics and Parallel Processing of the Johannes Kepler University, RISC, Research Institute for Software Technology of the University of Salzburg)  
Project leader for group RISC; June 1998 – September 1998, Austrian Ministry for Science and Transport (BMWV, Austria), Budget: ATS 120,000.
- **VRÖIG — Virtual Reality for the Austrian Information Society** (Department for Advanced Computer Engineering of the University of Vienna, Department of Graphics and Parallel Processing of the Johannes Kepler University, RISC, Research Institute for Software Technology of the University of Salzburg)  
Project leader for group RISC; August 1997 – March 1998, Austrian Ministry for Science and Transport (BMWV, Austria), Budget: ATS 150,000.
- **Distributed Constraint Solving for Functional Logic Programming** (RISC, Symbolic Computation Research Group of the University of Tsukuba, Japan)  
Technical project leader; July 1997 – June 1999, Research Institute for Advanced Information Technology (AITEC, Japan), Budget: Yen 3,000,000.
- **HPGP — High Performance Generic Programming (RISC)**  
Project director; September 1996 – February 1998, Austrian Science Foundation (FWF, Austria), grant P11414-ÖTE, Budget: ATS 1,234,000.

## 7 Memberships in Professional Societies

- **Working Group “eLearning” (Section “Contents”) of the OCG**  
Austrian Society for Computer Science.
- **ACM & ACM SIGPLAN**

Association for Computing Machinery, Special Interest Group on Programming Languages.

- **GI Special Interest Group PARS**  
German Society for Computer Science, Parallel Algorithms, Computers and Software.
- **OCG Österreichische Computer Gesellschaft**  
Austrian Society for Computer Science.
- **OMG Österreichische Mathematische Gesellschaft**  
Austrian Mathematical Society.

## 8 Conference Activities

- **MoMM 2018 Program Committee Member**  
16th International Conference on Advances in Mobile Computing And Multimedia, Yogyakarta, Indonesia, November 19–21, 2018.
- **ICACCI 2018 Program Committee Member**  
7th International Conference on Advances in Computing, Communications, and Informatics, Manipal, Bangalore, India September 19–22, 2017.
- **ICTERI 2018 Program Committee Member**  
14th International Conference on ICT in Education, Research, and Industrial Applications, Kyiv, Ukraine, May 14–17, 2018.
- **Future IoT 2018 Program Committee Member**  
2018 IEEE International Conference on Future IoT Technologies, January 18–19, 2018, Eger, Hungary.
- **CSEDU 2018 Program Committee Member**  
9th International Symposium on Computer Supported Education, March 15–17, 2018, Funchal, Madeira, Portugal.
- **MoMM 2017 Program Committee Member**  
15th International Conference on Advances in Mobile Computing And Multimedia, Salzburg, Austria, December 4–6, 2017.
- **SYNASC 2017 Program Committee Member of Track “Distributed Computing”**  
19th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, September 21–24, 2017, Timisoara, Romania.
- **ICACCI 2017 Program Committee Member**  
6th International Conference on Advances in Computing, Communications, and Informatics, Manipal, Karnataka, India September 13–16, 2017.
- **WSC 2017 Program Committee Member**  
9th Workshop on Scalable Computing, Prague, Czech Republic, September 3–6, 2017.



- **ICTERI 2017 Program Committee Member**  
13th International Conference on ICT in Education, Research, and Industrial Applications, Kyiv, Ukraine, May 15–18, 2017.
- **ICAI 2017 Program Committee Member**  
10th International Conference on Applied Informatics, Eger, Hungary, January 29 — January 31, 2017.
- **PASCO 2017 Program Committee Member**  
8th International Workshop on Parallel Symbolic Computation, Kaiserslautern, Germany, July 23-24, 2017.
- **CSEDU 2017 Program Committee Member**  
9th International Symposium on Computer Supported Education, April 25–27, 2017, Porto, Portugal.
- **MoMM 2016 Program Committee Member**  
14th International Conference on Advances in Mobile Computing And Multimedia, Singapore, November 28–30, 2016.
- **PRACE 2016 Autumn School Local Organization Chair and Programme Committee Member**  
PRACE 2016 Autumn School “Modern HPC Development for Scientists and Engineers”, September 27–30, 2016, Hagenberg, Austria.
- **SYNASC 2016 Program Committee Member of Track “Distributed Computing”**  
18th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, September 24–27, 2016, Timisoara, Romania.
- **ICACCI 2016 Program Committee Member**  
5th International Conference on Advances in Computing, Communications, and Informatics, Jaipur, India, September 21–24, 2016.
- **WSC 2016 Program Committee Member**  
8th Workshop on Scalable Computing, Gdansk, Poland, September 11–14, 2016.
- **ICTERI 2016 Program Committee Member**  
12th International Conference on ICT in Education, Research, and Industrial Applications, Kyiv, Ukraine, June 21-24, 2016.
- **PDCN 2016 Program Committee Member**  
13th IASTED International Conference on Parallel and Distributed Computing and Networks, February 15–17, 2016, Innsbruck, Austria.
- **MoMM 2015 Program Committee Member**  
13th International Conference on Advances in Mobile Computing And Multimedia, Brussels, Belgium, December 10–12, 2015.
- **PAS 2015 Program Committee Member**

- Fourth International Seminar on Program Verification, Automated Debugging and Symbolic Computation Beijing, China, October 21-23, 2015.
- **CMS 2015 Program Committee Member**  
6th Workshop on Conceptual Modelling of Services, Stockholm, Sweden, October 19-22, 2015.
  - **LaSCoG-SCoDiS 2015 Program Committee Member**  
8th Workshop on Large Scale Computations on Grids (LaSCoG'15) and The 3rd Workshop on Scalable Computing in Distributed Systems (SCoDiS'15) , Ohrid, Macedonia, October 1-4, 2015.
  - **SYNASC 2015 Program Committee Member of Track “Distributed Computing”**  
17th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, September 21-24, 2015, Timisoara, Romania.
  - **PASCO 2015 Program Committee Member**  
7th International Workshop on Parallel Symbolic Computation, Bath, UK, July 10-12, 2015.
  - **ICTERI 2015 Program Committee Member**  
11th International Conference on ICT in Education, Research, and Industrial Applications, Lviv, Ukraine, May 14-16, 2015.
  - **PRACE 2014 Spring School Local Organization Chair and Programme Committee Member**  
PRACE 2014 Spring School “Software Engineering for Supercomputers in Research and Industry”, April 15-17, 2014, Hagenberg, Austria.
  - **SYNASC 2014 Program Committee Member of Track “Distributed Computing”**  
16th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, September 22-25, 2014, Timisoara, Romania.
  - **TCGC-2014 Program Committee Member**  
International Symposium on Theory of Computing, and Global Computing Models, Delhi, India, 24 – 27 September 2014.
  - **SCoDiS-LaSCoG'14 Program Committee Member**  
3rd Workshop on Scalable Computing in Distributed Systems (SCoDiS'14) and 8th Workshop on Large Scale Computations on Grids (LaSCoG'14), Warsaw, Poland, 7 - 10 September, 2014.
  - **CMS 2014 Program Committee Member**  
CMS 2014 – 5th Workshop on Cloud Computing, Models and Services at the 25th International Conference on Database and Expert Systems Applications (DEXA 2014), Munich, Germany September 1-5, 2014.
  - **ICTERI 2014 Program Committee Member**  
10th International Conference on ICT in Education, Research, and Industrial Applications,

- Kherson, Ukraine, June 18–21, 2014.
- **PDCN 2014 Program Committee Member**  
IASTED International Conference on Parallel and Distributed Computing and Networks, February 17–19, 2014, Innsbruck, Austria.
  - **ICAI 2014 Program Committee Member**  
9th International Conference on Applied Informatics, Eger, Hungary, January 29 — February 1, 2014.
  - **SYNASC 2013 Program Committee Member of Track “Distributed Computing”**  
15th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, September 2013, Timisoara, Romania.
  - **ICTERI 2013 Program Committee Member**  
9th International Conference on ICT in Education, Research, and Industrial Applications, Kherson, Ukraine, June 19–22, 2013.
  - **FGCT 2012 Program Committee Member**  
International Conference on Future Generation Communication Technology, December 12–14, 2012, British Computer Society, London, UK.
  - **SMSV 2012 Program Committee Member**  
Workshop on Algebraic, Logical, and Algorithmic Methods of System Modeling, Specification and Verification, June 6–10, 2012, Kherson, Ukraine.
  - **SYNASC 2012 Program Committee Member of Track “Parallel and Distributed Computing”**  
14th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing September 26–29, 2012, Timisoara, Romania.
  - **MoMM 2012 Program Committee Member**  
10th International Conference on Advances in Mobile Computing And Multimedia, Bali, Indonesia, December 3–5, 2012.
  - **PDCS 2012 Program Committee Member**  
IASTED International Conference on Parallel and Distributed Computing and Systems, November 12–14, 2011, Las Vegas, Nevada, USA.
  - **LaSCoG-SCoDiS’12 Program Committee Member**  
3rd Workshop on Scalable Computing in Distributed Systems (SCoDiS’2012) and 8th Workshop on Large Scale Computations on Grids (LaSCoG’2012) Wrocław, Poland, September 9–12, 2012.
  - **ICTERI 2012 Program Committee Member**  
8th International Conference on ICT in Education, Research, and Industrial Applications, Kherson, Ukraine, June 6–10, 2012.
  - **LaSCoG-SCoDiS’11 Program Committee Member**  
2nd Workshop on Scalable Computing in Distributed Systems and 7th Workshop on Large

- Scale Computations on Grids, Torun, Poland, September 11–14, 2010.
- **PDCS 2011 Program Committee Member**  
IASTED International Conference on Parallel and Distributed Computing and Systems, December 14–16, 2011, Dallas, Texas, USA.
  - **MoMM 2011 Program Committee Member**  
9th International Conference on Advances in Mobile Computing And Multimedia, Hue City, Vietnam, December 5–7, 2011.
  - **HiPC'2011 Program Committee Member**  
18th IEEE International Conference on High Performance Computing, Bengaluru, India, December 19–22, 2011.
  - **ITCS 2011 Program Committee Member**  
3rd FTRA International Conference on Information Technology Convergence and Services, Gwangju, Korea, October 20–22, 2011.
  - **SYNASC 2011 Co-Chair of Track “Parallel and Distributed Computing”**  
13th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing September 26–29, 2011, Timisoara, Romania.
  - **THedu'11 Program Committee Member**  
CTP Components for Educational Software, Workshop associated to CADE23, July 31 2011, Wroclaw, Poland.
  - **FM 2011 Program Committee Member**  
17th International Symposium on Formal Methods, Lero, Limerick, Ireland, June 20–24, 2011.
  - **CAI 2011 Program Committee Member**  
4th International Conference on Algebraic Informatics, Hagenberg, Austria, June 21–24, 2011.
  - **PDCN 2011 Program Committee Member**  
IASTED International Conference on Parallel and Distributed Computing and Networks, February 15–17, 2011, Innsbruck, Austria.
  - **HiPC'2010 Program Committee Member**  
17th IEEE International Conference on High Performance Computing, Goa, India, December 19–22, 2010.
  - **MoMM 2010 Program Committee Member**  
8th International Conference on Advances in Mobile Computing And Multimedia, Paris, France, November 8–10, 2010.
  - **PPDP 2010 Symposium Co-Chair**  
Principles and Practice of Declarative Programming 12th International ACM SIGPLAN Symposium, Hagenberg, Austria, July 26–28, 2010.

- **ISPDC 2010 Program Committee Member**  
9th International Symposium on Parallel and Distributed Computing, Istanbul, Turkey, July 7–9, 2010.
- **PASCO 2010 Program Committee Member**  
International Workshop on Parallel Symbolic Computation, Grenoble, France, July 21–23, 2010.
- **LaSCoG-SCoDiS'10 Program Committee Member**  
6th Workshop on Large Scale Computations on Grids and 1st Workshop on Scalable Computing in Distributed Systems, Wisla, Poland, October 18–20, 2010.
- **SYNASC 2010 Co-Chair of Track “Parallel and Distributed Computing”**  
12th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing September 23–26, 2010, Timisoara, Romania.
- **WING 2010 Program Committee Member**  
3rd International Workshop on Invariant Generation, July 21, 2010.
- **ACSE 2010 Program Committee Member**  
Sixth IASTED International Conference on Advances in Computer Science and Engineering, March 15–17, 2010, Sharm El Sheikh, Egypt.
- **Third Austrian Grid Symposium Program Committee Co-Chair**  
Johannes Kepler University Linz, Austria September 28–29, 2009.
- **WWV'09 Local Organization Co-Chair**  
5th Int'l Workshop on Automated Specification and Verification of Web Systems, Hagenberg, Austria, July 17, 2009.
- **PDCN 2010 Program Committee Member**  
IASTED International Conference on Parallel and Distributed Computing and Networks, February 16–18, 2010, Innsbruck, Austria.
- **MoMM 2009 Program Committee Member**  
7th International Conference on Advances in Mobile Computing And Multimedia, Kuala Lumpur, Malaysia, December 14–16, 2009.
- **LaSCoG'09 Program Committee Member**  
5th Workshop on Large Scale Computations on Grids, September 13–16, 2009, Wroclaw, Poland.
- **SYNASC 2009 Session Co-Chair**  
11th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing September 26–29, 2009, Timisoara, Romania.
- **TFM 2009 Program Committee Member**  
2nd Int. FME Conference on Teaching Formal Methods, November 6, 2009, Eindhoven, The Netherlands.

- **PDCN 2009 Program Committee Member**  
IASTED International Conference on Parallel and Distributed Computing and Networks, February 16–18, 2009, Innsbruck, Austria.
- **ISPDC 2009 Program Committee Member**  
9-th International Symposium on Parallel and Distributed Computing, Lisbon, Portugal, June 30–July 4, 2009.
- **WING 2009 Program Committee Member**  
2nd International Workshop on Invariant Generation, York, UK, March 22–23, 2009.
- **SCSS2008 2008 Program Committee Member**  
Austrian-Japanese Workshop on Symbolic Computation in Software Science, Hagenberg, Austria, July 12–13, 2008.
- **MoMM 2008 Program Committee Member**  
6th International Conference on Advances in Mobile Computing And Multimedia, Linz, Austria, November 24–26, 2008.
- **ISPDC 2008 Program Committee Member**  
8-th International Symposium on Parallel and Distributed Computing, July 1–5, 2008, Cracow, Poland.
- **DAPSYS 2008 Program Committee Member**  
7th International Conference on Parallel and Distributed Systems, Debrecen, Hungary, September 3–5, 2008.
- **ISPDC 2007 Organization Chair and Program Committee Member**  
6th International Symposium on Parallel and Distributed Computing, Hagenberg, Austria, July 5–8, 2007.
- **MoMM 2007 Program Committee Member**  
5th International Conference on Advances in Mobile Computing And Multimedia, Jakarta, Indonesia, December 3–5, 2007.
- **ATC 2007 Program Committee Member**  
4th International Conference on Autonomic and Trusted Computing, Hong Kong, China, July 11–13, 2007.
- **LaScoG 2007 Program Committee Member**  
Workshop on Large Scale Computations on Grids, Gdansk, Poland, September 9-12, 2007.
- **ACST 2007 Program Committee Member**  
Third IASTED International Conference on Advances in Computer Science and Technology, Phuket, Thailand, April 2–4, 2007.
- **MoMM 2006 Program Committee Member**  
4th International Conference on Advances in Mobile Computing And Multimedia, Yogyakarta Indonesia, December 4–6, 2006.

- **LaScoG 2006 Program Committee Member**  
2nd Workshop on Large Scale Computations on Grids, Wisla, Poland, November 6-10, 2006.
- **Second Austrian Grid Symposium Program Committee Member**  
Innsbruck, Austria, September 21-23, 2006.
- **DAPSYS 2006 Program Committee Member**  
Innsbruck, Austria, September 21–23, 2006.
- **ATC 2006 Program Committee Member**  
3rd IFIP International Conference on Autonomic and Trusted Computing, Wuhan and Three Gorges, China, September 3-6, 2006.
- **ISPDC 2006 Program Committee Member**  
5th International Symposium on Parallel and Distributed Computing, Timisoara, Romania, July 6–9, 2006.
- **DAIS 2006 Program Committee Member**  
International Conference on Distributed Applications and Interoperable Systems, Bologna, Italy, June 15-17, 2005.
- **ACST 2006 Program Committee Member**  
IASTED International Conference on Advances in Computer Science and Technology, Puerto Vallarta, Mexico, January 23–25, 2006.
- **First Austrian Grid Symposium Local Organization and Program Chairman** (together with Thomas Fahringer and Dieter Kranzlmüller)  
First Austrian Grid Symposium, Schloss Hagenberg, Austria, December 1–2, 2005.
- **LaScoG 2005 Program Committee Member**  
Workshop on Large Scale Computations on Grids, Poznan, Poland, September 11–14, 2005.
- **SCG 2005 Program Committee Member**  
Second Workshop on Symbolic Computation on Grids, Timisoara, Romania, September 25–29, 2005.
- **MoMM 2005 Program Committee Member**  
Kuala Lumpur, Malaysia, September 19–21, 2005.
- **EuroPVM/MPI'2005 Program Committee Member**  
Capri, Italy, September 18–22, 2005.
- **DAIS 2005 Program Committee Member**  
International Conference on Distributed Applications and Interoperable Systems, Athens, Greece June 15-17, 2005.
- **USW'2005 Program Committee Member**  
Taipei, Taiwan, March 28–30, 2005.

- **EuroPVM/MPI'2004 Program Committee Member**  
Budapest, Hungary, September 19–22, 2004.
- **Dapsys'2004 Program Committee Member**  
Budapest, Hungary, September 19–22, 2004.
- **MoMM 2004 Program Committee Member**  
Bali, Indonesia, August 17–19, 2004.
- **MoMM 2003 Program Co-Chair**  
Jakarta, Indonesia, September 15–17, 2003.
- **EuroPVM/MPI'2002 Program Committee Member**  
Linz, Austria, September 15–18, 2002.
- **Dapsys'2002 Program Committee Member**  
Linz, Austria, September 15–18, 2002.
- **Parallel and Distributed Programming Tools for Grids Co-Organizer**  
Special Session of the 10th Euromicro Workshop on Parallel, Distributed and Network-based Processing PDP-2002, Gran Canaria Island January 9th-11th, 2002.
- **EuroPVM/MPI 2001 Program Committee Member**  
Santorini (Thera), Greece, September 23–26, 2001.
- **Austrian-Iranian Software/IT Workshop and Contact Forum Program Chairman**  
Hagenberg, Austria, September 14-15, 2000.
- **EuroPVM/MPI'2000 Program Committee Member**  
Balatonfüred, Lake Balaton, Hungary, September 10th-13th, 2000.
- **DAPSYS'2000 Program Committee Member**  
3rd Austrian-Hungarian Workshop on Distributed and Parallel Systems, Balatonfüred, Lake Balaton, Hungary September 10th-13th, 2000.
- **EuroPVM/MPI'99 Program Committee Member** 6th European PVM/ MPI Users' Group Meeting, Barcelona, Spain, September 22–29, 1997.
- **ACPC '99 Program Committee Member**  
4th International Conference of the Austrian Center for Parallel Computation, Salzbrug, Austria, February 16–18, 1999.
- **DAPSYS'98 Program Committee Member**  
Austrian-Hungarian Workshop on Distributed and Parallel Systems, Budapest, Hungary, September 28–30, 1998.
- **EuroPVM-MPI '97 Program Committee Member**  
Fourth European PVM-MPI Users' Group Meeting, Krakow, Poland, November 3–5, 1997.
- **MPLP'96 Program Committee Member**  
JICSLP'96 Post Conference Workshop on Multi-Paradigm Logic Programming, Bonn,



Germany, September 5–6, 1996.

- **DAPSYS'96 Program Committee Member**  
Austrian-Hungarian Workshop on Distributed and Parallel Systems (Environments and Tools), Miskolc, Hungary, October 2–4, 1996.
- **EuroPVM 96 Program Committee Member**  
Third European PVM Users' Group Meeting, Munich, Germany, October 7–9, 1996.
- **Telemedia 96 Program Committee Chairman**  
Telecommunication and Multimedia, Summer Forum Hagenberg, Austria, July 4–5, 1996.
- **EuroPVM 95 Program Committee Member**  
Second European PVM Users' Group Meeting, Lyon, France, September 19–21, 1995.
- **CONPAR 94 - VAPP VI Organization Committee Member**  
Third Joint International Conference on Vector and Parallel Processing, Linz, Austria, September 6–8, 1994.

## 9 Editing, Refereeing and Consulting Activities

- **Evaluator EU Programme HORIZON 2020 FET OPEN**  
Remote evaluation of proposals, 2015–2017.
- **Referee for International Journal of Information Technology and Management (IJITM)**,  
December 2015.
- **Referee for The Journal of Supercomputing**, Regularly since September 2013.
- **Referee for Concurrency and Computation: Practice and Experience**, January 2015,  
April 2015.
- **Referee for International Journal of Parallel, Emergent and Distributed Systems**,  
July 2014.
- **Referee for IEEE Transactions on Services Computing (TSC)**, July 2013.
- **Evaluator EU Programme IST Future and Emerging Technologies (FET)**  
Remote evaluation of proposal, 2013.
- **Member of the Editorial Board and Referee for the Journal of Universal Computer Science**  
Springer, Germany, since 1999.
- **Referee for Conferences on Intelligent Computer Mathematics (CICM)**, March 2012.
- **Referee for Central European Journal of Computer Science**, Versita, March 2012.
- **Referee for Information and Software Technology**, Elsevier, March 2012.

- **Referee for IEEE Transactions of Parallel and Distributed Systems (TPDS)**, July 2011.
- **Reviewer for Promotion Board of Kuwait University**. Kuwait, August 2010.
- **Referee ISSAC 2010**  
International Symposium on Symbolic and Algebraic Computation, Munich, Germany, July 25–28, 2010.
- **Referee Journal of Symbolic Computation**  
Academic Press, London, UK, since 1995.
- **Referee Korea Research Foundation**  
June 2009.
- **Evaluator EU Project SENSORIA**  
Project reviews: November 8-9, 2007, Sophia Antipolis, France and November 6-7, 2008, Barcelona, Spain.
- **Referee IEEE Internet Computing**  
February 2008.
- **Referee ISSAC 2008**  
International Symposium on Symbolic and Algebraic Computation, Hagenberg, Austria, July 20–23, 2008.
- **Referee Calculemus 2007**  
14th Symposium on the Integration of Symbolic Computation and Mechanized Reasoning, Hagenberg, Austria, June 27-30, 2007.
- **Referee ISSAC 2007**  
International Symposium on Symbolic and Algebraic Computation, Waterloo, Ontario, Canada, July 29-August 1, 2007.
- **Evaluator EU Project Types**  
Project reviews: August 29, 2006, Brussels, Belgium; October 19, 2007, Brussels, Belgium.
- **Referee IFL 2006**  
18th International Symposium on Implementation and Application of Functional Languages IFL'06, Budapest, Hungary, September 4-6, 2006.
- **Referee “Handbook of Computer Networks”**  
Hossein Bidgoli (ed), John Wiley & Sons, 2006.
- **Evaluator EU Project APPSEM-II**  
Project review, October 5, 2006, Graz, Austria.
- **Referee Cluster Computing**  
Springer Netherlands, 2006.

- **Referee Computing Reviews**  
Computing Reviews, ACM, since 2006.
- **Referee TFP 2006**  
Seventh Symposium on Trends in Functional Programming University of Nottingham, UK, 19 - 21 April, 2006.
- **Referee Informatica**  
An International Journal of Computing and Informatics, Slovene Society Informatika, October 2005.
- **Evaluator EU Programme Global Computing Initiative**  
Evaluation panel, Brussels, Belgium, May 28 – June 1, 2001.  
On site refereeing, December 2, 2001.  
Evaluation panel, Rovereto, Italy, February 11–13, 2003.  
Evaluation panel, Rovereto, Italy, March 10–11, 2004.  
Evaluation panel, Brussels, Belgium, October 25–29, 2004.  
Evaluation panel, Edinburgh, Scotland, April 4-6, 2005.
- **Evaluator EU Programme IST Future and Emerging Technologies (FET-Open)**  
Remote evaluation of proposals, 2004 and 2005.
- **Referee ISSAC 2005**  
International Symposium on Symbolic and Algebraic Computation, July 24–27, 2005, Beijing, China.
- **Referee IFL 2004**  
International Workshop on Implementation and Application of Functional Languages, September 8–10, Lübeck, Germany.
- **Referee ISSAC 2004**  
International Symposium on Symbolic and Algebraic Computation, July 4–7, Santander, Spain.
- **Referee Concurrency and Computation: Practice and Experience**  
John Wiley & Sons, April 2002, November 2002.
- **Industrial Consulting**  
Austrian hardware and software development company, 2001.
- **Referee Calculemus'2001.**  
9th Symposium on the Integration of Symbolic Computation and Mechanized Reasoning, Siena, Italy, June 21st-22nd, 2001.
- **Referee Software — Practice & Experience.**  
John Wiley & Sons, March 2001.
- **Referee ASCM'2000**  
4th Asian Symposium on Computer Mathematics, Chiang Mai, Thailand, December 17-21, 2000.

- **Referee Euro-Par 2000**  
European Conference on Parallel Computing, Munich, Germany, August 29 – September 1, 2000.
- **Referee Euro-Par'99**  
European Conference on Parallel Processing, Toulouse, France, August 31 – September 3, 1999.
- **Referee ISSAC 99**  
International Symposium on Symbolic and Algebraic Computation, July 28-31, 1999, Vancouver, Canada.
- **Referee International Journal of Computer Algebra in Mathematics Education**  
Special issue for the 1998 IMACS Conference on Applications of Computer Algebra, Prague, Czech Republic, August 9–11, 1998.
- **Referee Mathematical Foundations of Computer Science**  
23rd International Symposium, Brno, Czech Republic, August 24-28, 1998.
- **Referee Computers and Artificial Intelligence Journal**  
Slovak Academic Press, 1998.
- **Referee CP97**  
Third International Conference on Principles and Practice of Constraint Programming, Schloß Hagenberg, Austria, October 29 – November 1, 1997.
- **Referee ICPP '97**  
International Conference on Parallel Processing, Bloomingdale, IL, August 11–15, 1997.
- **Referee Euro-Par'97**  
European conference in Parallel Processing, Passau, Germany, August 26–29, 1997.
- **Evaluator EU INFO2000 Programme**  
MIDAS-NET call for proposals, Luxembourg, September 10–17, 1996.
- **Referee ISCO 96**  
International Symposium on Design and Implementation of Symbolic Computation Systems, Karlsruhe, Germany, September 18–20, 1996.
- **Referee CADE-13**  
Thirteenth International Conference on Automated Deduction, Rutgers University, New Brunswick, USA, July 30–August 3, 1996.
- **Referee EU Long Term Research**  
European Research and Technological Development Programme in Information Technologies (Esprit) in the 4th Framework Programme, 1995–1996.
- **Referee Springer-Verlag**  
Springer-Verlag, Vienna, Austria, 1995.

- **Referee IPPS 95**  
9th International Parallel Processing Symposium, Santa Barbara, California, April 25–28, 1995.
- **Referee PASCO 94**  
International Symposium on Parallel Symbolic Computation, Hagenberg, Austria, September 28–30, 1994.
- **Referee PPOPP 93**  
ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming, San Diego, CA, May 19–21, 1993.
- **Referee ICALP 92**  
19th International Colloquium on Automata, Languages and Programming, Vienna, Austria, July 12–17, 1991.
- **Referee ACPC 91**  
1st International Conference of the Austrian Center for Parallel Computation (ACPC), Salzburg, Austria, September 29 – October 2, 1991.
- **Referee Parcella 90**  
Workshop on Parallel Processing by Cellular Automata and Arrays, 1990.
- **Referee ICALP 90**  
International Colloquium on Automata, Languages and Programming, 1990.

## 10 Research Visits and Seminar Participation

- **Guest Professorship at the University of Debrecen**  
Debrecen, Hungary, October 2015. Course Formal Methods in Software Development.
- **Guest Professorship at the University of Debrecen**  
Debrecen, Hungary, February 2012. Course Formal Methods for Concurrent Systems.
- **Guest Professorship at the University of Debrecen**  
Debrecen, Hungary, February 2011. Course Formal Methods for Distributed Systems.
- **Guest Professorship at the University of Debrecen**  
Debrecen, Hungary, September 2009. Course Formal Methods for Distributed Systems.
- **Guest Professorship at the University of Debrecen**  
Debrecen, Hungary, September 2007. Course Formal Methods for Distributed Systems.
- **Participation in the NATO Advanced Research Workshop on Verification of Infinite-State Systems with Applications to Security (VISSAS 2005)**  
Timisoara, Romania, March 17–22, 2005.

- **Invited Research Visit in Tsukuba**  
Symbolic Computation Research Group (SCORE), Institute of Information Sciences and Electronics, University of Tsukuba, Japan, July 21–28, 2001.
- **Research Visit in Edinburgh**  
Edinburgh Parallel Computing Center and Heriot-Watt University, Department of Computing and Electrical Engineering, Edinburgh, UK, September 18 – October 22, 2000.
- **Summer School Participation** International Summer School on Computational System Design  
Advanced Study Institute, Marktoberdorf, Germany, July 28–April 9, 1998.
- **Seminar Participation** Team Building — Model Construction.  
Department for Executive Methods, Austrian Military NCO Academy, St. Oswald, Austria, October 1995.
- **Seminar Participation** Executive Guidelines for Coworker Motivation. Department for Executive Methods, Austrian Military NCO Academy, St. Oswald, Austria, April 1995.
- **Seminar Participation** Visions for the Future.  
Department for Executive Methods, Austrian Military NCO Academy, St. Oswald, Austria, February 1995.
- **Research Visit in Copenhagen**  
Department of Computer Science (DIKU), University of Copenhagen, June 30 – July 7, 1993.

## 11 University Courses

- **Computer Systems**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 2018, SS 2017, SS 2016, SS 2015, SS 2014, SS 2013, SS 2012, SS 2011, SS 2010, SS 2009, SS 2008, SS 2007, SS 2006, SS 2005, SS 2004, SS 2003, SS 2002.
- **Introduction to Parallel and Distributed Computing**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 2018, SS 2016, SS 2014, SS 2012, SS 2010, SS 2008, WS 2005, WS 2003, WS 2000, SS 99, WS 97/98, WS 96/97, WS 95/96, WS 93/94, WS 92/93.
- **Parallel Computing**  
36 hours course (together with Armin Biere), Johannes Kepler University, Linz, Austria.  
SS 2018, SS 2017.
- **Formal Specification of Abstract Data Types**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 2018, SS 2016, SS 2014, SS 2012, SS 2010, SS 2008, WS 2005, WS 2002, WS 2000, WS 98/99.

- **Seminar “Formal Methods”**  
24 hours seminar, Johannes Kepler University, Linz, Austria.  
SS 2018, WS 2017, SS 2017, WS 2016, SS 2016, WS 2015, SS 2015, WS 2014, SS 2014, WS 2013, SS 2013, WS 2012, SS 2012, WS 2011, SS 2011, WS 2010, SS 2010, WS 2009, SS 2009, WS 2008, SS 2008, WS 2007, SS 2007, WS 2006, SS 2006, WS 2005, SS 2005, WS 2004.
- **Computability and Complexity**  
48 hours course, Johannes Kepler University, Linz, Austria.  
WS 2017, WS 2016, WS 2015, WS 2014, WS 2013, WS 2012, WS 2011, WS 2010, WS 2009, WS 2008, WS 2007, WS 2006.
- **Formal Methods in Software Development**  
48 hours course, Johannes Kepler University, Linz, Austria.  
WS 2017, WS 2016, WS 2015, WS 2014, WS 2013, WS 2012, WS 2011, WS 2010, WS 2009, WS 2008, WS 2007, SS 2007, SS 2006, SS 2005.
- **Logic**  
36 hours course, Johannes Kepler University, Linz, Austria. Co-lecturers: Armin Biere, Martina Seidl, and Wolfgang Windsteiger.  
WS 2017, WS 2016, WS 2015, WS 2014, WS 2013.
- **Formal Semantics of Programming Languages**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 2017, SS 2015, SS 2013, SS 2011, SS 2009, WS 2006, WS 2004, SS 2001, SS 99, WS 97/98, WS 95/96, SS 91.
- **Formal Models of Parallel and Distributed Systems**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 2017, SS 2015, SS 2013, SS 2011, SS 2009, WS 2006, SS 2001, WS 99, SS 98, SS 96.
- **Formal Methods for Distributed Systems**  
12 hours blocked course, University of Debrecen, Hungary.  
September 2009, September 2007.
- **Algebraic and Discrete Methods in Biology**  
4 hours of a 24 hours blocked course, Johannes Kepler University, Linz, Austria.  
SS 2009. SS 2008. SS 2007.
- **Computer-based Work Environments**  
2 hours of a 12 hours course, Johannes Kepler University, Linz, Austria.  
WS 2008,
- **Algorithms for Distributed Systems**  
24 hours course, Johannes Kepler University, Linz, Austria.  
WS 2004, WS 2001, SS 2000, WS 98/99.
- **Project Seminar Parallel and Distributed Software and Algorithms**  
24 hours seminar, Johannes Kepler University, Linz, Austria.

WS 2003, SS 2003, WS 2002, SS 2002, WS 2001, SS 2001, WS 2000, WS 99, SS 99, WS 98, SS 98.

- **Project Seminar Parallel and Distributed Software and Algorithms**  
24 hours seminar, Johannes Kepler University, Linz, Austria.  
WS 2003, SS 2003, WS 2002, SS 2002, WS 2001, SS 2001, WS 2000, WS 99, SS 99, WS 98, SS 98.
- **Types, Modules, Classes**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 2000, SS 98, SS 96.
- **Formal Foundations of Computer Science 1**  
24 hours course, Johannes Kepler University, Linz, Austria.  
WS 99.
- **Parallel Programming Laboratory**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 97, SS 95, SS 92.
- **Compilation of Functional Languages for Parallel Execution**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 97, SS 94, WS 91/92.
- **Parallel Languages and Programming Models**  
24 hours course, Johannes Kepler University, Linz, Austria.  
WS 96/97.
- **Parallel Functional and Logic Programming**  
24 hours course, Johannes Kepler University, Linz, Austria.  
SS 93, SS 91.
- **Parallel Architectures for Declarative Languages**  
24 hours course, Johannes Kepler University, Linz, Austria.  
WS 90/91.
- **Programming Projects**  
Supervision of graduate students, Johannes Kepler University, Linz, Austria.  
Since WS 90/91.
- **Mathematics for Computer Scientists**  
Tutor for undergraduate students, Institute for Mathematics, Johannes Kepler University, Linz, Austria.  
WS 87/88 until SS 89.



## 12 Courses at the University of Applied Sciences

- **Introduction to Programming**  
56 hours course, Degree Programme “Communication, Knowledge, Media” respectively “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. WS 2017, WS 2016, WS 2015, WS 2014, WS 2013, WS 2012, WS 2011, WS 2010, WS 2009, WS 2008, WS 2007, WS 2006, WS 2005, WS 2004, WS 2003, WS 2002, WS 2001.
- **Object-Oriented Programming**  
56 hours course, Degree Programme “Communication, Knowledge, Media” respectively “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. SS 2018, SS 2017, SS 2016, SS 2015, SS 2014, SS 2013, SS 2012, SS 2011, SS 2010, SS 2009, SS 2008, SS 2007, SS 2006, SS 2005, SS 2004, SS 2003, SS 2002.
- **Mathematics 1 (Formal Problem Solving)**  
28 hours course, Degree Programme “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. WS 2004, WS 2003, WS 2002, WS 2001.
- **Seminar “Scientific Writing”**  
28 hours course, Degree Programme “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. SS 2004.
- **Mathematics 2 (Formal Problem Solving)**  
28 hours course, Degree Programme “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. SS 2004, SS 2003, SS 2002.
- **Networks 1**  
28 hours course, Degree Programme “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. WS 2002, WS 2001.
- **Networks 2**  
28 hours course, Degree Programme “Engineering for Computer-based Learning”, Hagenberg University of Applied Sciences. SS 2002.
- **Distributed Computing**  
28 hours course, Degree Programme “Software Engineering”, Hagenberg University of Applied Sciences. SS 2000.

## 13 Supervised Students

- Alexander Brunhuemer** Validating the Formalization of Theories and Algorithms of Discrete Mathematics by the Computer-Supported Checking of Finite Models (Bachelor Thesis, Johannes Kepler University, Linz, September 2017).
- Daniela Ritirc** Formally Modeling and Analyzing Mathematical Algorithms with Software Specification Languages & Tools (Master's Thesis, Johannes Kepler University, Linz, Austria, 2016).
- Muhammad Taimoor Khan** Formal Specification and Verification of Computer Algebra Software (PhD Thesis, Johannes Kepler University, Linz, Austria, 2014).
- Gabor Guta** Model-to-Text Transformation Modification by Examples (PhD Thesis, Johannes Kepler University, Linz, Austria, 2012).
- Andrei-Ovidiu Coman** Video Tracking of Humans in Robotic Environments (Master's Thesis, International School for Informatics, Hagenberg, Austria, 2011).
- Ahmad Mohamed Hisham Ismail** Remotely Controlling a Mechanical Laboratory via the Internet (Master's Thesis, International School for Informatics, Hagenberg, Austria, 2010).
- Amira Zaki** Re-engineering of a Grid Aware Medical Database System Based on a Metamodel (Master's Thesis, International School for Informatics, Hagenberg, Austria, 2009).
- Stefan Georgiev** Evaluation of Cluster Middleware Computing Environment (Master's Thesis, International School for Informatics, Hagenberg, Austria, 2009).
- Katharina Bauer-Öppinger** Concept and Prototype of an Aggregator Portal for Learning Opportunities Based on the MLO-AD Standard (Diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2009).
- Fabian Schwaiger** Entwicklung einer Benutzerschnittstelle zur Verwendung von 2D-Barcodes auf mobilen Endgeräten (Development of a User Interface for the Use of 2D Barcodes on Mobile Devices, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2009).
- Imre Matko** Grid-aware Database Support for Medical Software (Master's Thesis, International School for Informatics, Hagenberg, Austria, 2008).
- Kenji Miyamoto** Parallel Algorithms for Sparse Matrices in an Industrial Optimization Software (Master's Thesis, International School for Informatics, Hagenberg, Austria, 2008).
- Johannes Watzl** Investigations on Improving the SEE-GRID Optimization Algorithm (Diploma thesis, Johannes Kepler University, Linz, Austria, 2008).
- Markus Stadlbauer** Integration von Entscheidungsprozeduren in einen interaktiven Beweissistenten (Diploma thesis, Johannes Kepler University, Linz, Austria, 2008).

- Florian Prieler** Konzeptionierung und prototypische Entwicklung eines webbasierten Planspiels für Disponenten des Transportwesens (Concept and Prototypical Development of a Web-based Business Game for Dispatchers in Transport Business, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2008).
- Kathrin Furtlehner** Innovative Aufgabenarten für interaktive eLearning-Anwendungen (Innovative Exercise Types for Interactive eLearning Applications, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2007).
- Bettina Wansch** Erstellung eines kommerziellen Nachhilfesystems für Online-Nachhilfestunden (Development of a Commercial System for Online Tutoring, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2007).
- Roswitha Wallner** Unterstützung von SCORM bei der Erstellung von E-Learning-Inhalten mit einem Adobe-Flash-Framework (Supporting SCORM in the Development of eLearning Contents with an Adobe Flash Framework, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2007).
- David Schwingenschlögl** Visualisierung von prädikatenlogischen Auswertungen unter Berücksichtigung lernfördernder Aspekte (Visualization of Predicate Logic Evaluations Considering Learning Supporting Aspects, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2006).
- David Wojak** Bewertungssysteme in Web-basierten Lernumgebungen am Beispiel von Moodle (Evaluation Systems in Web Based Learning Environments using Moodle as an Example, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2006).
- Rebhi Baraka** A Framework for Publishing and Discovering Mathematical Web Services, PhD thesis, Johannes Kepler University, Linz, Austria, August 2006.
- David Hauger** Interaktive Bausteine zur Entwicklung von eLearning-Anwendungen (Interactive Components für the Development of eLearning Applications, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2006).
- Mirjam Köck** Computer-Supported Cooperative Project Management with Particular Emphasis on its Application in Education (diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2006).
- Günter Krausgruber** Visualisierung von Listen-basierten Java-Programmen unter Berücksichtigung von lernfördernden Aspekten (Visualization of List-based Java Programs under Consideration of Learning-Supporting Aspects, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2005).
- Robert Berndorfer** Konzeptionierung und Entwicklung eines Prototyps zur Online-Simulation einer CNC-Fräsmaschine für das Training von Mitarbeitern (Concept and Development of a Prototype for the Online Simulation of a CNC Milling Machine for Employee Training, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2005).

- Kathrin Meyer** Semantische Modellierung vernetzter Lerninhalte am Beispiel des Lernsystems “Digital Media for Artists” (Semantic Modeling of Linked Learning Contents for the Learning System “Digital Media for Artists”, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2005).
- Daniel Huemer** Fallstudien zur aufwandsminimierenden Erstellung von dynamischen Lernmaterialien (Case Studies for the Effort Minimizing Development of Dynamic Learning Contents, in German, diploma thesis, Upper Austria University of Applied Sciences at Hagenberg, Austria, 2005).
- Karoly Bosa** Fault Tolerance for Distributed Maple, PhD thesis, Johannes Kepler University, Linz, Austria, September 2004.
- Gerald Eckerstorfer** Integration von Streaming im e-Learning für eine Technische Veranstaltung im Fachhochschulbereich (Integrating Streaming into e-Learning for a Technical Course at a University of Applied Sciences, in German, diploma thesis, University of Applied Sciences at Hagenberg, Austria, 2003).
- Susanne Fest** Technische Szenarien für den e-Learning Einsatz im Ergänzungs-Lehrgang der Fachhochschul-Studiengänge Oberösterreich (Technical Scenarios for the Application of e-Learning in the Qualification Course of the Upper Austria University of Applied Sciences, in German, diploma thesis, University of Applied Sciences at Hagenberg, Austria, 2003).
- Lucia Sirbu** A Distributed Object Framework for Integrating Mathematical Services (master’s thesis for Babes-Bolyai University, Faculty of Computer Science, Cluj Napoca, Romania, written at RISC in 2001).
- Christian Mittermaier** Parallel Algorithms in Constructive Algebraic Geometry (diploma thesis, Johannes Kepler University, Linz, Austria, 1999-2000).
- Mircea Marin** Distributed Constraint Solving for Functional Logic Programming (PhD thesis, Johannes Kepler University, Linz, Austria, 1997–1998, joint supervision with Prof. Tetsu Ida at Tsukuba University, Japan).
- Werner Danielczyk-Landerl** Syntax Processing and Code Generation for a Generic Programming Language (diploma thesis, Johannes Kepler University, Linz, Austria, 1997–1998).
- Peter Kulczycki** An Application Framework for the Distributed Simulation of Virtual Worlds by Spatial Decomposition (diploma thesis, Technical College (Fachhochschule) for Software Engineering, Hagenberg, Austria, 1997).  
Integration of Client/Server and Peer-to-Peer Principles in Distributed Systems (practice semester, Technical College (Fachhochschule) for Software Engineering, Hagenberg, Austria, 1996–1997).
- Wolfgang Stöcher** Designing and Prototyping a Functor Language Using Denotational Semantics (diploma thesis, Johannes Kepler University, Linz, Austria, 1996–1997).
- Alexander Dvorsky** A Fault-Tolerant Distributed Manager/Worker System (practice semester,

Technical College (Fachhochschule) for Software Engineering, Hagenberg, Austria, 1996–1997).

## 14 Developed Software Systems

**The RISC Algorithm Language (RISCAL) (2017–)** A language and associated software system for specifying and verifying mathematical algorithms.

**LogicGuard (2014–2017)** A stream monitor specification language and associated monitoring system.

**The RISC ProgramExplorer (2008–)** An attempt towards an environment for formal program analysis and reasoning that integrates the RISC ProofNavigator as a proof assistant.

**The RISC ProofNavigator (2005–2008)** An attempt towards an interactive proof assistant as a first component of a future environment for formal program and system reasoning.

**Distributed Maple (1998–2001)** A system for writing parallel programs in the computer algebra system Maple based on a communication and scheduling mechanism implemented in Java.

**Logic Evaluator (1999)** A system for writing executable mathematical definitions in a subset of first order predicate logic with set theory applied in the undergraduate education of computer science students at the Johannes Kepler University.

**Generic Programming System (1996–1998)** A programming environment (language and compiler) for the development of generic programs based on the concept of parameterized modules (functors).

**DAJ — Distributed Algorithms in Java (1997)** A Java toolkit for developing, simulating, and visualizing distributed algorithms and embedding them into electronic documents.

**RISC Information System (1996–1997)** Web server and database integration.

**RT++ Thread Package (1996)** A C++ package that implements higher-order threads in a type-safe framework with garbage collection.

**pD Compiler (1993–1994)** A compiler for a para-functional programming language that uses a new technique to generate parallelism from annotated functional programs.

**PACLIB Runtime Kernel (1992–1993)** A parallel kernel for the computer algebra library SACLIB supporting on a shared memory multiprocessor tasks as first order objects with garbage-collection, non-determinism, and lazy task creation.

**ADAM Abstract Dataflow Machine (1989–1990)** A parallel runtime simulator for a new kind of dataflow architecture on a multi-transputer system.

## 15 Books and Book Sections

Wolfgang Schreiner.

### **Software.**

Appendix of “Nonlinear Resonance Analysis – Theory, Computation, Applications”, Elena Kartashova (author), Cambridge University Press, Cambridge, UK, 2011, pp. 185–208.

Maribel Fernández, Temur Kutsia, Wolfgang Schreiner.

**PPDP’10 - Proceedings of the 2010 Symposium on Principles and Practice of Declarative Programming**, July 26-28, 2010, Hagenberg, Austria, ACM, New York.

Jens Volkert, Thomas Fahringer, Wolfgang Schreiner, Rene Kobler.

### **Proceedings of the 3rd Austrian Grid Symposium.**

September 28–29, 2009, Linz, Austria, Austrian Computer Society (OCG), Vienna, Austria.

Bruno Buchberger, Michael Affenzeller, Alois Ferscha, Michael Haller, Tudor Jebelean, Erich Peter Klement, Peter Paule, Gustav Pomberger, Wolfgang Schreiner, Robert Stubenrauch, Roland Wagner, Gerhard Weiss, Wolfgang Windsteiger (eds).

### **Hagenberg Research.**

488 pages, Springer, 2009.

Wolfgang Schreiner (ed), Karoly Bosa, Andreas Langegger, Thomas Leitner, Bernhard Moser, Szilard Pall, Volkmar Wieser, Wolfram Wöß.

### **Parallel, Distributed, and Grid Computing.**

Chapter VII of “Hagenberg Research”, Bruno Buchberger, Michael Affenzeller, Alois Ferscha, Michael Haller, Tudor Jebelean, Erich Peter Klement, Peter Paule, Gustav Pomberger, Wolfgang Schreiner, Robert Stubenrauch, Roland Wagner, Gerhard Weiss, Wolfgang Windsteiger (eds), pp. 333-378, Springer, 2009.

Tudor Jebelean (ed), Bruno Buchberger, Temur Kutsia, Nikolaj Popov, Wolfgang Schreiner, Wolfgang Windsteiger.

### **Automated Reasoning.**

Chapter II of “Hagenberg Research”, Bruno Buchberger, Michael Affenzeller, Alois Ferscha, Michael Haller, Tudor Jebelean, Erich Peter Klement, Peter Paule, Gustav Pomberger, Wolfgang Schreiner, Robert Stubenrauch, Roland Wagner, Gerhard Weiss, Wolfgang Windsteiger (eds), Springer, 2009.

The original publication is available at [www.springerlink.com](http://www.springerlink.com).

E. Kartashova, C. Raab, Ch. Feurer, G. Mayrhofer, W. Schreiner.

### **Symbolic Computations for Nonlinear Wave Resonances.**

In: “Extreme Ocean Waves”, E. Pelinovsky, C. Kharif (eds.), Springer, July 2008, pp. 97–128. arXiv:0706.3789v2

Dieter Kranzlmüller, Wolfgang Schreiner, Jens Volkert (eds).

### **ISPDC 2007: 6th International Symposium on Parallel and Distributed Computing.**

Hagenberg, Austria, July 5-8, 2007. IEEE Computer Society, Los Alamitos, CA.

Jens Volkert, Thomas Fahringer, Dieter Krazlmüller, Wolfgang Schreiner (eds).

**1st Austrian Grid Symposium.**

Schloss Hagenberg, Austria, December 2005, Volume 210 of the Austrian Computer Society (OCG), Vienna, 2006.

Wolfgang Schreiner.

**Modellierung und Theorie verteilter Systeme** (Models and Theory of Distributed Systems, in German)

Chapter A7, Peter Rechenberg and Gustav Pomberger (eds.), Informatik-Handbuch, 4th edition, pp. 167–186, Hanser, 2006.

G. Kotsis, A. Ferscha, W. Schreiner, I.K. Ibrahim (eds.)

**The International Conference on Advances in Mobile Multimedia (MoMM2003).**

Jakarta, Indonesia, September 15–17, 2003, Volume 171 of the Austrian Computer Society OCG.

Wolfgang Schreiner.

**Functional and Logic Programming.**

Article 5.4 in Theme 6.45 “Computer Science and Engineering”, Zainalabedin Navabi and David Kaeli (theme eds), Encyclopedia of Life Support Systems (EOLSS), UNESCO-EOLSS Joint Committee, 2001.

Thierry Gautier, Hoon Hong, Jean-Louis Roch, Wolfgang Schreiner.

**Parallel Implementation.**

Section 2.16 in Handbook of Computer Algebra — Foundations, Applications, Systems; J. Grabmeier, E. Kaltofen, V. Weispfennig (eds), Springer Verlag, Heidelberg, 2001.

## 16 Journal Publications

Adam Toth, Tamas Berczes, Attila Kuki, Bela Almasi, Wolfgang Schreiner, Jinting Wang, Fang Wang.

**Analysis of Finite-Source Cluster Networks.** Creative Mathematics and Informatics, volume 25, number 2, pages 223–235, May 2016. SINUS Association, ISSN 1584-286X.

Wolfgang Schreiner, Tamas Berczes, Janos Sztrik.

**Probabilistic Model Checking on HPC Systems for the Performance Analysis of Mobile Networks**

Annales Mathematicae et Informaticae, volume 43, pp. 123–144, 2014.

Tamas Berczes, Gabor Guta, Gabor Kusper, Wolfgang Schreiner, and Janos Sztrik.

**Evaluating a Probabilistic Model Checker for Modeling and Analyzing Retrieval Queueing Systems**

Annales Mathematicae et Informaticae, Volume 7, pp. 51–75, Líceum University Press, 2010.

Dacian Tudor, Georgiana Macariu, Wolfgang Schreiner, Vladimir Cretu.

**Experiences on Grid Shared Data Programming**

International Journal of Grid and Utility Computing (IJGUC), Inderscience, 2009, pp. 43–54.

Wolfgang Schreiner.

**The RISC ProofNavigator: A Proving Assistant for Program Verification in the Classroom**

Formal Aspects of Computing, volume 21, number 3, pp. 277–291, 2009. The original publication is available at [www.springerlink.com](http://www.springerlink.com).

DOI 10.1007/s00165-008-0069-4

Gabriele Kotsis, Alois Ferscha, Wolfgang Schreiner, Ismail Khalil Ibrahim.

**Mobile Multimedia: A Communication Engineering Perspective**

Radiomatics: Journal on Communication Engineering, ITB Press, volume 1, number 1, May 2004, pp.1-11, ISSN 1693-5152.

Karoly Bosa, Wolfgang Schreiner.

**Tolerating Stop Failures in Distributed Maple.**

Scalable Computing: Practice and Experience, volume 6, number 2, pp. 59–70, July 2005.

Wolfgang Schreiner, Christian Mittermaier, Karoly Bosa.

**Distributed Maple: Parallel Computer Algebra in Networked Environments.**

Journal of Symbolic Computation, volume 35, number 3, pp. 305–347, Academic Press, 2003.

Mircea Marin, Tetsuo Ida, Wolfgang Schreiner.

**CFLP: a Mathematica Implementation of a Distributed Constraint Solving System (PostScript, Mathematica Notebook, Conference Version).**

The Mathematica Journal, volume 8, number 2, pp. 287–300, 2001.

Selected papers of IMS '99, Third International Mathematica Symposium, Hagenberg, Austria, August 23–25, 1999.

Wolfgang Schreiner.

**A Para-Functional Programming Interface for a Parallel Computer Algebra Package.**

Journal of Symbolic Computation, Special Issue on Parallel Symbolic Computation, Hoon Hong (ed.), volume 21, pp. 593–614, Academic Press, 1996.

Hoon Hong, Andreas Neubacher, Wolfgang Schreiner.

**The Design of the SACLIB/PACLIB Kernels.**

Journal of Symbolic Computation 19, pages 111–132, Academic Press, 1995.

## 17 Refereed Publications

Wolfgang Schreiner, Alexander Brunhuemer, Christoph Fürst.

**Teaching the Formalization of Mathematical Theories and Algorithms via the Automatic Checking of Finite Models.**

Post-Proceedings ThEdu'17, Pedro Quaresma and Walther Neuper: 6th International Workshop on Theorem proving components for Educational software (ThEdu'17), Gothenburg, Sweden, 6 Aug 2017, Electronic Proceedings in Theoretical Computer Science (EPTCS) 267, pp. 120-139. 2018. Open Publishing Association, ISSN 2075-2180.



Manfred Droste, Temur Kutsia, George Rahonis, Wolfgang Schreiner.

**MK-fuzzy Automata and MSO Logics.**

GandALF 2017 - Eighth International Symposium on Games, Automata, Logics, and Formal Verification, Patricia Bouyer, Andrea Orlandini and Pierluigi San Pietro (eds), Rome, Italy, September 22-27, Electronic Proceedings in Theoretical Computer Science, volume 256, pages 106–120, ISSN 2075-2180.

Ovidiu Constantin Novac, Tamás Bérczes, Attila Kuki, Ádám Tóth, Wolfgang Schreiner.

**Modeling RF-Based Sensor Networks by Using Dual-Source Retrial Queueing Systems.**

ICEMES 2017, 14th International Conference on Engineering of Modern Electric Systems, Oradea, Romania, June 1–2, 2017, pp. 149-153. IEEE Xplore, DOI: 10.1109/EMES.2017.7980402.

David Cerna, Wolfgang Schreiner.

**Measuring the Gap: Algorithmic Approximation Bounds for the Space Complexity of Stream Specifications.**

Mohamed Mosbah and Michaël Rusinowitch (eds). SCSS 2017: 8th International Symposium on Symbolic Computation in Software Science, Gammarth, Tunisia, April 6–9, 2017. EPIc Series in Computing, volume 45, pages 1–15.

David Cerna, Wolfgang Schreiner, Temur Kutsia.

**Predicting Space Requirements for a Stream Monitor Specification Language.**

Runtime Verification, 16th International Conference, RV 2016, Madrid, Spain, September 23–30, 2016, Yliès Falcone and César Sánchez (eds), volume 10012 of Lecture Notes in Computer Science, pages 135-151.

The final publication is available at Springer via [https://doi.org/10.1007/978-3-319-46982-9\\_9](https://doi.org/10.1007/978-3-319-46982-9_9).

David Cerna, Wolfgang Schreiner, Temur Kutsia.

**Space Analysis of a Predicate Logic Fragment for the Specification of Stream Monitors.**

James H. Davenport and Fadoua Ghourabi (editors). SCSS 2016: 7th International Symposium on Symbolic Computation in Software Science, Tokyo, Japan, March 28–31, 2016. EPIc Series in Computing, volume 39, pages 29–41.

Andrii Kryvolap, Mykola Nikitchenko, Wolfgang Schreiner.

**Extending Floyd-Hoare Logic for Partial Pre- and Postconditions.**

Vadim Ermolayev et al (eds), ICTERI 2013: 9th International Conference on ICT in Education, Research and Industrial Applications: Integration, Harmonization and Knowledge Transfer, Kherson, Ukraine, June 19-22, 2013, Revised Selected Papers. Communications in Computer and Information Science, Springer, Berlin, 2013 (to appear). The final publication is available at [www.springerlink.com](http://www.springerlink.com).

Andrii Kryvolap, Mykola Nikitchenko, Wolfgang Schreiner.

**Program Algebras with Monotone Floyd-Hoare Composition.**

Vadim Ermolayev et al (eds), ICTERI 2013: 9th International Conference on ICT in Education, Research and Industrial Applications: Integration, Harmonization and Knowledge Transfer, Kherson, Ukraine, June 19-22, 2013. Vol-1000 of CEUR-WS.org 2013 CEUR Workshop Proceedings, pp. 533–549.

Muhammad Taimoor Khan, Wolfgang Schreiner.

**Towards the Formal Specification and Verification of Maple Programs.**

Intelligent Computer Mathematics, Johan Jeuring, John A. Campbell, Jacques Carette, Gabriel Dos Reis, Petr Sojka, Makarius Wenzel, Volker Sorge (ed.), Lecture Notes in Artificial Intelligence (LNAI) 7362, pp. 231-247. July 2012. Springer-Verlag, Berlin/Heidelberg.

Best Student Paper Award.

The original publication is available at [www.springerlink.com](http://www.springerlink.com)

Muhammad Taimoor Khan, Wolfgang Schreiner.

**On Formal Specification of Maple Programs.**

Intelligent Computer Mathematics, Johan Jeuring, John A. Campbell, Jacques Carette, Gabriel Dos Reis, Petr Sojka, Makarius Wenzel, Volker Sorge (ed.), Lecture Notes in Artificial Intelligence (LNAI) 7362, pp. 442-446. July 2012. Springer-Verlag, Berlin/Heidelberg.

The original publication is available at [www.springerlink.com](http://www.springerlink.com)

Wolfgang Schreiner.

**Computer-Assisted Program Reasoning Based on a Relational Semantics of Programs.**

Pedro Quaresma and Ralph-Johan Back (eds), THedu'11, Proceedings First Workshop on CTP Components for Educational Software (THedu'11), July 31 2011, Wrocław, Poland,. Electronic Proceedings in Theoretical Computer Science (EPTCS), 79, pp. 124–142. February 2012.

Wolfgang Schreiner.

**Computer-Assisted Program Reasoning Based on a Relational Semantics of Programs (Extended Abstract).**

Pedro Quaresma and Ralph-Johan Back (eds), THedu'11, CTP Components for Educational Software, Workshop associated to CADE-23, July 31 2011, Wrocław, Poland, pp. 55–59, CISUC Technical Report 2011/001, Center for Informatics and Systems, University of Coimbra, Portugal, ISSN 0874-338X.

Karoly Bosa and Wolfgang Schreiner.

**A Supercomputing API for the Grid.**

Jens Volkert et al (eds), Proceedings of the 3rd Austrian Grid Symposium, September 28–29, 2009, Linz, Austria, Austrian Computer Society (OCG), Vienna, Austria, 15 pages.

Dacian Tudor, Vladimir Cretu, Wolfgang Schreiner.

**Shared Data Grid Programming Improvements using Specialized Objects.**

4th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2010), February, 15–18, 2010, Andrzej Frycz Modrzewski Cracow College, Krakow, Poland. IEEE, 6 pages.

Dacian Tudor, Georgiana Macariu, Wolfgang Schreiner, Vladimir Cretu.

**Experiments on a Grid Layer Prototype for Shared Data Programming Model.**

5th International Symposium on Applied Computational Intelligence and Informatics (SACI 2009), Timisoara, Romania, May 28-29, 2009. IEEE Catalog: CFP0945C-CDR, ISBN: 978-1-4244-4478-6.

Gábor Guta, Wolfgang Schreiner, Dirk Draheim.

**A Lightweight MDSO Process Applied in Small Projects.**

35th EuroMicro Conference, Software Engineering and Advanced Applications (SEEA), Patras, Greece, August 27–29, 2009, 4 pages. IEEE Computer Society.

Tamás Bérczes, Gábor Guta, Gábor Kuser, Wolfgang Schreiner, János Sztrik.

**Analyzing a Proxy Cache Server Performance Model with the Probabilistic Model Checker PRISM.**

WWV'09, 5th Int'l Workshop on Automated Specification and Verification of Web Systems, Hagenberg, Austria, July 17, 2009, 15 pages.

Karoly Bosa, Wolfgang Schreiner.

**The Porting of a Medical Grid Application from Globus 4 to the gLite Middleware**

DAPSYS 2008, 7th International Conference on Distributed and Parallel Systems, Debrecen, Hungary, September 3–5, 2008, 11 pages.

Dacian Tudor, Vladimir Cretu, Wolfgang Schreiner.

**Designing an Architecture for Distributed Shared Data on the Grid**

ICA3PP 2008, International Conference on Algorithms and Architectures for Parallel Processing, Agia Napa, Cyprus, June 9–11, 2008. Volume 5022 of Lecture Notes in Computer Science, Springer, pp. 2261–2264.

Karoly Bosa, Wolfgang Schreiner, Michael Buchberger, Thomas Kaltofen.

**A Grid Software for Virtual Eye Surgery Based on Globus and gLite**

ISPDC 2007, 6th International Symposium on Parallel and Distributed Computing, Hagenberg, Austria, July 5–8, 2007, pp. 151–158, IEEE Computer Society, Los Alamitos, CA.

Wolfgang Schreiner.

**Program Verification with the RISC ProofNavigator**

Teaching Formal Methods: Practice and Experience, BCS-FACS Christmas Meeting, London, UK, December 15, 2006. Electronic Workshops in Computing (eWiC), British Computer Society.

Rebhi Baraka, Wolfgang Schreiner.

**Semantic Querying of Mathematical Web Service Descriptions.**

Web Services and Formal Methods, Mario Bravetti et al (eds), Third International Workshop on Web Services and Formal Methods, WS-FM 2006, Vienna, Austria, September 8–9, 2006, Lecture Notes in Computer Science 4184, Springer, pp. 73–87.

Karoly Bosa, Wolfgang Schreiner, Michael Buchberger, Thomas Kaltofen.

**SEE-GRID: A Grid-Based Medical Decision Support System for Eye Muscle Surgery.**

1st Austrian Grid Symposium, December 1–2, 2005, Hagenberg, Austria. OCG Verlag, Vienna, pp. 61–74.

Rebhi Baraka, Wolfgang Schreiner.

**Querying Registry-Published Mathematical Web Services.**

AINA 2006, IEEE 20th International Conference on Advanced Information Networking and Applications, April 18–20, 2006, Vienna, Austria. IEEE Computer Society Press, pp. 776–772.

Rebhi Baraka, Olga Caprotti, Wolfgang Schreiner.

**A Web Registry for Publishing and Discovering Mathematical Services.**

EEE-05 IEEE International Conference on e-Technology, e-Commerce, and e-Service, Hong Kong, April 29 – March 1, 2005. IEEE Computer Society Press, pp. 190–193.

Karoly Bosa, Wolfgang Schreiner.

**Tolerating Stop Failures in Distributed Maple.**

Dapsys 2002, 4th Austrian-Hungarian Workshop on Distributed and Parallel Processing, Linz, Austria, September 29–October 2, 2002, Kluwer Academic Publishers, Boston, 8 pages.

Jozsef Kovacs, Gabor Kusper, Robert Lovas, Wolfgang Schreiner.

**Integrating Temporal Assertions into a Parallel Debugger.**

Euro-Par 2002, 8th International Euro-Par Conference, Paderborn, Germany, August 27–30, 2002. Lecture Notes in Computer Science, Springer, Berlin, 8 pages.

Olga Caprotti, Wolfgang Schreiner.

**Towards a Mathematical Service Description Language.**

ICMS 2002, International Congress of Mathematical Software, Beijing, China, August 20–28, 2002, World Scientific Publishers, Singapore/River Edge, 11 pages.

Wolfgang Schreiner.

**A Java Toolkit for Teaching Distributed Algorithms.**

ITiCSE 2002, 7th Annual Conference on Innovation and Technology in Computer Science Education, University of Aarhus, Denmark, June 24–26, 2002. ACM Press, New York, 5 pages.

Wolfgang Schreiner.

**Parallel Software and Algorithms for Symbolic Computation.**

Habilitation Thesis, Johannes Kepler University, Linz, Austria, January 2001.

Wolfgang Schreiner.

**Manager-Worker Parallelism versus Dataflow in a Distributed Computer Algebra System.**

PaCT'2001, Victor Malyskin (ed), Parallel Computing Technologies, Sixth International Conference, September 3–7, 2001, Novosibirsk, Russia. Volume 2127 of Lecture Notes in Computer Science, Springer, Berlin, pp. 329–343.

Wolfgang Schreiner, Gabor Kusper, Karoly Bosa.

**Fault Tolerance for Cluster Computing Based on Functional Tasks.**

Euro-Par 2001 Parallel Processing, Rizo Sakellariou and John Keane and John Gurd and Len Freeman (eds), 7th International Euro-Par Conference, Manchester, UK, August 28 – 31, 2001. Volume 2150 of Lecture Notes in Computer Science, Springer, Berlin, pp. 712–716.

Wolfgang Schreiner, Christian Mittermaier, Franz Winkler.

**Plotting Algebraic Space Curves by Cluster Computing.**

ASCM'2000, 4th Asian Symposium on Computer Mathematics, Xiao-Shan Gao and Dongming Wang (eds), Chiang Mai, Thailand, December 17–21, 2000, pp. 49–58. World Scientific Publishers, Singapore/River Edge.

Christian Mittermaier, Wolfgang Schreiner, Franz Winkler.

**A Parallel Symbolic-Numerical Approach to Algebraic Curve Plotting.**

CASC-2000, Third International Workshop on Computer Algebra in Scientific Computing, Vladimir Gerdt and Ernst W. Mayr (eds), Samarkand, Uzbekistan, October 5-9, 2000, pp. 301–314, Springer, Berlin.

Wolfgang Schreiner, Christian Mittermaier, Franz Winkler.

**On Solving a Problem in Algebraic Geometry by Cluster Computing.**

Euro-Par 2000, 6th International Euro-Par Conference, Arndt Bode, Thomas Ludwig, Wolfgang Karl, Roland Wismüller (eds), Munich, Germany, August 29 – September 1, 2000, volume 1900 of Lecture Notes in Computer Science, Springer, Berlin, pp. 1196–1200.

Wolfgang Schreiner, Christian Mittermaier, Franz Winkler.

**Analyzing Algebraic Curves by Cluster Computing.**

Distributed and Parallel Systems — From Instruction Parallelism to Cluster Computing, Peter Kacsuk and Gabriele Kotsis (eds), Proceedings of DAPSYS'2000, 3rd Austrian-Hungarian Workshop on Distributed and Parallel Systems, Balatonfüred, Lake Balaton, Hungary September 10th-13th, 2000, pp. 175-184, Kluwer Academic Publishers, Boston.

Mircea Marin, Tetsuo Ida, Wolfgang Schreiner.

**A Distributed Constraint Solving System for Functional Logic Programming.**

APSITT'99, Asia-Pacific Symposium on Information and Telecommunication Technologies, Ulaanbaatar, Mongolia, pp. 151–155, August 30-31, 1999.

Mircea Marin, Tetsuo Ida, Wolfgang Schreiner.

**A Distributed System for Solving Equational Constraints Based on Lazy Narrowing Calculi.**

JSSST PPL'99 Workshop on Programming and Programming Languages, Togawa, Japan, March 17–19, 1999, Japan Society for Software Science and Technology.

Wolfgang Schreiner.

**Developing a Distributed System for Algebraic Geometry.**

EURO-CM-PAR'99 Third Euro-conference on Parallel and Distributed Computing for Computational Mechanics, Weimar, Germany, March 20–25, 1999, Barry H.V. Topping (ed.), Civil-Comp Press, Edinburgh, pp. 137–146.

Mircea Marin, Wolfgang Schreiner.

**CFLP: A Distributed Constraint Solving System for Functional Logic Programming.**

P. Kacsuk and G. Kotsis (eds), DAPSYS'98 Workshop on Distributed and Parallel Systems, September 28–30, 1998, Budapest, Hungary, pp.133–136. Technical Report TR-98102, Department of Applied Computer Science, University of Vienna, Austria.

Wolfgang Schreiner, Werner Danielczyk-Lander, Mircea Marin, Wolfgang Stöcher.

**A Generic Programming Environment for High-Performance Mathematical Libraries.**

Generic Programming, Selected Papers of an International Seminar on Generic Programming, Dagstuhl Castle, Germany, April 27–May 1, 1998 Rüdiger Loos, David Musser (eds), Volume 1766 of Lecture Notes in Computer Science, Springer, Berlin, pp. 256–267.

Wolfgang Schreiner.

**Application of a Para-Functional Language to Problems in Computer Algebra.**

A. P. Wim Böhm, John T. Feo (eds), Proceedings High Performance Functional Computing,

Denver, Colorado, April 9–11, 1995, Lawrence Livermore National Laboratory Report CONF-9504126, pp. 10–24.

Wolfgang Schreiner.

**Parallel Functional Programming for Computer Algebra.**

Phd. Thesis, Research Institute for Symbolic Computation, Johannes Kepler University, Linz, Austria, September 1994.

Wolfgang Schreiner.

**A Para-Functional Programming Interface for a Parallel Computer Algebra Package.**

PASCO 94 International Symposium on Parallel Symbolic Computation, Hagenberg, Austria, September 26–28, 1994. World Scientific Publishing Company.

Wolfgang Schreiner.

**Virtual Tasks for the PACLIB Kernel.**

Parallel Processing: CONPAR 94 - VAPP VI Third Joint International Conference on Vector and Parallel Processing, Linz, Austria, September 6–8, 1994. Volume 854 of Lecture Notes in Computer Science, Springer, Berlin, pages 533–544.

Hoon Hong, Andreas Neubacher, Wolfgang Schreiner.

**The Design of the SACLIB/PACLIB Kernels.**

DISCO '93 International Symposium on Design and Implementation of Symbolic Computation Systems, Gmunden, Austria, September 15–17, 1993, Alfonso Miola (ed.), Volume 722 of Lecture Notes in Computer Science, Springer, Berlin.

Wolfgang Schreiner, Hoon Hong.

**The Design of the PACLIB Kernel for Parallel Algebraic Computation.**

Second International Conference of the Austrian Center for Parallel Computation, Gmunden, Austria, October 4–6, 1993, Jens Volkert (ed.), Volume 734 of Lecture Notes in Computer Science, Springer, Berlin, pages 204–218.

Wolfgang Schreiner, Hoon Hong.

**PACLIB — A System for Parallel Algebraic Computation on Shared Memory Computers.**

Parallel Systems Fair at the Seventh International Parallel Processing Symposium, Newport Beach, CA, April 14, 1993, Hussein M. Alnuweiri (editor), pages 56–61, IPPS '93.

Wolfgang Schreiner, Hoon Hong.

**A New Library for Parallel Algebraic Computation.**

Sixth SIAM Conference on Parallel Processing for Scientific Computing, Norfolk, VA, March 22–24, 1993, volume II, Richard F. Sincovec et al. (eds), pages 776–783, SIAM.

Wolfgang Schreiner.

**The ADAM Abstract Dataflow Machine.**

In *Parallelization in Inference Systems*, Fronhöfer, B. and Wrightson, G. (eds.), International Workshop, Dagstuhl Castle, Germany, December 17–18, 1990. Volume 590 of Lecture Notes in Artificial Intelligence, Springer, Berlin, pages 270–289.

Wolfgang Schreiner.

**ADAM — An Abstract Dataflow Machine and its Transputer Implementation.**

In *Distributed Memory Computing*, Arndt Bode (ed.), Proceedings of the 2nd European Conference, EDMCC2, Munich, Germany, April 22–24, 1991, Volume 487 of Lecture Notes in Computer Science, pp. 392–401, Springer, Berlin.

Wolfgang Schreiner.

**ADAM and EVE — An Abstract Dataflow Machine and Its Programming Language.**

Diploma Thesis, Johannes Kepler University, Linz, Austria, September 1990.

## 18 Non-Refereed Publications

Wolfgang Schreiner, David Cerna, Temur Kutsia, Michael Krieger, Bashar Ahmad, Helmut Otto, Martin Rummerstorfer, Thomas Gössl.

**Practical Event Monitoring in the LogicGuard Framework.**

embedded world Conference 2016, February 23-25 2016, Nürnberg, Germany, Matthias Sturm et al. (ed.), February 2016. Design & Elektronik, Haar, Germany, ISBN 978-3-645-50159-0.

Wolfgang Schreiner, Temur Kutsia, Michael Krieger, Bashar Ahmad, Helmut Otto, Martin Rummerstorfer.

**Securing Device Communication by Predicate Logic Specifications**

embedded world Conference 2015, February 24-26 2015, Nürnberg, Germany, Matthias Sturm et al. (ed.), February 2015. Design&Elektronik, Haar, Germany.

Wolfgang Schreiner.

**Program-Reasoning Based on a Relational Semantics of Programs (Extended Abstract)**

Specification and Verification of Hybrid Systems, Proceedings of the First International Seminar, Louis Feraud and Ievgen Ivanov and Mykola Nikitchenko and Martin Strecker (ed.), pp. 64-69. 2011. October 10-12, 2011, Kyiv, Ukraine, Taras Shevchenko National University of Kyiv and Paul Sabatier University of Toulouse.

Wolfgang Schreiner.

**The RISC ProgramExplorer: Reasoning about Programs as State Relations (Extended Abstract)**

SCSS 2010, Symbolic Computation in Software Science, Hagenberg, Austria, July 29–30, 2010.

Wolfgang Schreiner.

**On Proving Assistants in the Classroom (and Elsewhere)**

CADGME 2009, Computer Algebra and Dynamic Geometry Systems in Mathematics Education, Hagenberg, Austria. July 11-13, 2009.

Wolfgang Schreiner, Michael Buchberger.

**Grid Computing zur Simulation von Augenmuskeloperationen (Grid Computing for the Simulation of Eye Muscel Surgery, in German)**

OCG Journal, 5:23–24, December 2005, Austrian Computer Society (OCG).

Wolfgang Schreiner.

**A Distributed Computer Algebra System Based on Maple and Java.**

Helmut Gutmann (ed.), Software for Communication Technologies, Third International Austrian-Israeli Technion Symposium with Industrial Forum, April 26–27, 1999, Hagenberg, Austria, Austrian Technion Society, Vienna, pp. 23–28.

Wolfgang Schreiner.

**On Engineering a Distributed Algorithm.**

Helmut Gutmann (ed.), Software for Communication Technologies, Third International Austrian-Israeli Technion Symposium with Industrial Forum, April 26–27, 1999, Hagenberg, Austria, Austrian Technion Society, Vienna, pp. 110–116.

Mircea Marin and Wolfgang Schreiner.

**CFLP: a Distributed Constraint Solving System for Functional Logic Programming.**

Bruno Buchberger and Tudor Jebelean (eds), Second International Theorema Workshop, Castle of Hagenberg, Austria, June 29–30, 1998.

Technical Report 98-10, RISC, Johannes Kepler University, Linz, Austria, June 1998.

Wolfgang Schreiner.

**A Distributed Education Environment Based on Mathematica.**

IDIMT'97 — 5th Interdisciplinary Information Management Talks, Zadov, Czech Republic, October 15–17, 1997, pp. 287–301, Volume 102 of the Austrian Computer Society Series, Oldenbourg Verlag, Vienna. Also: Technical Report 97-22, RISC, Johannes Kepler University Linz, Austria, July 1997.

Wolfgang Schreiner.

**Alle Fäden in der Hand — Thread Programmierung unter Linux in C und C++ (Teil 1 und Teil 2)**

Linux-Magazin, 07/1996 und 08/1996.

Wolfgang Schreiner.

**Parallel Computer Algebra on a Shared Memory Multiprocessor (Extended Abstract).**

4th Supercomputing Day, Johannes Kepler University, Linz, Austria, February 3, 1994.

Hoon Hong and Wolfgang Schreiner.

**Programming in PACLIB.**

SIGSAM Bulletin, Volume 26, Number 4, pages 1–6, November 1992. Also: Technical Report 93-05, RISC, Johannes Kepler University, Linz, Austria, February 1993. Also: Technical Report ACPC/TR 93-13, Austrian Center for Parallel Computation.

Wolfgang Schreiner.

**On the Automatic Parallelization of List-Based Functional Programs.**

Invited paper at the Third International Workshop on Compilers for Parallel Computers, Vienna, Austria, July 6–9, 1992, Technical Report ACPC/TR 92-8, Austrian Center for Parallel Computation, pages 44-57.



## 19 Technical Reports

Wolfgang Schreiner, William Steingartner.

**Visualizing Execution Traces in RISCAL.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, March 2018.

Wolfgang Schreiner, Tamás Bérczes, János Sztrik, Hamza Nemouchi.

**On the Probabilistic Model Checking of Cognitive Radio Networks and Cognitive Infocommunication Systems.**

Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria. Technical report, February 2018.

Wolfgang Schreiner.

**The RISC Algorithm Language - Tutorial and Reference Manual.**

Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria. Technical report, March 2017.

Temur Kutsia, George Rahonis, Wolfgang Schreiner.

**MK-fuzzy automata.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, May 2016.

Wolfgang Schreiner, Temur Kutsia, Davic Cerna, Michael Krieger, Bashar Ahmad, Helmut Otto, Martin Rummerstorfer, Thomas Gössl.

**The LogicGuard Stream Monitor Specification Language Tutorial and Reference Manual.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, October 2015.

Wolfgang Schreiner, Tamas Berczes, Janos Sztrik, Adam Toth.

**Modeling RF Communication in Sensor Networks by Probabilistic Model Checking.**

Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria. Technical report, October 2015.

Wolfgang Schreiner, Tamas Berczes, Janos Sztrik, Adam Toth.

**Analyzing Cluster Scheduling Schemes by Probabilistic Model Checking.**

Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria. Technical report, October 2015.

Wolfgang Schreiner.

**Some Lessons Learned on Writing Predicate Logic Proofs in Isabelle/Isar.**

Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria. Technical report, October 2014.

Wolfgang Schreiner, Tamas Berczes, Adam Toth.

**Analyzing Cluster Scheduling Schemes by Probabilistic Model Checking.**

Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria.

Technical report, September 2014.

Temur Kutsia, Wolfgang Schreiner.

**Verifying the Soundness of Resource Analysis for LogicGuard Monitors — Revised Version.**  
Technical Report 14-08, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2014.

Temur Kutsia, Wolfgang Schreiner.

**Verifying the Soundness of Resource Analysis for LogicGuard Monitors — Part 1.**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, December 2013.

Wolfgang Schreiner, Temur Kutsia.

**A Resource Analysis for LogicGuard Monitors .**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, December 2013.

Wolfgang Schreiner, Tamas Berczes, Janos Sztrik, Gabor Kusper.

**A Case Study on Exploring the Performance Limits of PRISM.**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2013.

Wolfgang Schreiner, Tamas Berczes, Janos Sztrik.

**Probabilistic Model Checking on HPC Systems for the Performance Analysis of Mobile Networks.**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2013.

Wolfgang Schreiner, Nikolaj Popov, Tamas Berczes, Janos Sztrik, Gabor Kusper.

**Applying High Performance Computing to Analyzing by Probabilistic Model Checking Mobile Cellular Networks with Spectrum Renting.**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, July 2013.

Wolfgang Schreiner.

**Initial Results on Modeling in PRISM Mobile Cellular Networks with Spectrum Renting.**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, April 2013.

Wolfgang Schreiner.

**Experiments with Measuring Time in PRISM 4.0 (Addendum).**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, April 2013.

Wolfgang Schreiner.

**Experiments with Measuring Time in PRISM 4.0.**  
Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, March 2013.

Wolfgang Schreiner.

**Computability and Complexity.**

Technical Report 2012-10, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, June 2012.

Lecture Notes, Winter Semester 2012/2013.

Temur Kutsia, Wolfgang Schreiner.

**LogicGuard Abstract Language.**

Technical Report 12-08, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, June 2012.

Wolfgang Schreiner.

**The RISC ProgramExplorer: Tutorial and Manual.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2011.

Wolfgang Schreiner.

**A JML Specification of the Design Pattern “Proxy”.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2010.

Wolfgang Schreiner.

**The RISC ProgramExplorer: Tutorial and Manual.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, April 2010.

Wolfgang Schreiner.

**From Types to Contracts: Supporting by Light-Weight Specifications the Liskov Substitution Principle.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, February 2010.

Wolfgang Schreiner.

**How to Write Postconditions with Multiple Cases.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, November 2009.

Wolfgang Schreiner.

**Supporting the Design Pattern “Object Structures as Plain Values”.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2009.

Wolfgang Schreiner.

**A JML Specification of the Design Pattern “Proxy”.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, April 2009.

Tamás Bérczes, Gábor Guta, Gábor Kusper, Wolfgang Schreiner, János Sztrik.

**Analyzing Web Server Performance Models with the Probabilistic Model Checker PRISM.**  
Technical Report 08-17, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, November 2008.

Wolfgang Schreiner.

**A Program Calculus**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, September 2008.

Wolfgang Schreiner.

**Understanding Programs**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, July 2008.

Gabor Guta, Barnabas Szasz, Wolfgang Schreiner.

**A Lightweight Model Driven Development Process based on XML Technology**

Technical Report 08-01, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, March 2008.

Karoly Bosa, Wolfgang Schreiner.

**Report on Experiments with Globus 4 and GLite.**

Austrian Grid Deliverable AG-D4-1-2007, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, January 2008.

Tamás Bérczes, Gábor Guta, Gábor Kuser, Wolfgang Schreiner, János Sztrik.

**Comparing the Performance Modeling Environment MOSEL and the Probabilistic Model Checker PRISM for Modeling and Analyzing Retrial Queueing Systems.**

Technical Report 07-17, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, December 2007.

Wolfgang Schreiner.

**The RISC ProofNavigator – Tutorial and Manual.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, July 2006.

Rebhi Baraka, Wolfgang Schreiner.

**Semantic Querying of Mathematical Web Service Descriptions.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, April 2006.

Rebhi Baraka, Wolfgang Schreiner.

**Querying Registry-Published Mathematical Web Services.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, July 2005.

Karoly Bosa, Wolfgang Schreiner, Michael Buchberger, Thomas Kaltofen.

**A Prototype of the SEE-GRID Pathology Fitter.**

Austrian Grid Deliverable A1c-3-2005, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, July 2005.

Karoly Bosa, Wolfgang Schreiner, Michael Buchberger, Thomas Kaltofen.

**The Initial Version of SEE-GRID.**

Austrian Grid Deliverable A1c-1-2005, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, March 2005.

Karoly Bosa, Wolfgang Schreiner, Rebhi Baraka, Michael Buchberger, Thomas Kaltofen, Daniel Mitterdorfer.

**SEE-GRID Design Overview.**

Austrian Grid Deliverable A1c-1, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, November 2004.

Rebhi Baraka, Olga Caprotti, Wolfgang Schreiner.

**A Registry Service as a Foundation for Brokering Mathematical Services.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, May 2004.

Rebhi Baraka, Olga Caprotti, Wolfgang Schreiner.

**Publishing and Discovering Mathematical Service Descriptions: A Web Registry Approach.**

Technical Report, Research Institute for Symbolic Computation (RISC), Johannes Kepler University, Linz, Austria, April 2004.

Wolfgang Schreiner.

**Recording Instructional Presentations on Your PC**

Engineering for Computer-based Learning, University of Applied Sciences at Hagenberg, Austria, March 2003.

Wolfgang Schreiner.

**Elektronische Lehrpräsentationen**

Engineering for Computer-based Learning, University of Applied Sciences at Hagenberg, Austria, March 2003.

Wolfgang Schreiner.

**Ein Teleteaching Experiment**

Engineering for Computer-based Learning, University of Applied Sciences at Hagenberg, Austria, May 2002.

Karoly Bosa, Wolfgang Schreiner.

**Task Logging, Rescheduling, and Peer Checking in Distributed Maple.**

Technical Report 02-10, RISC, Johannes Kepler University, Linz, Austria, March 2002.

Gabor Kusper, Wolfgang Schreiner, Robert Lovas.

**Integrating Temporal Specifications as Runtime Assertions into Parallel Debugging Tools (Project Report) .**

Technical Report 02-07, RISC, Johannes Kepler University, Linz, Austria, March 2002.

Wolfgang Schreiner.

**Parallelizing the Big Prime Berlekamp Algorithm with Distributed Maple.**

Technical Report 01-15, RISC, Johannes Kepler University, Linz, Austria, July 2001.

Wolfgang Schreiner, Gabor Kusper, Karoly Bosa.

**Introducing Fault Tolerance to Distributed Maple.**

Technical Report 01-03, RISC, Johannes Kepler University, Linz, Austria, January 2001.

Wolfgang Schreiner.

**Manager-Worker Parallelism versus Dataflow in Distributed Maple.**

Technical Report 00-34, RISC, Johannes Kepler University, Linz, Austria, December 2000.

Wolfgang Schreiner.

**Analyzing the Performance of Distributed Maple on Various Parallel and Distributed Systems.**

Technical Report 00-32, RISC, Johannes Kepler University, Linz, Austria, November 2000.

Cleopatra Pau, Wolfgang Schreiner.

**Distributed Mathematica — User and Reference Manual.**

Technical Report 00-25, RISC, Johannes Kepler University, Linz, Austria, July 2000.

Wolfgang Schreiner.

**A Note on Maple's GCD Computation of Partially Factored Polynomials.**

Technical Report 00-11, RISC, Johannes Kepler University, Linz, Austria, April 2000.

Ioana-Cleopatra Pau, Igor Rents, Wolfgang Schreiner.

**Verifying Mutual Exclusion and Liveness Properties with TLA.**

Technical Report 00-06, RISC, Johannes Kepler University, Linz, Austria, January 2000.

Wolfgang Schreiner.

**Formal Foundations of Computer Science 1.**

Technical Report 99-32, RISC, Johannes Kepler University, Linz, Austria, November 1999.

Fabrizio Caruso, Carsten Schneider, Geert Van de Weyer, Wolfgang Schreiner.

**A Student Dictionary System.**

Technical Report 99-10, RISC, Johannes Kepler University, Linz, Austria, April 1999.

Ralf Hemmecke, Erik Hillgarter, Wolfgang Schreiner, Franz Winkler.

**An Evaluation of the State of the CASA System.**

Technical Report 98-16, RISC, Johannes Kepler University, Linz, Austria, October 1998.

Wolfgang Schreiner.

**Distributed Maple - User and Reference Manual.**

Technical Report 98-05, RISC, Johannes Kepler University, Linz, May 1998.

Bruno Buchberger, Manuel Chakravarty, John Darlington, Yke Guo, Tetsuo Ida, Igor Mejeuev, Wolfgang Schreiner.

**KnowledgeWeb — A Design and Feasibility Study.**

Technical Report ISE-TR-98-151, Institute of Information Sciences and Electronics, University of Tsukuba, Japan, May 1998.

Wolfgang Schreiner.

**DAJ — A Toolkit for the Simulation of Distributed Algorithms in Java .**

Technical Report 97-36, RISC, Johannes Kepler University, Linz, November 1997.

Bruno Buchberger, Wolfgang Schreiner.

**CONCERT — A Software Architecture for Coordinating Education Sessions in Distributed Environments .**

Technical Report 97-04, RISC, Johannes Kepler University, February 1997.

Wolfgang Schreiner.

**RT++ — Higher Order Threads for C++, Tutorial and Reference Manual**

Technical Report 96-09, RISC, Johannes Kepler University, Linz, April 1996.

Hoon Hong and Wolfgang Schreiner.

**HPGP — High-Performance Generic Programming for Computational Mathematics by Compile-Time Instantiation of Higher-Order Functors.**

Accepted Research Proposal, Technical Report 96-10, RISC, Johannes Kepler University, July 1995.

Bruno Buchberger, Andreas Neubacher, Peter Pregler, Wolfgang Schreiner, Kurt Siegl.

**Kein Briefgeheimnis für die Informationsgesellschaft (No Privacy for the Information Society?)**

HTML version <http://www.risc.jku.at/misc-info/crypto/crypto.html>

Wolfgang Schreiner.

**Compiling a Para-Functional Language to Parallel PACLIB C.**

Technical Report 94-44, RISC, Johannes Kepler University, Linz, July 1994.

P.G. Bertoli, Hoon Hong, Andreas Neubacher, Wolfgang Schreiner, Volker Stahl.

**The C++ Interface to the STURM Distributed Multi-Processor Kernel.**

Technical Report 94-32, RISC, Johannes Kepler University, Linz, March 1994.

Hoon Hong, Andreas Neubacher, Wolfgang Schreiner, Volker Stahl.

**The C++ Interface to the STURM Multi-Processor Kernel.**

Technical Report 94-31, RISC, Johannes Kepler University, Linz, April 1994.

Hoon Hong, Andreas Neubacher, Wolfgang Schreiner, Volker Stahl.

**The STURM Multi-Processor Kernel.**

Technical Report, RISC, Johannes Kepler University, Linz, April 1994.

Wolfgang Schreiner.

**Virtual Tasks for the PACLIB Kernel.**

Technical Report 94-2, RISC, Johannes Kepler University, Linz, Austria, January 1994.

Wolfgang Schreiner.

**Garbage Collection on a Stack.**

Technical Report 94-1, RISC, Johannes Kepler University, Linz, Austria, January 1994.

Wolfgang Schreiner.

**Compiling a Functional Language to Efficient SACLIB C.**

Technical Report 93-49, RISC, Johannes Kepler University, Linz, Austria, September 1993.

Wolfgang Schreiner.

**Parallel Functional Programming — An Annotated Bibliography.**

Technical Report 93-24, RISC, Johannes Kepler University, Linz, Austria, May 1993.

Wolfgang Schreiner.

**The Correctness of the PACLIB Kernel — A Case Study in Parallel Program Verification by Temporal Logic.**

Technical Report 93-13, RISC, Johannes Kepler University, Linz, Austria, January 1993. Also: Technical Report ACPC/TR 93-15, Austrian Center for Parallel Computation.

Wolfgang Schreiner and Volker Stahl.

**The Exact Solution of Linear Equation Systems on a Shared Memory Multiprocessor.**

Technical Report, RISC, Johannes Kepler University, Linz, Austria, November 1992.

Wolfgang Schreiner.

**The Design of the PACLIB Kernel.**

Technical Report 92-33, RISC, Johannes Kepler University, Linz, Austria, May 1992. Also: Technical Report ACPC/TR 93-4, Austrian Center for Parallel Computation.

Hoon Hong, Wolfgang Schreiner, Andreas Neubacher, et al.

**PACLIB User Manual — A System for Parallel Algebraic Computation on Shared Memory Multiprocessors.**

Technical Report 92-32, RISC, Johannes Kepler University, Linz, Austria, May 1992. Also: Technical Report ACPC/TR 92-9, Austrian Center for Parallel Computation.

Wolfgang Schreiner.

**On the Analysis of List-Based Functional Programs for Automatic Parallelization.**

Technical Report, RISC, Johannes Kepler University, Linz, Austria, May 1992.

Wolfgang Schreiner.

**User Guide and System Administration Reference for the Sequent Symmetry.**

Technical Report \*-12, RISC, Johannes Kepler University, Linz, Austria, April 1992.

Wolfgang Schreiner.

**A Portable Parallel Library for the Compilation of Dataflow Programs.**

Technical Report ACPC/TR 92-5, Austrian Center for Parallel Computation, April 1992.

Wolfgang Schreiner.

**A Model for the Compilation of Dataflow Languages on Conventional Parallel Architectures.**

Technical Report 91-50, RISC, Johannes Kepler University, Linz, Austria, November 1991.

Wolfgang Schreiner.



**A High-Level Target Language for the Compilation of Dataflow Programs.**

Technical Report 91-49, RISC, Johannes Kepler University, Linz, Austria, November 1991.

Wolfgang Schreiner.

**Report on the EVE Programming Language.**

Technical Report 89-43, RISC, Johannes Kepler University, Linz, Austria, November 1989.

## 20 Talks

**Implementing Logic by Semantics: The RISCAL Approach to Automating Program Reasoning over Finite Domains.**

Talk at the Department of Computers and Informatics, Technical University of Kosice, Slovakia, March 28, 2018.

**Semantic Technologies for Computer Science Education.**

Talk at the Department of Computers and Informatics, Technical University of Kosice, Slovakia, July 11, 2017.

**Software Security/Safety II: Formal Methods for Analyzing the Safety and Performance of Concurrent Systems.**

Industrial seminar in the frame of the SmaPro (Smart Production) project, October 8, 2015, Hagenberg, Austria.

**Formal Methods: A Personal Perspective.**

Invited talk, Scientific Day: Research Priorities in Information Technology, March 28, 2014, Islamic University of Ghaza, Palestine.

**Formal Methods II: Logic Decision Procedures as Universal Problem Solvers.**

Industrial seminar in the frame of the SmaPro (Smart Production) project, March 26, 2015, Hagenberg, Austria.

Florian Haftmann, Andreas Lochbihler, Wolfgang Schreiner.

**Towards abstract and executable multivariate polynomials in Isabelle**

Isabelle Workshop 2014, associated with ITP 2014, Vienna, Austria, July 13, 2014.

**Applying Predicate Logic to Monitoring Network Traffic**

**Invited Talk** at PAS 2013, Second International Seminar on Program Verification, Automated Debugging and Symbolic Computation Beijing, China, October 23-25, 2013.

**High Performance Computing – A Small Tutorial**

Department of Informatics Systems and Networks, University of Debrecen, Hungary, February 22, 2013.

**Generating Network Monitors from Logic Specifications**

**Invited Talk** at FIT 2012, 10th International Conference on Frontiers of Information Technology, Islamabad, Pakistan, December 17-19, 2012.

**Specification and Implementation of CENREC Services**

Research Institute of Information Technologies, Kherson State University, Kherson, Ukraine, May 18, 2009.

**Computer-Assisted Proving for the Analysis of Systems and Specifications**

Seminar “Advanced topics in Distributed and Component-based Systems”, Distributed Systems Research Group, Charles University, Prague, March 17, 2009.

**A Report on the “MathBroker” Project for Brokering Mathematical Web Services**

The First International Conference for Science and Development (ISCD-I), March 1–2, 2005, Gaza, Palestine.

**WP WA1-c “Virtual Eye Surgery – SEE-GRID”**

First Austrian Grid Workshop, December 9–10, 2004, Linz, Austria.

**eLearning für die Schulen**

Vortrag am BORG Birkfeld, 18. November 2003.

**eLearning für die Schulen**

Vortrag anlässlich der Verleihung des Learnie Award 2003, HAK Steyr, 2. Oktober 2003.

**Brokering Mathematical Services in the Global Network**

**Invited Talk** at MoMM 2003, Advances in Mobile Multimedia, September 17, 2003, Jakarta, Indonesia.

**Autorenwerkzeuge für eLearning-Inhalte**

Vortrag für die Lektorats-Mitarbeiter des Veritas-Verlags, 11. Juli 2003.

**Distributed Maple — Lessons Learned from Parallel Computer-Algebra in Distributed Environments**

**Invited Talk** at the East Coast Computer Algebra Day, April 5, 2003, Clemson University, Clemson, South Carolina, USA.

**Engineering für Computer-basiertes Lernen — Ein FH-Studiengang in Hagenberg**

2. Trinationaler Marktplatz “Virtuelle Lehre”, Bundesdekanekonferenz Wirtschaftswissenschaften, Fachhochschule Nürtingen, Deutschland, 7.–8. November 2002.

**Engineering for Computer-based Learning — A Degree Programme of the University of Applied Sciences in Hagenberg**

MbTAC, Multimedia-based Training Application Conference, Seefeld, Austria, May 14–15, 2002.

**Notebooks an die Schulen! eLearning an der AHS?**

Vortrag bei der Schulklausur des BG Ramsauerstraße, Schlierbach, 25. Jänner 2001.

**Plotting Algebraic Curves by Cluster Computing**

Talk at the Institute of Computer Science, University of Salzburg, Austria, November 29, 2001.

**e-Learning: Perspektiven für den unternehmensweiten Einsatz**

Vortrag beim Informations-Event “E-Learning — Internet für Aus- und Weiterbildung nutzen”

des Future Network, 6. November 2001, Wien.

**Towards Semantic Brokering of Mathematical Services on the Network**

Talk at the Tsukuba Software Science Seminar, Symbolic Computation Research Group (SCORE), Institute of Information Sciences and Electronics, University of Tsukuba, Japan, July 26, 2001.

**eLearning — eine Chance für das Bildungswesen**

Festvortrag bei der akademische Feier des Österreichischen Universitätslehrgangs für Tourismuswirtschaft, Wirtschaftsuniversität Wien, 29. Juni 2001.

**Temporal Logic Specifications for Parallel Debugging**

Talk at the Laboratory of Parallel and Distributed Systems of MTA SZTAKI, Computer Science Automation Research Institute of the Hungarian Academy of Sciences, April 13, 2001.

**Parallel Algebraic Geometry based on Maple and (Java or Haskell)**

Talk at School of Computer Science, University of St. Andrews, Scotland, UK, October 17, 2000.

**Parallel Computer Algebra based on Maple and Java**

Talk at Department of Computing and Electrical Engineering, Heriot-Watt University, Edinburgh, UK, October 3, 2000.

**On Parallelizing a Software Library for Algebraic Geometry**

*Invited talk* at the Eight International Colloquium on Numerical Analysis and Computer Science with Applications, Plovdiv, Bulgaria, August 13-17, 1999.

**Research on Distributed Software at RISC**

KnowledgeWeb Workshop, Imperial College London, UK, September 23–24, 1998.

**CONCERT — A Software Architecture for Building Distributed Education Sessions**

*Invited talk* at the WILL workshop, PFU company, June 13, 1997, Hagenberg/Linz, Austria.

**Sketch of a Distributed Education Environment Based on Mathematica**

Followup programme of the Theorema Workshop, June 11, 1997, Hagenberg/Linz, Austria.

**Was ist das Internet?**

*Invited talk* at the Sommer Medienakademie, September 18–22, 1996, Ars Electronica Center, Linz, Austria.

**Bedeutung von Multiprozessoren im kommerziellen Einsatz (Usability of Multiprocessors in Commercial Applications)**

*Invited talk* at Parallel Computing, Seminar of the International Data Corporation (IDC-Austria), Vienna, Austria, January 12, 1995.

**Datenbanken für Anwender (Databases for Users)**

Gödel School GmbH, Hagenberg, Austria, September 21, 1995.

**Multiprozessoren für den kommerziellen Einsatz (Multiprocessors for Commercial Applications)**

*Invited talk* at Power Business — Hochleistungscomputing 95, Seminar of the International Data Corporation (IDC-Switzerland), Zurich, Switzerland, October 17, 1995.

**Parallel Functional Programming for Computer Algebra.**

Talk at DIKU, University of Copenhagen, June 30, 1993.

**A Proposal for the Efficient Implementation of Dataflow in C.**

2nd Scientific Meeting of the Austrian Center for Parallel Computation (ACPC), Wilhelminen-berg Castle, Vienna, Austria, March 8–9, 1991.

**ADAM — An Abstract Dataflow Machine, Implementation and Evaluation.**

1st Scientific Meeting of the Austrian Center for Parallel Computation (ACPC), Henndorf at Wallersee, Austria, October 4–6, 1990.

**Parallel Computation and Computer Algebra**

Computer Algebra Summer School, Hagenberg Castle, Austria, July 2–14, 1990.

**ADAM — An Abstract Dataflow Machine and Its Transputer Implementation.**

Workshop on Parallel Computation, Schloß Seggau, Graz, Austria, June 24 – 30, 1990.