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Prof. Dr. phil. nat. Rolf Drechsler

Universität Bremen

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Lebenslauf/Curriculum Vitae

Rolf Drechsler

geboren am: 30. Juli 1969 in Rüsselsheim (Hessen)
Staatsangehörigkeit: Deutsch
Kinder: 1 Sohn, 2 Töchter



Persönliche Daten/Personal Data

Anschrift (dienstlich) Universität Bremen/
Fachbereich 3 - Mathematik und Informatik
Deutsches Forschungszentrum für
Künstliche Intelligenz GmbH (DFKI)
Bibliothekstr. 5
28359 Bremen
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Bildungsgang/Educational Program

1975-79 Grundschule Karben - Petterweil
1979-81 Förderstufe der J.-F. Kennedy Schule, Bad Vilbel
1981-88 Georg Büchner Gymnasium, Bad Vilbel
1988-92 Studium der Mathematik und Informatik an der J.W. Goethe-Universität in Frankfurt am Main
1992 Diplom in Informatik bei Prof. B. Becker
Titel der Diplomarbeit: *Konstruktion vollständig testbarer Addiererschaltkreise unter dem "robust Path-Delay-Fault" Fehlermodell*
1995 Promotion (summa cum laude) zum Dr. phil. nat. bei Prof. B. Becker
Titel der Dissertation: *Ordered Kronecker Functional Decision Diagrams und ihre Anwendung*
1999 Habilitation zum Privatdozenten bei Prof. B. Becker
Albert-Ludwigs-Universität Freiburg
Rahmenthema: *Automatische Synthese und Verifikation im computergestützten Schaltkreisentwurf*

Bisherige wissenschaftliche Tätigkeiten/Previous Academic Activities

1992	wissenschaftlicher Mitarbeiter bei Prof. G. Hotz im Fachbereich 10 (Informatik) der Universität des Saarlandes
1993-1995	wissenschaftlicher Mitarbeiter bei Prof. B. Becker im Fachbereich 20 (Informatik) der J.W. Goethe-Universität in Frankfurt am Main
1995-1996	wissenschaftlicher Mitarbeiter bei Prof. B. Becker an der Albert-Ludwigs-Universität in Freiburg im Breisgau
1996-2000	wissenschaftlicher Assistent bei Prof. B. Becker an der Albert-Ludwigs-Universität in Freiburg im Breisgau
2000-2001	Mitarbeiter (Senior Engineer) der Zentralabteilung Technik (Corporate Technology), Fachzentrum Entwicklungsautomatisierung der Siemens AG, München
2001-2002	Professor (C3) für Rechnerarchitektur an der Universität Bremen
seit 2002	Professor (C4 - seit Juli 2008 W3) für Rechnerarchitektur an der Universität Bremen
seit 2011	Direktor im DFKI, Leiter des Forschungsbereichs Cyber-Physical Systems
2012-2019	Term Member, Duke University, USA
2014-2016	Internationaler Gastprofessor, IIT Kharagpur, India
2018-2020	Internationaler Gastprofessor, Indian Statistical Institute

Aktuelle Forschungsgebiete/Current Fields of Research

- ✧ Datenstrukturen und Algorithmen für (Boolesche) Funktionen
- ✧ Formale Methoden
- ✧ Spezifikation, Synthese, Verifikation und Test von Schaltungen und Systemen
- ✧ Rechnerarchitektur
- ✧ Emerging Technologies

Preise und Ehrungen

- Best paper/poster/presentation awards
 - *Best Paper Award Haifa Verification Conference (HVC) 2006*
 - *Best Paper Award Forum on specification & Design Languages (FDL) in 2007*
 - *Best Paper Award Forum on specification & Design Languages (FDL) in 2010*
 - *Best Paper Award IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS) in 2010*
 - *Best Paper Award ACM/IEEE International Conference on Computer Aided Design (ICCAD) in 2013*
 - *Best Poster Award ACM Great Lakes Symposium on VLSI (GLSVLSI) in 2018*
 - *Best Paper Award ACM/IEEE International Conference on Computer Aided Design (ICCAD) in 2018*
 - *Best Paper Award Forum on specification & Design Languages (FDL) in 2020*
 - *Best Paper Award Euromicro Digital System Design (DSD) in 2020*
 - *Best Paper Award Forum on specification & Design Languages (FDL) in 2021*
 - *Best Presentation Award International Workshop on Logic & Synthesis (IWLS) in 2022*
- Hauptpreis (Award) des Gründerwettbewerbs IKT Innovativ des Bundesministeriums für Wirtschaft und Technologie (BMBF) für die Firmengründung SolVerTec, 2013
- IEEE Fellow, 2015
- Honorary Professor Amity University, Dubai, UAE, 2017
- Berninghausenpreis der Universität Bremen (Kategorie: Hervorragende, innovative Lehrveranstaltung), 2018
- ASP-DAC Prolific Author Award, 2020
- Preis für Herausragende Promotionsbetreuung, 2021

- ACM Senior Member, 2021
- ACM Distinguished Member, 2021
- 10 Year Retrospective Most Influential Paper Award ASP-DAC 2022
- IEEE CEDA Distinguished Lecturer, 2023-2024
- ACM Fellow 2024
- ACM Distinguished Speaker, 2024-2027

Weitere berufliche Aktivitäten/Professional Activities

Geförderte Projekte: Der Bewerber war als Projektleitung oder Teilprojektleitung bei mehr als **25 geförderten Projekten** tätig, die u.a. von der Deutschen Forschungsgemeinschaft (DFG), dem Bundesministerium für Bildung und Forschung (BMBF), der Europäischen Union (EU), dem Deutschen Akademischen Austauschdienst (DAAD) sowie mehreren Industriepartnern unterstützt wurden. Durch diese Förderzuschüsse wurden der Arbeitsgruppe des Bewerbers insgesamt über **25 Millionen Euro** zur Verfügung gestellt. Dies umfasst **gemeinsame Projekte mit Partnern aus dem Akademischen Bereich** (z.B. Prof. K. Chakrabarty, Prof. G. De Micheli, Prof. K. Roy, Prof. R. Brayton) **sowie der Industrie** (z.B. AMD, Robert Bosch GmbH, Concept Engineering, Ferchau, Infineon, Intel, Mentor Graphics, NXP, Siemens).

Funded Projects: The applicant has been PI or Co-PI on more than **25 grants** funded among others by the German Research Foundation (DFG), the German Federal Ministry of Education and Research (BMBF), the European Union (EU), the German Academic Exchange Service (DAAD), and several industrial partners. Together, these grants have provided more than **25 million Euro** of funding allocated to the applicant's research group. This includes joint projects **together with partners from academia** (e.g. Prof. K. Chakrabarty, Prof. G. De Micheli, Prof. K. Roy, Prof. R. Brayton) **and industry** (e.g. AMD, Bosch, Concept Engineering, Ferchau, Infineon, Intel, Mentor Graphics, NXP, Siemens).

Projekte/Projects

1996-2000	“Routing-Probleme in VLSI-Systemen – Lösungsansätze mit Genetischen Algorithmen” gemeinsam mit Prof. Dr. Bernd Becker (Freiburg) und Prof. Dr. Paul Molitor (Halle), gefördert durch die DFG
1997-1998	“Decision Diagrams - Neue Implementierungsmethoden und ihre Anwendungen” als Koordinator des gemeinsamen Projektes von Prof. Dr. Bernd Becker (Freiburg) und Prof. Dr. Randy Bryant (CMU, USA), gefördert durch den DAAD.
1999-2000	“Spektraltechniken im computergestützten Schaltkreisentwurf unter der Verwendung von AND/OR-Graphen” gemeinsam mit Prof. Dr. Mitch Thornton (University of Arkansas, USA), gefördert durch den DAAD.
2000	“Fehlerdiagnose in kombinatorischen Schaltungen” gemeinsam mit Prof. Dr. Wolfram Büttner (Siemens AG, München), gefördert durch Siemens ZT
2002-2004	“Formale Verifikation von Schaltungen unter Verwendung von Informationen der Hochsprache” gefördert durch die DFG
2003-2005	“Valse-XT” gemeinsam mit Concept Engineering und Infineon Technologies AG, gefördert durch das BMBF
2003-2004	“Schaltung- und Systemverifikation auf der Wort-Ebene” gemeinsam mit Prof. Dr. Maciej Ciesielski (Amherst, USA), gefördert durch den DAAD
2004-2005	“Implementing Modules and ECTS for Computer Studies” gefördert durch die EU
2005-2006	“Effiziente Methoden zum Debugging von Schaltungen und Systemen” gemeinsam mit Prof. Dr. Mitch Thornton (Dallas, USA), gefördert durch den DAAD

2005-2006	“Testsynthese von Schaltungen geringer Laufzeit” gemeinsam mit Dr. Valentina Ciriani (Pisa, Italien), gefördert durch den DAAD
2005-2006	“Manipulation of Boolean Functions Based on Hybrid Data Structures” gemeinsam mit Dr. Joao Marques-Silva (Southampton, England), gefördert durch den DAAD
2006	“Pilot Implementation of ECTS” gefördert durch die EU
2005-2008	“URANOS: Analysemethoden für den Entwurf anwendungsrobuster nanoelektronischer Systeme” gemeinsam mit AMD (Dresden), gefördert durch das BMBF
2006-2009	“Effiziente Erfüllbarkeitsalgorithmen für die Generierung von Testmustern” gefördert durch die DFG
2006-2007	“Verisoft” gemeinsam mit OneSpin Solutions (München), gefördert durch das BMBF
2006-2009	“MAYA: Neue Methoden für den Massiv-Parallel-Test im Hochvolumen, Yield Learning und beste Testqualität” gemeinsam mit NXP/Philips (Hamburg), gefördert durch das BMBF
2006-2009	“Herkules: Hardwareentwurfstechnik für Null-Fehler-Designs” gemeinsam mit Concept Engineering GmbH (Freiburg), gefördert durch das BMBF
2007	“SAT-basierte Pfadanalyse” gefördert durch Infineon AG (München)
2008	“Verifikation von Prozessorbeschreibungen” gefördert durch NXP (Hamburg)
2007-2010	“Verisoft XT” gemeinsam mit OneSpin Solutions (München), gefördert durch das BMBF
2008-2009	“Synthese zuverlässiger Quantenschaltkreise” gemeinsam mit Prof. Gerhard Dueck (Fredericton, Kanada), gefördert durch den DAAD
2008-2010	“Formaler Robustheitsnachweis im computergestützten Schaltkreisentwurf” gemeinsam mit Dr. Görschwin Fey, gefördert durch die DFG
2009-2010	“Qualitätsorientierter Entwurf von Systemen mit rekonfigurierbaren Komponenten” gemeinsam mit Prof. Dr. Wolfgang Nebel (Carl von Ossietzky Universität Oldenburg), gefördert durch die Nowetas-Stiftung
2009-2011	“Qualitätsorientierte Synthese großer Funktionen in reversibler Logik” gefördert durch die DFG
2010-2011	“DeAR: Debugging von Schaltkreisen mittels Abstraktions- und Verfeinerungstechniken” gefördert durch den DAAD
2010-2011	“Modellierung Komplexer Adaptiver Systeme mit SystemC” gemeinsam mit Prof. Dr. Michael Hülsmann (Jacobs University), gefördert durch die Nowetas-Stiftung
2009-2012	“SANITAS: Sichere Systeme auf Basis einer durchgängigen Verifikation entlang der gesamten Wertschöpfungskette” gefördert durch das BMBF
2010-2012	“DIAMOND - Diagnosis, Error Modelling and Correction for Reliable Systems Design” gefördert durch die EU
2011-2012	“Synthese und Optimierung von Quantenlogik” gemeinsam mit Prof. Michael Miller (Victoria, Kanada), gefördert durch den DAAD
2011-2012	IFXstud „Überarbeitung, Erweiterung und Erstellung von Software für CAD-Anwendungen“, Förderung durch Infineon
2011-2013	“VisES: Visualisierungstechnologien für komplexe Systembeschreibungen zur Verbesserung der Sicherheit und Robustheit elektronischer Systeme ” gemeinsam mit Concept Engineering GmbH, gefördert durch das BMBF
2011-2013	“SolVerTec – Solution Verification Technologies” gefördert durch das BMWi im Rahmen des EXIST-Forschungstransfers
2011-2013	RESCAR (2.0) Robuster Entwurf von neuen Elektronikkomponenten für Anwendungen im Bereich Elektromobilität, gefördert durch das BMBF
2011-2017	“Reinhart Koselleck-Projekt: Entwicklung eines durchgängigen Verifikationsablaufes für den ESL Entwurf” gefördert durch die DFG
2012-2013	“Generierung von hochwertigen Testmustern für geringe Verzögerungsfehler” gemeinsam mit Prof. Krishnendu (Krish) Chakrabarty (Duke, USA), gefördert durch den DAAD
2012-2016	„Förderung von Kompetenzen der mathematischen Modellierung“, gefördert durch die DFG

2012-2018	Graduiertenkolleg „System Design“ (SyDe), gefördert im Rahmen der Exzellenzinitiative durch die Universität Bremen
2013-2014	„Verwendung reversibler Logik zum Bau von Low-Power-Schaltungen“ gemeinsam mit Prof. Kaushik Roy (Purdue University, USA), gefördert durch den DAAD
2013-2015	„Synthesis of Reversible Circuits using Probabilistic Methods“ gemeinsam mit Prof. Hafizur Rahaman (IEST, Indien), gefördert durch den DAAD
2013-2015	“Entwicklung eines modularen Frameworks für die automatische Validation und Verifikation von UML/OCL-Modellen“ gefördert durch die DFG
2013-2016	Effektiv „Effiziente Fehlereffektsimulation mit virtuellen Prototypen zur Qualifikation intelligenter Motion Control Systeme in der Industrieautomatisierung“, gefördert durch das BMBF
2013 -2016	„SPECiFIC: Quality-driven Design Flow using Formal Specifications and Functional Change Management“, gefördert durch das BMBF
2006-2016	Graduiertenkolleg Eingebettete Systeme (GESy), gefördert u.a. von SIEMENS, NXP, Concept Engineering, Verified, in 2016 Überführung in SyDe
2013-2017	NANOTEST „Entwicklung einer qualitätsorientierten, kosteffektiven und robusten Testumgebung für Nanometer-Schaltkreise basierend auf formalen Methoden zur Sicherstellung der Korrektheit zukünftiger Generationen von Computerchips“ M8-Post-Doc-Initiative
2013-2018	COFUND-Fellowship-Programm „Scalable Reversible Circuit Design“ Post-Doc-Stelle Michael Kirkedal
2014 -2016	“KI-Suche: Entwicklung einer den Prinzipien der Künstlichen Intelligenz folgenden Suchmaschine“
2014 -2016	“HySociaTea: Hybrid Social Teams for Long-Term Collaboration in Cyber-Physical Environments“, gefördert durch das BMBF
2015	“Computer Design for Kids“ Bremen macht Helden, gefördert durch die Sparkasse Bremen
2015	BremenIDEA Ein bis dreimonatige Forschungsaufenthalte von Promovierenden aus Bremen an Forschungsinstitutionen im Ausland, Förderung: Nils Przigoda, gefördert durch das BMBF-geförderten DAAD-Programm IPID4all
2015-2016	“Faster Formal Verification with Reverse Engineering“ gemeinsam mit Prof. Robert K. Brayton, Berkeley, gefördert durch den DAAD
2015-2016	„Automatische Testgenerierung für Multi-Core Virtuelle Prototypen“ gemeinsam mit Prof. Pu Gejuang, Shanghai, gefördert durch den DAAD
2015-2016	“Design Work and Consulting Services for Project Aurix2G“, gefördert durch die Infineon Technologies AG
2015 -2017	“VerifyDFT“, gefördert durch Intel
2015-2017	Betreuungszuspruch von StipendiatInnen, gefördert durch das DAAD-Stipendiatenprogramm (5 Stipendiaten)
2015-2017	„Entwurfsautomatisierung für die Synthese und formale Verification von Digital Microfluidic Lab-on-Chips“ Internationale Kooperation mit Prof. Bhargab B. Bhattacharya, gefördert durch die DFG
2016	„Entwurf von fehlertoleranten Quantenschaltungen mit der Fähigkeit zur Fehlerkorrektur“ Internationale Kooperation mit Prof. Susmita Sur-Kolay, gefördert durch die DFG
2016 -2018	“MANIAC: Manipulation von BDDs für Approximate Computing“, gefördert durch die DFG
2016-2019	FormalEST „Formale Methoden zur Energie-sicheren Testerzeugung für digitale Schaltungen“, gefördert durch die DFG
2016 -2019	“SELFIE: Selbstverifikation von Elektronischen Systemen“, gefördert durch das BMBF
2016-2020	SFB1232 P01 „Prädiktorfunktion“ und P02 „Heuristisch, statistische und analytische Versuchsplanung“, gefördert durch die DFG
2017	“Noerdmann-Comicstrip“ Bremen macht Helden, gefördert durch die Sparkasse Bremen

2017-2019	CONFIRM „Automatisierter Firmware-Entwurf unter Berücksichtigung von Timing- und Power-Budgets für anwendungsspezifische Elektroniksysteme“, gefördert durch das BMBF
2017 -2020	“CONVERS: Entwurfsautomatisierung für komplexe Elektroniksysteme“, gefördert durch das BMBF
2017 -2020	“SecRec: Security by Reconfiguration - Physikalische Sicherheit durch dynamische Hardware-Rekonfiguration“, gefördert durch das BMBF
2017 -2021	Sonderforschungsbereich 1320: EASE – Everyday Activity Science and Engineering
2018 -2021	„Symbolic Virtual Hardware/Firmware Co-verification“, gefördert durch die Zentrale Forschungsförderung der Universität Bremen

Lehrveranstaltungen/Courses

Johann Wolfgang Goethe-Universität in Frankfurt

1991-1996	Betreuung diverser Vorlesungen für Grund- und Hauptstudium
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Albert-Ludwigs-Universität in Freiburg

1996	Vorlesung über “Zweistufige (AND, EXOR) Minimierung”
1997	Vorlesung über “Technische Informatik I” (in Zusammenarbeit mit Prof. B. Becker)
1997	Vorlesung über “Technische Informatik II”
1998	Vorlesung über “Graphenbasierte Funktionsdarstellung”
1999	Vorlesung über “Rechnerarchitektur” (in Zusammenarbeit mit Prof. B. Becker)
1999	Vorlesung über “Rechnerarchitektur” an der Berufsakademie Lörrach
2000	Vorlesung über “Hardware-Entwurf” (in Zusammenarbeit mit Prof. B. Becker)
2000	Vorlesung über “Formale Verifikation” (in Zusammenarbeit mit Prof. B. Becker)
2001	Vorlesung über “Graphenbasierte Funktionsdarstellung”
2001	Seminar über “SAT-Algorithmen”

Universität Bremen

seit 2001	Regelmäßig stattfindende Veranstaltungen im Grund- und Hauptstudium. Seminare, Vorlesungen und Projekte u.a. zu den Themen Rechnerarchitektur, Schaltkreisentwurf, formale Methoden, Verifikation. Details mit Beschreibungen der Inhalte der Veranstaltungen sind zu finden unter: http://www.informatik.uni-bremen.de/agra/ger/lehrmat.php
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Forschungsaufenthalte/Research Stays

9/92-12/92	Universität des Saarlandes, Saarbrücken, Lehrstuhl Prof. G. Hotz
7/96-8/96	Besuche der Universitäten University of California at Berkeley, University of California, Santa Barbara und der Firmen Synopsys, Exemplar Logic in USA
7/99-8/99	University of Arkansas, USA, Prof. M. Thornton
2/00-3/00	University of Mississippi, USA, Prof. M. Thornton
4/00-9/00	Siemens, München, Prof. W. Büttner
7/05-8/05	Southern Methodist University, Dallas, USA, Prof. M. Thornton
8/13-08/13	Besuche der Duke University in Durham und der Purdue University in West Lafayette, USA

1/14-12/16	Internationaler Gastprofessor, IIT Kharagpur, India
seit 06/18	Internationaler Gastprofessor, Indian Statistical Institute

Tagungen /Conferences

1996	<ul style="list-style-type: none"> • Technisches Komitee "IEEE European Design & Test Conference 1996 (ED&TC 1996)" • Programm Co-Chair "New Information Technologies in Education"
1997	<ul style="list-style-type: none"> • Programmkomitee "AAAI Genetic Programming 97 (GP 1997)" • Programmkomitee "International Workshop on Application of the Reed-Muller Expansion in Circuit Design (Reed-Muller 1997)" • Programmkomitee "International Conference on Pattern Recognition and Information Processing" • Technisches Komitee "IEEE European Design & Test Conference 1997 (ED&TC 1997)" • Programmkomitee "International Conference on Applications of Computer Systems (ACS 1997)" • Vice Chairman "Computer-Aided Design of Discrete Devices (CAD DD 1997)" • Programm Chair für Europa/Afrika "IEEE International Symposium on Multiple-Valued Logic (ISMVL 1997)"
1998	<ul style="list-style-type: none"> • Programmkomitee "AAAI Genetic Programming 98 (GP 1998)" • Vice Chairman "International Conference on Advanced Computer Systems (ACS 1998)"
1999	<ul style="list-style-type: none"> • Programmkomitee "International Conference on Computational Intelligence (6th Fuzzy Days 1999)" • Technisches Komitee "IEEE Design Automation and Test Europe (DATE 1999)" • Programmkomitee "IEEE EUROMICRO" • Programmkomitee "Genetic and Evolutionary Computation Conference (GECCO 1999)" • Programmkomitee "International Workshop on Application of the Reed-Muller Expansion in Circuit Design (Reed-Muller 1999)" • Symposiums Chair "IEEE International Symposium on Multiple-Valued Logic (ISMVL 1999)" • Vice Chairman "International Conference on Advanced Computer Systems (ACS 1999)" • Programmkomitee "IFIP International Conference on Very Large Scale Integration (VLSI 1999)"
2000	<ul style="list-style-type: none"> • Programmkomitee "IEEE VLSI Design" • Senior Programmkomitee "Genetic and Evolutionary Computation Conference (GECCO 2000)" • Programmkomitee "International Conference on Evolvable Systems: From Biology to Hardware (ICES2000)" • Deputy Programm Chair "IEEE EUROMICRO" • Vice Chairman "International Conference on Advanced Computer Systems (ACS 2000)"
2001	<ul style="list-style-type: none"> • Programmkomitee "IEEE VLSI Design" • Programmkomitee "IEEE EUROMICRO" • Programmkomitee "First International Conference on Evolutionary Multi-Criterion Optimization (EMO 2001)" • Programmkomitee "International Conference on Evolvable Systems: From Biology to Hardware (ICES2001)" • Programmkomitee "International Conference on Computational Intelligence (7th Fuzzy Days 2001)" • Workshop Co-Chair "International Workshop on Application of the Reed-Muller Expansion in Circuit Design (Reed-Muller 2001)" • Senior Programmkomitee (Program Policy Committee, Standing Member) "Genetic and Evolutionary Computation Conference (GECCO 2001)"

	<ul style="list-style-type: none"> • Vice Chairman “International Conference on Advanced Computer Systems (ACS 2001)” • Programmkomitee “IFIP International Conference on Very Large Scale Integration (VLSI 2001)”
2002	<ul style="list-style-type: none"> • Programmkomitee “1st International Workshop on Electronic Design Test & Applications (DELTA2002)” • Technisches Komitee “IEEE Design Automation and Test Europe (DATE 2002)” • Senior Programmkomitee (Program Policy Committee, Standing Member) “Genetic and Evolutionary Computation Conference (GECCO 2002)” • Programmkomitee “Foundation of Genetic Algorithms VII (FOGA’2002)” • Programmkomitee und Plenary Chair “IEEE EUROMICRO”
2003	<ul style="list-style-type: none"> • Programmkomitee “International Conference on Evolvable Systems: From Biology to Hardware (ICES2003)” • Technisches Komitee “Asia and South Pacific Design Automation Conference (ASP-DAC 2003)” • Programmkomitee “IEEE Design Automation and Test Europe (DATE 2003)” • Programmkomitee “IEEE International Workshop on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2003)” • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2003)” • Tutorial Co-Chair “IFIP International Conference on Very Large Scale Integration (VLSISOC 2003)” • Programmkomitee “NASA/DoD Conference on Evolvable Hardware” • Programmkomitee “Forum on Specification & Design Languages (FDL 2003)” • Technisches Komitee der Special Session on Evolutionary Design Automation der “IEEE Congress on Evolutionary Computation (CEC)” • Programmkomitee “IEEE EUROMICRO”
2004	<ul style="list-style-type: none"> • Programmkomitee “International Workshop on Electronic Design Test & Applications (DELTA2004)” • Programmkomitee “GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen” • Programmkomitee “IEEE Design Automation and Test Europe (DATE 2004)”, Topic Chair for “Formal Verification” (B10) • Programmkomitee “IEEE International Workshop on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2004)” • Technisches Komitee “Asia and South Pacific Design Automation Conference (ASP-DAC 2004)” • Programmkomitee “NASA/DoD Conference on Evolvable Hardware” • Programmkomitee “Genetic and Evolutionary Computation Conference (GECCO 2004)” • Programmkomitee “IEEE EUROMICRO” • Programmkomitee “International Workshop on Boolean Problems” • Programmkomitee “International Conference on Computational Intelligence (8th Fuzzy Days 2004)” • Programmkomitee “Forum on Specification & Design Languages (FDL 2004)” • Programmkomitee “International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2004)” • Technisches Komitee “Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI 2004)”
2005	<ul style="list-style-type: none"> • Technisches Komitee “Asia and South Pacific Design Automation Conference (ASP-DAC 2005)” • Programmkomitee “IEEE Design Automation and Test Europe (DATE)”, Topic Chair for “Formal Verification” (B9) • Technisches Komitee “International Conference on VLSI Design and the 4th International Conference on Embedded Systems” • Programmkomitee “GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen”

	<ul style="list-style-type: none"> • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2005)” • Programmkomitee “IEEE International Workshop on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2005)” • Programmkomitee “Correct Hardware Design and Verification Methods, IFIP WG 10.5 Advanced Research Working Conference (CHARME 2005)” • Programmkomitee “Foundation of Genetic Algorithms (FOGA 2005)” • Programmkomitee “IEEE International Workshop on Rapid System Prototyping (RSP 2005)” • Programmkomitee “IFIP International Conference on Very Large Scale Integration (VLSI-SOC 2005)” • Programmkomitee “Genetic and Evolutionary Computation Conference (GECCO 2005)” • Programmkomitee “International Conference on Evolvable Systems (ICES2005)” • Programmkomitee “NASA/DoD Conference on Evolvable Hardware”
2006	<ul style="list-style-type: none"> • Programmkomitee “IEEE International Workshop on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2006)” • Programmkomitee “International Workshop on Electronic Design Test & Applications (DELTA2006)” • Programmkomitee “GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen” • Programmkomitee “IEEE Design Automation and Test Europe (DATE)”, Topic Chair for “Formal Verification” (B9) • Technisches Komitee “Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI 2006)” • Programmkomitee “IEEE International Workshop on Rapid System Prototyping (RSP 2006)” • Programmkomitee “International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2006)” • Programmkomitee “Genetic and Evolutionary Computation Conference (GECCO 2006)” • Programmkomitee “IFIP International Conference on Very Large Scale Integration (VLSI-SOC 2006)” • Programmkomitee “1st Conference on Adaptive Hardware and Systems (AHS-2006)” • Programmkomitee “International Workshop on Boolean Problems” • Programmkomitee “Biennial International Conference on Formal Methods in Computer-Aided Design (FMCAD 2006)” • Programmkomitee “IEEE Congress on Evolutionary Computation (CEC 2006)”
2007	<ul style="list-style-type: none"> • Programmkomitee “Workshop on Compiler Optimization Meets Compiler Verification (COCV)” • Organisationskomitee “1. GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf” • Programmkomitee “IEEE Design Automation and Test Europe (DATE 2007)” • Programmkomitee “GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen” • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2007)” • Program Chair “European Workshop on Bio-Inspired Heuristics for Design Automation (Evo-HOT 2007)” • Programmkomitee “International Conference on Evolvable Systems (ICES2007)” • Programmkomitee “Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen” • Programmkomitee “IEEE International Workshop on Rapid System Prototyping (RSP 2007)” • Programmkomitee “Foundation of Genetic Algorithms (FOGA 2007)” • Programmkomitee “International Conference on Computing: Theory and Applications (ICCTA 2007)” • Programmkomitee “EUROMICRO Conference on Digital System Design (DSD 2007)” • Technisches Komitee “Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI 2007)”

	<ul style="list-style-type: none"> • Programmkomitee "IEEE Congress on Evolutionary Computation (CEC 2007)" • Programmkomitee "Genetic and Evolutionary Computation Conference (GECCO 2007)" • Programmkomitee "Conference on Adaptive Hardware and Systems (AHS 2007)" • Programmkomitee "Forum on Specification & Design Languages (FDL 2007)" • Programmkomitee "edaWorkshop 07" • Programmkomitee "Evolutionary Algorithms for Industrial Design Optimization"
2008	<ul style="list-style-type: none"> • Programmkomitee "International Symposium on Electronic Design Test & Applications (DELTA2008)" • Programmkomitee "IEEE Design Automation and Test Europe (DATE 2008)" • Programmkomitee "International Conference on Evolvable Systems (ICES2008)" • Programmkomitee "IEEE International Workshop on Rapid System Prototyping (RSP 2008)" • Programmkomitee "Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen" • Programmkomitee "NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2008)" • Programmkomitee "ACM Great Lakes Symposium on VLSI" • Technisches Komitee "IEEE Congress on Evolutionary Computation (CEC)" • Programmkomitee "IEEE International Workshop on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2008)" • Program Chair "Genetic and Evolutionary Computation Conference (GECCO)", Track "Artificial Life, Evolutionary Robotics, Adaptive Behavior, Evolvable Hardware" • Programmkomitee "GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen" • Programmkomitee "The International Conference on Advances in Computer-Human Interactions (ACHI 2008)" • Organisationskomitee "GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf" • Programmkomitee "International IEEE Information Technology Symposium 2008 (ITSIM 2008)" • Programmkomitee "Forum on Specification & Design Languages (FDL 2008)" • Programmkomitee "EUROMICRO Conference on Digital System Design (DSD)" • Programmkomitee "International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2008)" • Program Chair "European Workshop on Bio-Inspired Heuristics for Design Automation (Evo-HOT)" • Programmkomitee "edaWorkshop 08"
2009	<ul style="list-style-type: none"> • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2009)" • Programmkomitee "Reed-Muller Workshop (RM2009)" • Programmkomitee "International Conference on Evolutionary Multi-Criterion Optimization (EMO 2009)" • Programmkomitee "International Conference on Advances in Computer-Human Interactions (ACHI 2009)" • Programmkomitee "GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen" • Technisches Komitee "Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI 2009)" • Programmkomitee "edaWorkshop 09" • Programmkomitee "IEEE International Workshop on Rapid System Prototyping (RSP 2009)" • Programmkomitee "IEEE Congress on Evolutionary Computation (CEC)" • Organisationskomitee "GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf" • Programmkomitee "ACM-IEEE International Conference series on Formal Methods and Models for Codesign (MEMOCODE)" • Programmkomitee "ACM Great Lakes Symposium on VLSI" • Programmkomitee "EUROMICRO Conference on Digital System Design (DSD)", Special Session: Logic Synthesis Reborn

	<ul style="list-style-type: none"> • Programmkomitee "International Conference on Adaptive and Intelligent Systems (ICAIS 2009)" • Programmkomitee "NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2009)" • Programmkomitee "Workshop Dependability and Fault Tolerance" • Programmkomitee "EUROMICRO Conference on Digital System Design (DSD)" • Technisches Komitee "Design Automation Conference (DAC 2009)" • Programmkomitee "IEEE International On-Line Testing Symposium 2009 (IOLTS 2009)" • Programmkomitee "Reversible Computation 2009", Satellite Workshop of European Joint Conferences on Theory and Practice of Software (ETAPS) 2009 • Programmkomitee "First International Conference on Emerging Network Intelligence (EMERGING 2009)" • Programmkomitee "International Visual Informatics Conference 2009 (IVIC 2009)" • Technisches Komitee "IEEE International Conference on Computer Aided Design (ICCAD 2009)"
2010	<ul style="list-style-type: none"> • Programmkomitee "International Conference on Advances in Computer-Human Interactions (ACHI 2010)" • Programmkomitee "GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen" • Programmkomitee "International Symposium on Electronic Design Test & Applications (DELTA2010)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2010)" • Programmkomitee "International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2010)" • Programmkomitee "International Workshop on Boolean Problems" • Organisationskomitee "GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL)" • Programmkomitee "International Conference on Advances in Biotechnologies (BIOTECHNO 2010)" • Programmkomitee "International Conference on Emerging Network Intelligence (EMERGING 2010)" • Programm Chair und Ausrichter "Reversible Computation 2010" • Programmkomitee "edaWorkshop 10" • Programmkomitee "International Conference on Evolvable Systems (ICES2010)" • Programmkomitee "NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2010)" • Programmkomitee "ACM-IEEE International Conference series on Formal Methods and Models for Codesign (MEMOCODE)" • Programmkomitee "EUROMICRO Conference on Digital System Design (DSD)" • Programmkomitee "IEEE International Workshop on Rapid System Prototyping (RSP 2010)" • Programmkomitee "International Symposium on Information Technology 2010 (ITSim 2010)" • Programmkomitee "ACM Great Lakes Symposium on VLSI" • Programmkomitee "IEEE International On-Line Testing Symposium 2010 (IOLTS 2010)" • Programmkomitee "International Symposium on Aware Computing (ISAC 2010)" • Programmkomitee "IEEE International Conference on Systems, Man, and Cybernetics (SMC 2010)" • Programmkomitee "International Conference on Simulated Evolution And Learning (SEAL 2010)" • Technisches Komitee "Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI 2010)" • Technisches Komitee "Design Automation Conference (DAC 2010)", TPC subcommittee chair for verification
2011	<ul style="list-style-type: none"> • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2011)" • Technisches Komitee "Asia and South Pacific Design Automation Conference (ASP-DAC 2011)" • Programmkomitee "ACM Great Lakes Symposium on VLSI" • Programmkomitee "edaWorkshop 11"

	<ul style="list-style-type: none"> • Organisationskomitee “GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf” • Programmkomitee “International Conference on Advances in Biotechnologies (BIOTECHNO 2011)” • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2011)” • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2011)” • Programmkomitee “Reversible Computation 2011” • Programmkomitee “NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2011)” • Programmkomitee “Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen” • Programmkomitee “GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen” • Programmkomitee “EUROMICRO Conference on Digital System Design (DSD)” • Programmkomitee “ACM-IEEE International Conference series on Formal Methods and Models for Codesign (MEMOCODE)” • Programmkomitee “IEEE International Symposium on Multiple-Valued Logic (ISMVL 2011)” • Programmkomitee “International Conference on Emerging Network Intelligence (EMERGING 2011)” • Programmkomitee “International Conference on Formal Methods in Computer-Aided Design (FMCAD 2011)” • Technisches Komitee “Design Automation Conference (DAC 2011)”, TPC subcommittee chair for verification • Programmkomitee “IEEE International Conference on Awareness Science and Technology (iCAST 2011)” • Programmkomitee “Virtual Worldwide PhD forum on Electronic Design Automation (VW-FEDA)” • Programmkomitee “Saudi International Electronics, Communications and Photonics Conference (SIEPC 2011)” • Programmkomitee “International Conference on Advances in System Testing and Validation Lifecycle (VALID 2011)”
2012	<ul style="list-style-type: none"> • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2012)” • Technisches Komitee “Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI 2012)” • Programmkomitee “International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2012)” • Programmkomitee “International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies (BIOTECHNO 2012)” • Programmkomitee “IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2012)” • Programmkomitee “IEEE International Symposium on Multiple-Valued Logic (ISMVL 2012)” • Programmkomitee “VLSI Design Conference 2012” • Programmkomitee “edaWorkshop 12” • Programmkomitee “IEEE Congress on Evolutionary Computation (CEC)” • Programmkomitee “EUROMICRO Conference on Digital System Design (DSD)” • Programmkomitee “ACM Great Lakes Symposium on VLSI” • Programmkomitee “International Workshop on Boolean Problems” • Programmkomitee “ITG/GI/GMM-Workshops Cyber-Physical Systems – Enabling Multi-Nature Systems (CPMNS)” • Programmkomitee “International Conference on Emerging Network Intelligence (EMERGING 2012)” • Programmkomitee “GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen” • Programmkomitee “VLSI Design and Test Symposium (VDAT-2012)”

	<ul style="list-style-type: none"> • Programmkomitee “IEEE International Conference on Awareness Science and Technology (iCAST 2012)” • Programmkomitee “NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2012)” • Programmkomitee “International Conference on Simulated Evolution And Learning (SEAL-2012)” • Tutorial Chair “International Conference on Formal Methods in Computer-Aided Design (FMCAD 2012)” • Programmkomitee “Forum on Specification & Design Languages (FDL 2012)” • Programmkomitee “International Conference on Advances in System Testing and Validation Lifecycle (VALID 2012)” • Programmkomitee “International Conference on Evolutionary Computation Theory and Applications (ECTA 2012)” • Programmkomitee “IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2012)” • Programmkomitee “European Workshop on Hardware Optimization Techniques (EvoHOT 2012)”
2013	<ul style="list-style-type: none"> • Programmkomitee “IEEE Symposium on Quantum Computing and Computational Intelligence” • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2013)” • Programmkomitee “IEEE International Conference on Evolvable Systems – From Biology to Hardware (ICES2013)” • Programmkomitee “Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2013)” • Programmkomitee “Reed-Muller Workshop (RM2013)” • Programmkomitee “The EUROMICRO Conference on Digital System Design (DSD 2013)” • Programmkomitee “Great Locations Symposium on VLSI (GLSVLSI-2013)” • Programmkomitee “International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies (BIOTECHNO 2013)” • Programmkomitee “Metaheuristics International Conference (MIC2013)” • Programmkomitee “NASA/ESA Conference on Adaptive Hardware and Systems (AHS 2013)” • Programmkomitee “Forum on specification & Design Languages (FDL 2013)” • Technisches Programmkomitee “Workshop on Synthesis And System Integration of Mixed Information Technologies (SASIMI 2013)” • Programmkomitee “IEEE International Conference on Awareness Science and Technology (iCAST 2013)” • Programmkomitee “IEEE International Symposium on Rapid System Prototyping (RSP’2013)” • Programmkomitee “International Conference on Emerging Network Intelligence (EMERGING 2013)” • Programmkomitee “ITG/GI/GMM-Fachtagung Zuverlässigkeit und Entwurf 2013” • Internationales Programmkomitee “Doctoral Conference on Computing, Electrical and Industrial Systems (DoCEIS 2013)” • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2013)” • Programmkomitee “edaWorkshop 13” • Programmkomitee “IEEE Symposium on Quantum Computing and Computational Intelligence (QCCI 2013)”
2014	<ul style="list-style-type: none"> • Programmkomitee “Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2014)” • Topic Chair on Verification “International Symposium on Design and Diagnostics of Electronic Circuits & Systems (DDECS 2014)” • Topic Chair “IEEE European Test Symposium (ETS 2014)” • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2014)” • Programmkomitee “International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies (BIOTECHNO 2014)”

	<ul style="list-style-type: none"> • Programmkomitee “Doctoral Conference on Computing, Electrical and Industrial Systems (DoCEIS 2014)” • Programmkomitee “Test und Zuverlässigkeit (TuZ 2014)” • Programmkomitee “NASA/ESA Conference on Adaptive Hardware and Systems (AHS 2014)” • Programmkomitee “edaWorkshop 14” • Programmkomitee “IEEE World Congress on Computational Intelligence (WCCI 2014)” • Programmkomitee “International Conference on Emerging Network Intelligence (EMERGING 2014)” • Technisches Programmkomitee “IEEE International Conference on Evolvable Systems (ICES 2014)” • Programmkomitee “GLS Symposium on VLSI (GLSVLSI 2014)” • Programmkomitee “International Test Conference (ITC 2014)” • Programmkomitee “International Conference on Advances in System Testing and Validation Lifecycle (VALID 2014)” • Programmkomitee “Workshop on Bioinspired Optimization and their Applications (BIOMA 2014)” • Programmkomitee “International Workshop on Boolean Problems (IWSBP 2014)” • Programmkomitee “Forum on Specification and Design Language (FDL 2014)” • Technisches Programmkomitee “IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2014)” • Programmkomitee “IEEE International Symposium on Rapid System Prototyping (RSP2014)” • Programmkomitee “IEEE International Conference on Awareness Science and Technology (iCAST 2014)” • PhD Judge for Poster Session SRC “IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2014)” • Programmkomitee “INFORMATIK 2014”
2015	<ul style="list-style-type: none"> • Special Day Chair “Design Automation and Test in Europe (DATE 2015)” • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2015)” • Technisches Programmkomitee “IEEE International Conference on Evolvable Systems (ICES 2015)” • Topic Chair on Validation and Verification “IEEE European Test Symposium (ETS 2015)” • Programmkomitee “Reed-Muller Workshop (RM 2015)” • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2015)” • Programmkomitee “BIOTECHNO 2015” • Programmkomitee „Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2015)” • Programmkomitee “The Euromicro Conference on Digital System Design (DSD 2015)” • Programmkomitee “IEEE International Symposium on Multiple-Valued Logic (ISMVL 2015)” • Technisches Programmkomitee “NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2015)” • Programmkomitee “edaWorkshop 15” • Programmkomitee “GLS Symposium on VLSI (GLSVLSI 2015)” • Programmkomitee und Advisory Chair “International Conference on Emerging Network Intelligence (EMERGING 2015)” • Technisches Programmkomitee “IEEE Congress on Evolutionary Computation (IEEE CEC 2015)” • Programmkomitee “IEEE GREEN INNOVATION FOR AFRICAN RENAISSANCE (IEEE AFRICON 2015)” • Programmkomitee “International Conference on Advances in System Testing and Validation Lifecycle (VALID 2015)” • Programmkomitee “IEEE Latin-American Test Symposium (LATS2015)” • Programmkomitee “Studierendenkonferenz Informatik 2015 (SKILL 2015)” • Programmkomitee “International Doctoral Symposium on Applied Computation and Security

	<p>(ACSS)"</p> <ul style="list-style-type: none"> • Programmkomitee "International Conference on Advances in Circuits, Electronics and Micro-electronics (CENICS 2015)" • Programmkomitee "International Conference on Information, Computation and Communications (ICIC2-2015)" • Programmkomitee "7th International Conference on Awareness Science and Technology (iCAST2015)" • Programmkomitee "International Symposium on Electronic System Design (ISED-2015)" • PhD Forum Chair "Design, Automation and Test in Europe (DATE 2015)" • Programmkomitee "GMM/ITG/GI-Fachtagung Zuverlässigkeit und Entwurf (ZuE 2015)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2015)" • Programmkomitee Advisory Board "VLSI Design Conference 2015"
2016	<ul style="list-style-type: none"> • Workshop Chair "IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2016)" • PhD Forum Chair "Design, Automation and Test in Europe (DATE 2016)" • Programmkomitee "Advanced Doctoral Conference on Computing, Electrical and Industrial Systems (DoCEIS 2016)" • Programmkomitee „Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2016)“ • Programmkomitee "Test und Zuverlässigkeit (TuZ 2016)" • Programmkomitee "BIOTECHNO 2016" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2016)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2016)" • Programmkomitee "International Conference on Emerging Network Intelligence (EMERGING 2016)" • Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2016)" • Programmkomitee "International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2016)" • Programmkomitee "International Conference on Advances in Circuits, Electronics and Micro-electronics (CENICS 2016)" • Programmkomitee "Great Lakes Symposium on VLSI (GLSLVSI 2016)" • Programmkomitee "International Conference on Quantum, Nano/Bio, and Micro Technologies (ICQNM 2016)" • Programmkomitee "International Workshop on Boolean Problems (IWSBP 2016)" • Programmkomitee "edaWorkshop 16" • Programmkomitee "International Conference on Advances in System Testing and Validation Lifecycle (VALID 2016)" • Programmkomitee "International Symposium on Information Management in a Changing World (IMCW2016)" • Programmkomitee "SSCI16 (IEEE Symposium Series on Computational Intelligence)" • Programmkomitee "IWLS 2016 (International Workshop on Logic & Synthesis)" • Programmkomitee "Workshop on Model-Driven Engineering, Logic and Optimization (MELO 2016)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2016)" • Programmkomitee "IEEE International High-Level Design Validation and Test Workshop (HLDVT 2016)" • Programmkomitee "Advanced Doctoral Conference on Computing, Electrical and Industrial Systems (DoCEIS 2016)"
2017	<ul style="list-style-type: none"> • Programmkomitee "International Conference on Human Computer Interaction Theory and Applications (HUCAPP 2017)" • Programmkomitee PhD Forum "Design, Automation and Test in Europe (DATE 2017)" • Programmkomitee "Test und Zuverlässigkeit (TuZ 2017)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium

	<p>(DDECS 2017)“</p> <ul style="list-style-type: none"> • Technical Programmkomitee “VLSI Design Conference 2017” • Programmkomitee “IEEE International Symposium on Multiple-Valued Logic (ISMVL 2017)“ • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2017)“ • Programmkomitee “International Conference on Evolutionary Multi-Criterion Optimization (EMO 2017)“ • Programmkomitee “Reed-Muller Workshop (RM 2017)“ • Programmkomitee „Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2017)“ • Programmkomitee “The Euromicro Conference on Digital System Design (DSD 2017)“ • Programmkomitee “GMM/ITG/GI-Fachtagung Zuverlässigkeit und Entwurf (ZuE 2017)“ • Programmkomitee “IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2017)“ • Workshop Chair “IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2017)“ • Programmkomitee “IEEE International High-Level Design Validation and Test Workshop (HLDVT 2017)“ • Award chair “IEEE Technical Committee on Cyber-Physical Systems (TC-CPS 2017)“ • Programmkomitee “NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2017)“ • Programmkomitee “International Conference on Advances in System Testing and Validation Lifecycle (VALID 2017)“ • Programmkomitee “IEEE International Symposium on Rapid System Prototyping (RSP 2017)“ • Vice Program Co-Chair “IEEE International Design & Test Symposium (IDT 2017)“
2018	<ul style="list-style-type: none"> • Tutorial and Special Session Chair “IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2018)“ • General Chair “13th International Workshop on Boolean Problems (IWSBP 2018)“ • General Co-Chair “23rd IEEE European Test Symposium (ETS 2018)“ • Programmkomitee “International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2018)“ • Programmkomitee PhD Forum “Design, Automation and Test in Europe (DATE 2018)“ • Programmkomitee “International Conference on Advances in Computer-Human Interactions (ACHI 2018)“ • Technical Programmkomitee “VLSI Design Conference 2018” • Programmkomitee “Test und Zuverlässigkeit (TuZ 2018)“ • Programmkomitee “IEEE International Symposium on Multiple-Valued Logic (ISMVL 2018)“ • Programmkomitee “Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2018)“ • Programmkomitee “International Conference on Dynamics in Logistics (LDIC 2018)“ • Programmkomitee “International Symposium on Embedded Computing and System Design (ISED2018)“ • Programmkomitee “First International Conference on Microelectronic Devices and Technologies (MicDAT 2018)“ • Programmkomitee “GI Sicherheit 2018” • Programmkomitee “IEEE International Conference on Industrial Cyber-Physical Systems (ICPS 2018)“ • Programmkomitee “Test und Zuverlässigkeit (TuZ 2018)“ • Programmkomitee “The Euromicro Conference on Digital System Design (DSD 2018)“ • Programmkomitee “IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2018)“ • Programmkomitee “International Workshop on Logic & Synthesis (IWLS 2018)“ • Programmkomitee „International Conference on Awareness Science and Technology (iCAST 2018)“ • Programmkomitee “International Conference on Advances in System Testing and Validation Lifecycle (VALID 2018)“

	<ul style="list-style-type: none"> • Programmkomitee "IEEE International Symposium on Devices, Circuits and Systems (ISDCS 2018)" • Programmkomitee "International workshop on Design and Verification Techniques for Mixed Critical Systems (DVMCS 2018)" • Programmkomitee "Euromicro Workshop on Machine Learning Driven Technologies and Architectures for Intelligent Internet of Things (ML-IoT 2018)" • Programmkomitee "NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2018)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2018)" • Technisches Komitee für <i>Late Breaking Papers</i> "Design Automation Conference (DAC 2018)"
2019	<ul style="list-style-type: none"> • Program Co-Chair "IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2019)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2019)" • Programmkomitee "International Conference on VLSI Design (VLSID 2019)" • Programmkomitee "Test und Zuverlässigkeit (TuZ 2019)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2019)" • Programmkomitee "International Conference on Evolutionary Multi-Criterion Optimization (EMO 2019)" • Programmkomitee "Reed-Muller Workshop (RM 2019)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2019)" • Selection Committee PhD Forum "Design, Automation and Test in Europe (DATE 2019)" • Technical Programmkomitee "IEEE International Conference on Computer Design" (ICCD 2019) • Programmkomitee "International Conference on Advances in System Testing and Validation Lifecycle (VALID 2019)" • Programmkomitee "IEEE International Conference on Industrial Cyber-Physical Systems (IEEE ICPS/MFI 2019)" • Programmkomitee "International Workshop on Logic & Synthesis (IWLS 2019)" • Technisches Programmkomitee "Workshop on Design Automation for CPS (DESTION 2019)" • Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2019)" • Programmkomitee "NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2019)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2019)"
2020	<ul style="list-style-type: none"> • Program Chair "IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2020)" • General Chair "14th International Workshop on Boolean Problems (IWSBP 2020)" • Technisches Programmkomitee "GI Sicherheit 2020" • Technisches Komitee "Design Automation Conference (DAC 2020)" • Programmkomitee "Test und Zuverlässigkeit (TuZ 2020)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2020)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2020)" • Programmkomitee "IEEE Design Automation and Test Europe (DATE 2020)" • Selection Committee PhD Forum "Design, Automation and Test in Europe (DATE 2020)" • Programmkomitee "International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2020)" • Technisches Programmkomitee "Workshop on Design Automation for CPS (DESTION 2020)" • Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2020)" • Programmkomitee "IEEE International Symposium on Devices, Circuits and Systems (ISDCS 2020)" • Programmkomitee "International Workshop on Logic & Synthesis (IWLS 2020)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2020)"
2021	<ul style="list-style-type: none"> • Academic Chair "EDA event of SAT2021"

	<ul style="list-style-type: none"> • Gernal Chair "IEEE/ACM International Conference on Computer-Aided Design (ICCAD 2021)" • Programmkomitee "Test und Zuverlässigkeit (TuZ 2021)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2021)" • Selection Committee PhD Forum "Design, Autmation and Test in Europe (DATE 2021)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2021)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2021)" • Programmkomitee "IEEE European Test Symposium (ETS 2021)" • Programmkomitee "Reed-Muller Workshop (RM 2021)" • Programmkomitee "Workshop on Design Automation for CPS (DESTION 2021)" • Programmkomitee "International Conference on Evolvable Systems (ICES 2021)" • Programmkomitee "IEEE Latin-American Test Symposium (LATS2021)" • Programmkomitee "Symposium on Microelectronics Technology and Devices (SBMicro 2021)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2021)"
2022	<ul style="list-style-type: none"> • Programmkomitee "Test und Zuverlässigkeit (TuZ 2022)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2022)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2022)" • Programmkomitee "GI Sicherheit 2022" • Programmkomitee "IEEE European Test Symposium (ETS 2022)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2022)" • Programmkomitee "International Conference on Bioinspired Optimization Methods and their Applications (BIOMA 2022)" • Programmkomitee "Workshop on Design Automation for CPS (DESTION 2022)" • Selection Committee PhD Forum "Design, Autmation and Test in Europe (DATE 2022)" • Technisches Programmkomitee "IEEE International Symposium on Devices, Circuits and Systems (ISDCS 2022)" • Technisches Programmkomitee "International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology (DFTS 2022)" • Programmkomitee "IEEE Latin-American Test Symposium (LATS2022)" • Programmkomitee "Prague Embedded Systems Workshop (PESW 2022)" • Programmkomitee "IEEE International Symposium on Rapid System Prototyping (RSP2022)"
2023	<ul style="list-style-type: none"> • D7 (Formal Methods and Verification) topic co-chair "Design, Autmation and Test in Europe (DATE 2023)" • Programmkomitee PhD Forum "Design, Autmation and Test in Europe (DATE 2023)" • Programmkomitee "Test und Zuverlässigkeit (TuZ 2023)" • Programmkomitee "IEEE European Test Symposium (ETS 2023)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2023)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2023)" • Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2023)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2023)" • Programmkomitee "Prague Embedded Systems Workshop (PESW 2023)" • Technisches Programmkomitee "International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology (DFTS 2023)" • Programmkomitee "Symposium on Microelectronics Technology and Devices (SBMicro 2023)" • Programmkomitee "IEEE Latin-American Test Symposium (LATS2023)" • Programmkomitee "Workshop on LLM-Aided Design 2024 (LAD2024)"

2024	<ul style="list-style-type: none"> • Programmkomitee "Design, Automation and Test in Europe (DATE 2024)" - Formal Methods and Verification Co-chair (Topic D7) • Programmkomitee "Test und Zuverlässigkeit (TuZ 2024)" • Programmkomitee "GI Sicherheit 2024" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2024)" • Programmkomitee "IEEE Latin-American Test Symposium (LATS2024)" • Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2024)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2024)" • Programmkomitee "IEEE European Test Symposium (ETS 2024)" • Programmkomitee "Workshop on Parallel AI and Systems for the Edge (PAISE 2024)" • Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2024)" • Programmkomitee "Forum on Specification and Design Languages (FDL2024)" • Programmkomitee "International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology (DFTS 2024)" • Technisches Programmkomitee – Research Track " DVCon Europe 2024 (DEVCON 2024)"
2025	<ul style="list-style-type: none"> • Technisches Programmkomitee "Asia and South Pacific Design Automation Conference (ASP-DAC 2025)" • Technische Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2025)" • Programmkomitee "International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology (DFTS 2025)" • Technisches Programmkomitee "Workshop on Reliable and Secure RISC-V Architectures (RESCUER)" • Programmkomitee "Reed-Muller Workshop (RM 2025)" • Technisches Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2025)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2025)" • Organisationskomitee „Memory-Centric Computing (CCMCC2025)" • Programmkomitee "Forum on Specification and Design Languages (FDL2025)"
2026	<ul style="list-style-type: none"> • Publicity Chair "International Joint Conference on Artificial Intelligence (IJCAI)" • Programmkomitee "Test und Zuverlässigkeit (TuZ 2026)" • Programmkomitee "Prague Embedded Systems Workshop (PESW 2026)" • Technisches Programmkomitee "IEEE Latin-American Test Symposium (LATS2026)" • Programmkomitee "Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV 2026)" • Programmkomitee "IEEE International Symposium on Multiple-Valued Logic (ISMVL 2026)" • Technische Programmkomitee "IEEE Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2026)" • Programmkomitee Advisory Board "TRS" • Technisches Programmkomitee "The Euromicro Conference on Digital System Design (DSD 2026)" • Program Committee PhD Forum "Design, Automation and Test in Europe (DATE 2026)" • Programmkomitee "Forum on Specification and Design Languages (FDL2026)"

Gutachten/Reviews

Gutachten für die folgenden Konferenzen/Reviews at the following Conferences:

- * IEEE VLSI Design
- * IEEE VLSI Test Symposium
- * IEEE Asian Test Symposium
- * IEEE/ACM Design Automation Conference
- * IEEE/ACM European Design Automation Conference
- * IEEE European Design & Test Conference
- * IEEE Design, Automation and Test in Europe
- * IEEE EUROMICRO
- * IEEE European Test Workshop
- * IEEE Logic in Computer Science
- * AAAI Genetic Programming
- * IFIP WG 10.5 Workshop on Applications of the Reed-Muller Expansion in Circuit Design
- * International Workshop on Electronic Design Test & Applications
- * International Workshop on Boolean Problems
- * International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services
- * World-Multi-Conference on Information Systems, Analysis and Synthesis, and Systemics, Cybernetics and Informatics
- * International Conference on Advanced Computer Systems
- * European Conference on Artificial Intelligence
- * European Signal Processing Conference
- * Congress on Evolutionary Computation
- * Workshop on Algorithm Engineering and Experiments
- * IEEE Region 8 EUROCON
- * IEEE Mediterranean Electronical Conference
- * IEEE Great Lakes Symposium on VLSI
- * IEEE International Symposium on Multiple-Valued Logic
- * IEEE International Symposium on Circuits and Systems
- * IEEE International Conference on Computer Aided Design
- * IEEE International Conference on Computer Design
- * International Workshop on Graph-Theoretic Concepts in Computer Science
- * Doktorandenprogramm INFORMATIK
- * Gutachter International Conference on Design & Technology of Integrated Systems in Nanoscale Era (DTIS 2015)
- * EDAA ODA 2017

Gutachten für die folgenden Zeitschriften/Reviews at the following Journals:

- * Information and Computation
- * Information Processing Letters
- * The Computer Journal
- * Journal of Discrete Algorithms
- * Discrete Mathematics, Algorithms and Applications
- * Computing and Informatics (CAI)
- * IEICE Transactions
- * Journal of Evolutionary Computation
- * ACM Transactions on Design Automation of Electronic Systems (TODAES)
- * ACM Transactions on Embedded Computing Systems
- * ACM Transactions on Programming Languages and Systems
- * ACM Journal of Emerging Technologies in Computing Systems
- * IEE Electronic Letters

- * IEE Communications
- * IEE Circuits, Devices and Systems
- * IEE Computers and Digital Techniques
- * IEEE Transaction on Computers
- * IEEE Transaction on Computer Aided Design
- * IEEE Transactions on VLSI Systems
- * IEEE Transaction on Evolutionary Computation
- * IEEE Transactions on Circuits and Systems, Part I
- * IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing
- * IEEE Transaction on Education
- * IEEE Design & Test
- * IEEE Embedded Systems Letters
- * Acta Informatica
- * INTEGRATION - The VLSI Journal
- * IETE Technical Review
- * Iranian Journal of Electrical and Computer Engineering (IJECE)
- * Journal of Zhejiang University SCIENCE A (Applied Physics and Engineering)
- * Journal on System Architecture
- * IBM Journal of Research and Development
- * Circuits, Systems and Signal Processing
- * Nordic Journal of Computing
- * Design Automation for Embedded Systems
- * VLSI Design
- * Measurement
- * Journal of Software
- * International Journal of Metaheuristics
- * ASP Journal of Low Power Electronics (JOLPE)
- * Genetic Programming and Evolvable Machines
- * Symmetry
- * Advances in OptoElectronics
- * Springer Journal on Design Automation for Embedded Systems (seit 2016)
- * International Journal of Circuit Theory and Applications
- * Formal Aspects of Computing (FAOC)
- * IEEE Access (seit 2018)

Sonstige Gutachten wurden erstellt/Other Reviews:

- * DFG
- * Bundesministeriums für Bildung und Forschung (BMBF)
- * Bayrische Forschungstiftung
- * Sächsisches Staatsministerium
- * Alexander von Humboldt-Stiftung
- * ITG-Preis
- * Springer
- * DAAD-Auswahlkommission für VIGONI-Programm (2006-2012)
- * Natural Sciences and Engineering Research Council of Canada (NSERC)
- * Italian Ministry for Education University and Research (MIUR)
- * Israel Science Foundation (ISF)
- * Czech Science Foundation (GACR)
- * Government of Flanders
- * Research Foundation Flanders (FWO)
- * ACM Outstanding Ph.D. Dissertation Award in EDA
- * Best Paper Award Selection Committee for ACM Transactions on Design Automation of Electronic Systems (TODAES)
- * ACM Journal on Emerging Technologies in Computing Systems (JETC) Editor-in-Chief Search Committee

- * DAAD-Auswahlkommission für PPP-Programm (2014-2017)
- * EU-Gutachter (TETRACOM)
- * Förderwettbewerb „Informations- und Kommunikationswirtschaft in NRW“
- * Fachgutachter Elitenetzwerk Bayern
- * EDAA Achievement Award Jury
- * Dagstuhl Seminars and Dagstuhl Perspectives Workshops

Editor/Editor

- * IET Computers and Digital Techniques
- * Journal of Artificial Evolution and Applications
- * International Journal of Applied Metaheuristic Computing (IJAMC)
- * Artificial Intelligence Research (AIR)
- * International Journal on Multi-Valued Logic and Soft Computing (seit 2001)
- * IEEE Transactions on Computer-Aided Design (TCAD) (2014-2022)
- * ACM Journal on Emerging Technologies in Computing Systems (JETC) (2014-2026)
- * Journal on Design Automation for Embedded Systems (DAEM), Springer (seit 2016)
- * IET Cyber-Physical Systems: Theory & Applications (seit 2016)
- * IEEE Transactions on VLSI Systems (TVLSI) (seit 2017)
- * Chip, Elsevier (seit 2021)
- * Memories - Materials, Devices, Circuits and Systems, Elsevier (seit 2022)

Mitgliedschaften/Memberships

- * Institute of Electrical and Electronics Engineers (IEEE) - Fellow
 - Chair of Technical Committee of Multiple-Valued Logic (2006-2008)
 - Member of Technical Committee on Soft Computing
- * Association for Computing Machinery (ACM) – Fellow
- * Gesellschaft für Informatik (GI)
 - Mitglied der Kooperationsgemeinschaft Rechnergestützter Schaltungs- und Systementwurf
 - Sprecher der Fachgruppe 3: Methoden des Entwurfs und der Verifikation digitaler Schaltungen und Systeme
 - Mitglied der Fachgruppe 5: Testmethoden und Zuverlässigkeit von Schaltungen und Systemen
- * European Design and Automation Association (EDAA)
- * Elsevier Academic Executive Advisory Board (2010-2015)
- * IEEE Computational Intelligence Society – Emergent Technologies Technical Committee: Task Force on Quantum Computing
- * Member of National Academy of Artificial Intelligence (NAAI)
- * Wissenschaftlich-technischer Beirat Deutsches Zentrum für Luft- und Raumfahrt (DLR), Institut für den Schutz maritimer Infrastrukturen
- * Mitglied im wissenschaftlichen Beirat des Digital Science Centers der Christian-Albrechts-Universität zu Kiel (CAU)

Mitarbeit in der akademischen Selbstverwaltung/Collaboration with the Academic Administration

- * Rechnerbeauftragter des Fachbereichs (2002-2003)
- * Bibliotheksbeauftragter des Fachbereichs (2002-2003)
- * Sprecher der Informatik und Prodekan des Fachbereichs (2003-2007)
- * Vertreter der Universität Bremen beim Fakultätentag Informatik (FTI) (2003-2010)

- * Konrektor für Forschung und wissenschaftlichen Nachwuchs (seit 2008-2013)
Im Rahmen dieser Funktion unter anderem
 - Mitglied Vorstand Verein zur Förderung der wissenschaftlichen Forschung in der Freien Hansestadt Bremen (VFWF e.V.)
 - Kurator des Fraunhofer-Instituts für Fertigungstechnik und Angewandte Materialforschung (IFAM)
- * Raumbeauftragter der Informatik (seit 2010)
- * Kolloquiumsbeauftragter des Fachbereichs (seit 2013)
- * Beirat der Alumni der Universität Bremen e.V.
- * Vertreter der Universität Bremen im Fakultätentag Informatik (seit 2013)
- * Mitglied im Akademischen Senat der Universität Bremen (seit 2015)
- * Dekan des Fachbereichs 3 - Mathematik und Informatik (2018-2025)

Initiierung/Initiation

- * Gründung des Doktorandenkollegs „Eingebettete Systeme“ gemeinsam mit Prof. Dr. Jan Peleska im Jahr 2006
- * Gründung EvoHOT – mit Proceedings in Lecture Notes in Computer Science (LNCS)
- * Nominierender Gastgeber für AvH-Forschungspreis an Prof. Kaushik Roy (Purdue, USA) in 2010
- * Gründung und Koordination des Doktorandenkollegs „System Design“ (SyDe) im Rahmen der Exzellenz-Initiative
- * Ausgründung der Firma „SolVerTec – Solution Verification Technologies“ in 2013
- * Nominierender Gastgeber für AvH-Forschungspreis an Prof. Krishendu Chakrabaty (DUKE, USA) in 2013

Gremien/Boards

- * Vorstand Universitätsverband zur Qualifizierung des wissenschaftlichen Nachwuchses in Deutschland (UniWiND), 2013 – 2017
- * DFG-Fachkollegiat (409-07 Rechnerarchitekturen und eingebettete Systeme), seit 2016

Ausgerichtete Tagungen/Organized Conferences in Bremen

2003	GI/ITG/GMM Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen
2009	21. Workshop für Testmethoden und Zuverlässigkeit von Schaltungen und Systemen (TuZ)
2011	8. Workshops Cyber-Physical Systems – Enabling Multi-Nature Systems (CPMNS)
2012	ZuE 2012 Zuverlässigkeit und Entwurf 6. GMM/GI/ITG-Fachtagung
2014	IEEE 44th International Symposium on Multiple-Valued Logic (ISMVL)
2015	The Conference on Reversible Computation (RC)
2015	DUHDe – 2 nd Workshop on Design Automation for Understanding Hardware Design
2016	Forum on specification & Design Language (FDL)
2017	20. Workshop Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen (MBMV)
2017	29. Workshop für Testmethoden und Zuverlässigkeit von Schaltungen und Systemen (TuZ)
2018	23rd IEEE European Test Symposium (ETS)
2018	13th International Workshop on Boolean Problems (IWSBP)
2020	14th International Workshop on Boolean Problems (IWSBP)
2022	15th International Workshop on Boolean Problems (IWSBP)

Schriftenverzeichnis/Publications

(a) Diplomarbeit/Diploma Thesis

1. Konstruktion vollständig testbarer Addiererschaltkreise unter dem "robust Path-Delay-Fault" Fehlermodell, Diplomarbeit, J.W. Goethe-Universität, Frankfurt am Main, 1992

(b) Bücher/Books

1. R. Drechsler. Ordered Kronecker Functional Decision Diagrams und ihre Anwendung, Dissertation, Modell Verlag, Karben, ISBN 3-980-50330-5, 1996
2. R. Drechsler, B. Becker. Graphenbasierte Funktionsdarstellung, B.G. Teubner, Stuttgart, ISBN 3-519-02149-8, DOI: 10.1007/978-3-663-01442-3, 1998
3. R. Drechsler, B. Becker. Binary Decision Diagrams: Theory and Implementation, Kluwer Academic Publisher, Dordrecht, ISBN 0-7923-8193-9, 1998
4. R. Drechsler. Evolutionary Algorithms for VLSI CAD, Kluwer Academic Publisher, Dordrecht, ISBN 0-7923-8168-8, 1998
5. R. Drechsler. Formal Verification of Circuits, Kluwer Academic Publisher, Dordrecht, ISBN 0-7923-7858-X, 2000
6. M.A. Thornton, R. Drechsler, D.M. Miller. Spectral Techniques in VLSI CAD, Kluwer Academic Publisher, Dordrecht, ISBN 0-7923-7433-9, 2001
7. R. Drechsler, W. Günther. Towards One-Pass Synthesis, Kluwer Academic Publisher, Dordrecht, ISBN 1-4020-7044-6, 2002
8. A. Sikora, R. Drechsler. Software-Engineering und Hardware-Design, Carl Hanser Verlag, München, ISBN 3-446-21861-0, 2002
9. R. Drechsler, N. Drechsler. Evolutionary Algorithms for Embedded System Design Evolutionary Algorithms for Embedded System Design, Kluwer Academic Publishers, DOI: 10.1007/978-1-4615-1035-2, 2002
10. R. Drechsler. Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen, Shaker Verlag, ISBN 978-3-8322-1202-5, 2003
11. R. Ebdndt, G. Fey, R. Drechsler. Advanced BDD Optimization, Kluwer Academic Publisher, Dordrecht, ISBN 978-0387254531, DOI: 10.1007/b107399, 2005
12. B. Becker, R. Drechsler, P. Molitor. Technische Informatik - Eine Einführung, Pearson Deutschland GmbH, München, ISBN 3-8273-7092-2, 2005
13. G. Fey, R. Drechsler. Robustness and Usability in Modern Design Flows, Springer, Heidelberg, ISBN 978-1-4020-6535-4, 2008
14. R. Drechsler, S. Eggersgluß, G. Fey, D. Tille. Test Pattern Generation using Boolean Proof Engines, Springer, Heidelberg, ISBN 978-90-481-2359-9, DOI: 10.1007/978-90-481-2360-5, 2009
15. D. Große, R. Drechsler. Quality-Driven SystemC Design, Springer, Heidelberg, ISBN 978-90-481-3630-8, DOI: 10.1007/978-90-481-3631-5, 2010
16. F. Rogin, R. Drechsler. Debugging at the Electronic System Level, Springer, Heidelberg, ISBN 978-90-481-9254-0, DOI: 10.1007/978-90-481-9255-7, 2010
17. R. Wille, R. Drechsler. Towards a Design Flow for Reversible Logic, Springer, Heidelberg, ISBN 978-90-481-9578-7, DOI: 10.1007/978-90-481-9579-4, 2010
18. S. Eggersgluß, R. Drechsler. High Quality Test Pattern Generation and Boolean Satisfiability, Springer, Heidelberg, ISBN 978-1-4419-9975-7, 2012

19. M. Soeken, R. Drechsler. Formal Specification Level, ISBN: 978-3-319-08699-6, DOI: 10.1007/978-3-319-08699-6, 2014
20. N. Abdessaied, R. Drechsler. Reversible and Quantum Circuits, Springer, ISBN: 978-3-319-31937-7, DOI: 10.1007/978-3-319-31937-7, 2016
21. J. Seiter, R. Wille, R. Drechsler. Automatic Methods for the Refinement of System Models, Springer, ISBN 978-3319414799, DOI: 10.1007/978-3-319-41480-5, 2016
22. R. Drechsler. Formal System Verification State-of-the-Art and Future Trends, Springer, ISBN 978-3-319-57685-5, DOI: 10.1007/978-3-319-57685-5, 2017
23. D. Große, R. Drechsler. Methoden und Beschreibungssprachen zur Modellierung und Verifikation von Schaltungen und Systemen, Shaker Verlag, ISBN 978-3-8440-4996-1, 2017
24. R. Drechsler, A. Fink, J. Stoppe. Computer: Wie funktionieren Smartphone, Tablet & Co.?, Springer, Taschenbuch, ISBN: 978-3-662-53059-7, DOI: 10.1007/978-3-662-53060-3, 2017
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26. O. Keszöcze, R. Wille, R. Drechsler. Exact Design of Digital Microfluidic Biochips, Springer, ISBN: 978-3-030-08135-5, DOI: 10.1007/978-3-319-90936-3, 2018
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28. S. Shirinzadeh, R. Drechsler. In-Memory Computing - Synthesis and Optimization, Springer, ISBN: 978-3-030-18028-7, DOI: 10.1007/978-3-030-18026-3, 2020
29. R. Drechsler, M. Soeken (Eds.). Advanced Boolean Techniques, Springer, ISBN: 978-3-030-20325-2, DOI: 10.1007/978-3-030-20323-8, 2020
30. C. S. Große, R. Drechsler (Eds.). Information Storage - A Multidisciplinary Perspective, Springer, ISBN: 978-3-030-19264-8, DOI: 10.1007/978-3-030-19262-4, 2019
31. M. Goli, R. Drechsler. Automated Analysis of Virtual Prototypes at the Electronic System Level – Design Understanding and Applications, Springer, ISBN: 978-3-030-44284-2, DOI: 10.1007/978-3-030-44282-8, 2020
32. V. Herdt, D. Große, R. Drechsler. Enhanced Virtual Prototyping: Featuring RISC-V Case Studies, Springer, ISBN: 978-3-030-54830-8, DOI: 10.1007/978-3-030-54828-5, 2020
33. S. Huhn, R. Drechsler. Design for Testability, Debug and Reliability: Next Generation Measures Using Formal Techniques, Springer, ISBN: 978-3-030-69208-7, DOI: 10.1007/978-3-030-69209-4, 2021
34. R. Drechsler, J. Stoppe. Noch analog oder lebst Du schon? Mit Noerdman durch die Welt von heute... und morgen, Springer, ISBN: 978-3-658-32412-4, DOI: 10.1007/978-3-658-32413-1, 2021
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37. V. Herdt, D. Große, R. Drechsler. Verbessertes virtuelles Prototyping Mit RISC-V-Fallstudien, Springer, DOI: 10.1007/978-3-031-18174-0, 2023
38. A. Mahzoon, D. Große, R. Drechsler. Formal Verification of Structurally Complex Multipliers, Springer, DOI: 10.1007/978-3-031-24571-8, 2023
39. S. Shirinzadeh, R. Drechsler. In-Memory-Computing Synthese und Optimierung, Springer, DOI: 10.1007/978-3-031-22879-7, 2023
40. R. Drechsler, S. Huhn. Advanced Boolean Techniques, Springer, DOI: 10.1007/978-3-031-28916-3, 2023
41. M. Goli, R. Drechsler. Automatisierte Analyse von virtuellen Prototypen auf der Ebene elektronischer Systeme | Design, Verständnis und Anwendungen, Springer, DOI: 10.1007/978-3-031-36997-1, 2023
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43. S. Huhn, R. Drechsler. Design für Testbarkeit, Fehlersuche und Zuverlässigkeit Maßnahmen der nächsten Generation unter Verwendung formaler Techniken, Springer, DOI: 10.1007/978-3-031-45319-9, 2023
44. P. Pieper, R. Drechsler. Formal and Practical Techniques for the Complex System Design Process using Virtual Prototypes, Springer, DOI: 10.1007/978-3-031-51692-4, 2024
45. M. Hassan, D. Große, R. Drechsler. Erweiterte virtuelle Prototypen für heterogene Systeme, Springer, DOI: 10.1007/978-3-031-53152-1, 2024

(c) Herausgebertätigkeit/Commission Editor

1. B. Becker, R. Drechsler. Proceedings 8. Workshop GI/ITG/GME "Testmethoden und Zuverlässigkeit von Schaltungen und Systemen", Report 77, Universität Freiburg, Institut für Informatik, 1996
2. R. Drechsler, D.M. Miller. Special Issue on Decision Diagrams, Multiple-Valued Logic – An International Journal, 1998
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