

CURRICULUM VITAE

Herbert K. Dreiner

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BIRTH DATE: Nov. 4, 1962 **PLACE OF BIRTH:** Pittsfield, MA; USA

CITIZENSHIP: USA, GERMANY **FAMILY:** Married,
one daughter (*30.8.97),
one son (*11.4.2000).

EDUCATION AND EMPLOYMENT:

1968–1972 Primary Education in Williamstown, MA, USA.
1972–1981 Secondary Education in Aachen, Germany.
1981–1983 Vordiplom, plus two semesters, Universität Bonn, Germany.
1984–1989 Ph.D. in Theoretical Particle Physics at the University of Wisconsin–
Madison under the supervision of D.V. Nanopoulos.
Dec. 1985 MS Physics.
1989–1990 Postdoctoral Associate, Theory Group, DESY, Hamburg.
1990–1993 Postdoctoral Associate, Theoretical Physics, University of Oxford.
1993–1995 Postdoctoral Associate, Theoretical Physics, ETH-Zürich.
1996–2000 Rutherford Laboratory, Senior Scientific Officer (~university reader).
2000– Physics Professor, University of Bonn, Germany

AWARDS:

1983–1989 Fellowship from Studien Stiftung des Deutschen Volkes.
Aug. 1987 Scholarship for the Physics Summer School at Cargese, France.
1988–1989 University of Wisconsin Dean’s Fellowship.
1991–1993 Elected member of Wolfson College, Oxford.
2005 Alumni-Preis der Universität Bonn.
2009 European Physical Society, High Energy Physics Outreach Prize: Bonn
Physikshow

RESEARCH GRANTS:

- 1998–2000 Successful application for Athanasios Dedes to hold a Marie-Curie Fellowship at the Rutherford Laboratory.
- 1998–2000 RAL/Oxford: PPARC SPG on Neutrino Physics, 1 postdoc position and travel money.
- 2001–2002 Successful application for Gregory Moreau to hold a Humboldt Postdoctoral Fellowship at the University of Bonn under my guidance.
- 2004–2008 EU grant: MRTN-CT-2004-503369; The Quest of Unification. Theory confronts experiment
- 2006–2010 EU grant: MRTN-CT-2006-035863; UniverseNet - The origin of our universe: seeking links between fundamental physics and cosmology
- 2006–2009 BMBF Grant, “Determining SUSY Lagrangian Parameters at the LHC”.
- 2006–2018 SFB-TR33, Principal Investigator for project C4: Unified Dark Matter and Energy: Axions
- 2007–2008 Successful application for Prof. Abdelhak Djouadi (Orsay) to hold a Senior Humboldt Fellowship at the University of Bonn.
- 2007–2013 Co-author of the successful HGF Alliance “Physics at the Terascale” excellence initiative. (5 Mill. EUR/year) Member of Analysis Project Board. Speaker of VTI (Virtual Theory Institute). 1 five-year and 1 two-year theory position to Bonn
- 2009–2010 Successful application for Prof. Howard Haber, University of California, Santa Cruz, to hold a Senior Humboldt Fellowship at the University of Bonn.
- 2009–2012 BMBF Grant, “Determining SUSY Lagrangian Parameters at the LHC”.
- 2009–2012 BMBF Grant, “Determining SUSY Lagrangian Parameters at the LHC”.
- 2011– Humboldt Fellowship for Prof. Nidal Chamoun Physics Department, HIAST, Damascus, Syria, for regular visits to Bonn University.
- 2015–2018 DFG Forschergruppe FOR 2239/1 “New Physics at the Large Hadron Collider” together with RWTH Aachen (M. Krämer), U. Heidelberg (T. Plehn) and U. Mainz (J. Kopp).
- 2015–2018 BMBF Grant, “Determining SUSY Lagrangian Parameters at the LHC”.

FUNCTIONS:

- 1996–2000 Organzier of the UK Annual Theoretical Particle Physics Meeting
- 1998– Member of SUSY Conference International Board
- 1998, 2010 Hosted SUSY conference at RAL/Oxford and in Bonn
- 2005 External member of professorial hiring committee Wuppertal University
- 2007–2009 Member of Helmholtz Alliance “Terascale” Analysis Board
- 2007–2012 Head of VTI (Virtual Theory Inst.) in Helmholtz Alliance
- 2009– Member of Wissenschaftliche Aufsichtsrat, Junior-Uni, Wuppertal

- 2009–2012 Member of Helmholtz Alliance “Terascale” Management Board
- 2011 External member of professorial hiring committee Freiburg University
- 2011–2014 Member of the American Physical Society committee on outreach in physics: CIP
- 2010 Panel member to evaluate the Graduierten Kolleg GRK on Particle physics at Freiburg, University.
- 2014 Panel member to evaluate the Graduierten Kolleg GRK on Particle physics at Freiburg, University.
- 2015 Panel member of the STFC Strategic review of Particle Physics Phenomenology in the United Kingdom

PUBLICATIONS

Most Cited Papers:

1. **Bounds on R-Parity Violating Couplings at the Weak Scale and at the GUT Scale** [287 Citations]
B.C. Allanach, A. Dedes, H.K. Dreiner,
Phys. Rev. D60 (1999) 075014, hep-ph/9906209.
2. **How to find a Higgs boson with a mass between 155-GeV - 180-GeV at the LHC** [234 Citations]
M. Dittmar, Herbert K. Dreiner
Phys.Rev.D55:167-172,1997; hep-ph/9608317
3. **Sphaleron Erasure of Primordial Baryogenesis** [215 Citations]
H. K. Dreiner and G.G. Ross,
Nuclear Physics B 410 (1993) 188.
4. **Correlations of $B_s \rightarrow \mu\mu$ and $(g - 2)_\mu$ in Minimal Supergravity** [214 Citations]
A. Dedes, H. K. Dreiner, U. Nierste
Phys.Rev.Lett.87:251804,2001, hep-ph/0108037.
5. **R-Parity Violation at Hadron Colliders** [200 Citations]
H. K. Dreiner, and G. G. Ross,
Nuclear Physics B 365 (1991) 597.
6. **What is the Discrete Gauge Symmetry of the MSSM?** [165 Citations]
Herbi K. Dreiner, Christoph Luhn, Marc Thormeier,
Phys.Rev.D73:075007,2006; hep-ph/0512163
7. **The R Parity Violating Minimal Supergravity Model** [160 Citations]
B.C. Allanach, A. Dedes, H.K. Dreiner,
Phys.Rev.D69:115002,2004; hep-ph/0309196
8. **Two-component spinor techniques and Feynman rules for quantum field theory and supersymmetry** [158 Citations]
Herbi K. Dreiner, Howard E. Haber, Stephen P. Martin
e-Print: arXiv:0812.1594 [hep-ph]; Phys. Rept. 494 (2010) 1-196.

9. **R-parity violation at HERA** [148 Citations]
 J. Butterworth, Herbert K. Dreiner
 Nucl.Phys.B397:3-34,1993; hep-ph/9211204
10. **Benchmark Models, Planes, Lines and Points for Future SUSY Searches at the LHC** [119 Citations]
 S.S. AbdusSalam, B.C. Allanach, H.K. Dreiner, J. Ellis, U. Ellwanger, J. Gunion, S. Heinemeyer, M. Krämer, M.L. Mangano, K.A. Olive
 Eur. Phys. J. C71 (2011) 1835; e-Print: arXiv:1109.3859 [hep-ph].
11. **Chargino pair production in e+ e- collisions** [112 Citations]
 S.Y. Choi, A. Djouadi, Herbert K. Dreiner, J. Kalinowski, P.M. Zerwas
 Eur.Phys.J.C7:123-134,1999; hep-ph/9806279
12. **High Q² Anomaly at HERA and Supersymmetry** [110 Citations]
 Herbert K. Dreiner, P. Morawitz
 Nucl.Phys.B503:55-78,1997; hep-ph/9703279
13. **Anomaly-Free Gauged R symmetry in Local Supersymmetry** [102 Citations]
 A. H. Chamseddine, and H.K. Dreiner,
 hep-ph/9504337, Nucl. Phys. B 458 (1996) 65.
14. **Constrained Supersymmetry after two years of LHC data: a global view with Fittino** [98 Citations]
 Philip Bechtle, Torsten Bringmann, Klaus Desch, Herbi Dreiner, Matthias Hamer, Carsten Hensel, Michael Krämer, Nelly Nguyen, Werner Porod, Xavier Prudent
 JHEP 1206 (2012) 098; e-Print: arXiv:1204.4199 [hep-ph].

TEACHING

Ph.D. STUDENTS:

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| 1990 – 1992 | Jon Butterworth (Oxford), joint advisor with Doug Gingrich. Topic: <i>Searches for Supersymmetry with Broken R-parity at HERA via Resonance Production</i> . Reader Univ. Coll. London |
| 1992 – 1994 | Peter Morawitz (Oxford), supervised theory and analysis part of thesis in Oxford. Experimental advisor: Neville Harnew. Topic: <i>Searches for Supersymmetry with Broken R-parity at HERA via Associated Production</i> . |
| 1997 – 2000 | Peter Richardson (Oxford), jointly supervised with Michael Seymour. Topic: <i>Simulations of R-Parity Violating SUSY Models</i> . First Postdoc: Cambridge University, now: Reader, Durham University |
| 1999 – 2002 | Marc Thormeier (Oxford/Bonn). Topic: <i>Confronting Froggatt-Nielsen Models for Fermion Masses with Supersymmetry with broken R-Parity</i> . First Postdoc: UC Berkeley. |
| 2002 – 2006 | Christoph Luhn (Bonn). Topic: <i>Supersymmetry Model Building: Investigating Discrete Gauge Symmetries and their Applications for the Fermion Mass Problem</i> , First Postdoc: Univ. of Florida, now: Postdoc. Univ. of Sothampton |

- 2004 – 2007 **Ulrich Langenfeld** (Bonn). Topic: *Cosmological, Astrophysical and Collider Bounds on the Lightest Neutralino Mass*, First Postdoc: DESY-Zeuthen
- 2004 – 2008 **Markus Bernhardt** (Bonn). Topic: *Supersymmetry Model Building: Investigating Discrete Gauge Symmetries and their Applications for the Fermion Mass Problem*
- 2004 – 2008 **Jong-Soo Kim** (Bonn). Topic: *Supersymmetric Jarlskog invariants: The Neutrino sector*. First Postdoc: Dortmund Univ.
- 2006 – 2009 **Sebastian Grab** (Bonn). Topic: *Supersymmetric Signatures at the LHC*. First Postdoc: UC Santa Cruz
- 2006 – 2010 **Bransilav Poletanovic** (Bonn). Topic: *Axion and Axino Relic Density in R-Parity Violating Supersymmetry*
- 2007 – 2011 **Anja Marold** (Bonn). Topic: *CP-Violating Asymmetries in SUSY Pair Production at the ILC*
- 2007 – 2011 **Marja Hanussek** (Bonn). Topic: *Supersymmetric Model Building and Cosmology*
- 2011 – 2014 **Tim Stefaniak** (Bonn). Topic: *Higgs-Bounds and Higgs-Signals*
- 2012 – **Daniel Schmeier** (Bonn). Topic: *CheckMATE*
- 2012 – **Kilian Nickel** (Bonn). Topic: *Implementing Higher Order Supersymmetric Corrections in SARAH*
- 2013 – **Toby Opferkuch** (Bonn). Topic: *Discrete Symmetries in Supersymmetric Theories*
- 2014 – **Stefano Colucci** (Bonn). Topic: *Axinos in R-parity Violating Theories*
- 2015 – **Annika Reinert** (Bonn). Topic: *Dark matter candidates*

DIPLOM & MASTERS STUDENTS:

- 11/2000 – 11/2001 **Pascal Vaudrevange**, *Derivation of Feynman Rules for Two-component Fermions in Supersymmetry*.
- 4/2001 – 4/2002 **Christoph Luhn**, *Neutrino Masses in R-parity Violation with Complex Yukawa Couplings*.
- 4/2001 – 4/2002 **Ulrich Langenfeld**, *Lower Bound on the Lightest Neutralino Mass from Supernova 1987a*
- 11/2001 – 11/2002 **Margarete Herz**, *Bounds on R-parity Violating Couplings from Meson Decays*.
- 6/2003 – 7/2004 **Markus Bernhardt**, *$H \rightarrow WW \rightarrow \ell\ell\nu\nu$ as a Higgs Search Mode at the LHC*
- 7/2003 – 7/2004 **Jong Soo Kim**, *A Simple model for Neutrino Masses in R-parity Violating Supersymmetry*
- 1/2005 – 1/2006 **Branislav Poletanovic**, *Axino Dark Matter in R-Parity Violating Supersymmetry*
- 1/2005 – 1/2006 **Sebastian Grab**, *Next-to-Leading Order QCD Corrections to Resonant Slepton Production at Hadron Colliders*
- 2/2006 – 3/2007 **Anja Marold**, *CP-Violation in Chargino Production and Decay via tau Leptons*
- 2/2008 – 3/2009 **Marja Hanussek**, *Bounds on R-parity Violating Couplings from Neutrino Masses in B_3 mSUGRA*

2/2009 – 3/2010	Alessandro Barri , <i>Squark and Gluino Production at the LHC with a Stau LSP</i>
2/2010 – 3/2011	Tim Stefaniak , <i>Squark and Gluino Production at the LHC with a Sneutrino LSP</i>
5/2011 – 5/2012	Kian Salimkhani <i>Testing CP Violation at Colliders</i>
11/2011 – 11/2012	Daniel Schmeier <i>Effective Models for Dark Matter at the International Linear Collider</i>
11/2011 – 11/2012	Kilian Nickel <i>Higher Order Corrections in SARAH</i>
11/2012 – 10/2013	Stefano Colucci <i>Dark Matter</i>
11/2012 – 10/2013	Toby Opferkuch <i>Froggatt Nielsen Models</i>

Former Postdocs with Permanent Academic Jobs:

Benjamin Allanach:	Reader, DAMTP Cambridge
Athanasios Dedes:	Reader, Durham University
Cyril Hugonie:	CNRS Montpellier
Michael Krämer:	Professor, RWTH Aachen
Gregory Moreau:	CNRS Paris
Pietro Slavich:	LAPTH, Annecy

LECTURE COURSES:

Spring 1999	<i>Supersymmetry for Experimentalists</i> , 8 part graduate lecture course, Oxford University.
WS 2000/01	<i>Theoretical Elementary Particle Physics</i> (Halzen & Martin), Bonn University. 16-week lecture course, 3 hrs per week.
SS 2001	<i>Experimental and Theoretical Aspects of Neutrino Physics</i> , Bonn University. 14-week lecture course, 2 hrs per week.
WS 2001/02	<i>Theoretical Physics I</i> [classical mechanics (Goldstein), electro- and magnetostatics (Jackson)], Bonn University. 16-week lecture course, 4 hrs per week.
SS 2002	<i>Electrodynamics</i> (Jackson), Bonn University. 14-week lecture course, 4 hrs per week.
SS 2002	<i>Supersymmetry for Experimentalists</i> , Bonn University. Six part graduate lecture course for experimentalists working at LEP, Tevatron, HERA and LHC.
WS 2002/03	<i>Theoretical Elementary Particle Physics</i> (Halzen & Martin), Bonn University. 16-week lecture course, 3 hrs per week.
WS 2002/03	<i>Cosmology and Astroparticle Physics</i> , Bonn University. Seminar, talks held by students.

- SS 2003 *Neutrino Physics*, Bonn University; together with Prof. Weinheimer. 14-week lecture course, 3 *hrs* per week, plus 2 *hrs* per week problems class.
- WS 2003/04 *Collider Physics* (Barger and Phillips), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 2 *hrs* per week problems class.
- SS 2004 *Quantum Field Theory*, Bonn University; 14-week lecture course, 3 *hrs* per week, plus 2 *hrs* per week problems class.
- WS 2004/05 *Quantum Field Theory II* (Peskin & Schröder), Bonn University; 16-week lecture course, 4 *hrs* per week, plus 2 *hrs* per week problems class.
- SS 2005 *Astroparticle Physics and Cosmology*, Bonn University; 14-week lecture course, 3 *hrs* per week, plus 2 *hrs* per week problems class.
- WS 2005/06 *Classical Mechanics and Electrostatics* (Kuypers, Jackson), Bonn University; 16-week lecture course, 4 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2006 *Sabbatical*
- WS 2006/07 *Theoretical Particle Physics I* (Halzen & Martin), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2007 *Theoretical Particle Physics II*; (grand unified theories; introduction to supersymmetry) 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- WS 2007/08 *Theoretical Particle Physics I* (Halzen & Martin), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2008 *Quantum Mechanics* (Shankar), Bonn University; 16-week lecture course, 4 *hrs* per week, plus 3 *hrs* per week problems class.
- WS 2008/09 *Advanced Quantum Mechanics* (Shankar; Sakurai), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2009 *Quantum Field Theory* (Peskin & Schroeder), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- WS 2009/10 *Advanced Quantum Field Theory* (Peskin & Schroeder), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2010 *Sabbatical*
- WS 2010/11 *Supersymmetry*, Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2011 *Astroparticle Physics and Cosmology*, Bonn University; 14-week lecture course, 3 *hrs* per week, plus 2 *hrs* per week problems class.
- WS 2011/12 *Theoretical Particle Physics I* (Halzen & Martin), Bonn University; 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- SS 2012 *Advanced Theoretical Particle Physics* ; (neutrinos, two-component spinors, supersymmetry) 16-week lecture course, 3 *hrs* per week, plus 3 *hrs* per week problems class.
- WS 2012/13 *Electrodynamics* (Jackson), Bonn University. 14-week lecture course, 4 *hrs* per week, plus 3 *hrs* per week problems class; with Ch. Hanhart.
- SS 2013 *Theoretical Physics I* [classical mechanics (Goldstein)], Bonn University. 16-week lecture course, 4 *hrs* per week.

- WS 2013/14 *General Relativity for Experimentalists* (Hartle), Bonn University. 14-week lecture course, 3 hrs per week; with Ch. Hanhart.
- SS 2014 *Astroparticle Physics and Cosmology*, Bonn University; 14-week lecture course, 3 hrs per week, plus 2 hrs per week problems class.
- WS 2014/15 *Theoretical Particle Physics I* (Halzen & Martin), Bonn University; 16-week lecture course, 3 hrs per week, plus 3 hrs per week problems class.
- SS 2015 *Advanced Theoretical Particle Physics*; (neutrinos, two-component spinors, supersymmetry) 16-week lecture course, 3 hrs per week, plus 3 hrs per week problems class.
- WS 2015/16 *Advanced Theoretical Physics: Quantum Mechanics II* (Shenkar), Bonn University; 16-week lecture course, 3 hrs per week, plus 3 hrs per week problems class.

EARLY TEACHING EXPERIENCE:

- 1984 – 1986 University of Wisconsin: teaching assistant for first year undergraduate physics students. Problem solving sessions and laboratory classes.
- 1987 – 1989 Grader of graduate level theoretical physics courses. Field theory and quantum mechanics.
- 1996 – 1999 Tutor at University College, Oxford. Teaching 3rd year undergraduates.
- June, 1996 Invited member of E. Perez’s (Paris, H1 experiment) thesis defense committee.
- Dec., 1999 Invited member of C. Hugonie’s (Paris) thesis defense committee.
- April, 2001 Invited member of G. Moreau’s (Paris) thesis defense committee.

SUMMER SCHOOLS & BLOCK COURSES:

- March 1996 6 part lecture course on *Supersymmetry for Experimentalists*; held at the University of Edinburgh
- March 1996 6 part lecture course on *Supersymmetry for Experimentalists*; held at the University of Glasgow.
- June 1997 6 part lecture course on *Supersymmetry for Experimentalists*; held at the University of Manchester.
- Aug. 1998 2 lectures on supersymmetry held at Swiss Summer School in Zuoz, Engadin.
- Sept. 1998, 6 lectures entitled: *An Introduction to Supersymmetry for Theorists*, held at BUSSTEPP (British Universities Summer School on Theoretical Elementary Particle Physics).
- Sept. 1999 6 lectures entitled: *An Introduction to Supersymmetry for Theorists*, held at BUSSTEPP-99. Voted best lecturer by students.
- March 2002 Six part, blackboard lecture course, *Introduction to Supersymmetry*, at Dutch national graduate symposium held at NIKHEF.
- Sept. 2002 Four part, black board lecture course on “Introduction to Supersymmetry” at the German Autumn School: Maria Laach.
- Feb. 2003 3 part black board lecture course on “Introduction to Supersymmetry” at Schladming, Austria.
- Oct. 2004 4 part black board lecture course on “Introduction to Supersymmetry” for astroparticle physicists at Obertrubach, Germany.

- Feb. 2006 Lecture course on “Introduction to Supersymmetry” for hadron- and astroparticle physicists at Tübingen, Germany.
- Sept 2009 Lecture course on “Supersymmetry at Colliders” for formal theorists at the Saalburg Summer school, Wolfersdorf, Thüringen, Germany.

CONFERENCES ORGANIZED:

- Dec. 1996 Organizer (with R.G. Roberts) of annual British Theory Christmas meeting. The conference has 200, mainly British-based participants and lasts 3 days. It consists of 9 or 10 invited hour-long plenary talks, held by international speakers.
- Dec. 1997 Together with R.G. Roberts organizer of annual British Theory Christmas meeting.
- June 1998 Main organizer for SUSY-98, held in Oxford. Co-organizer: Graham Ross. The conference had 170 international participants and ran for 6 days. Over 120 talks were given in parallel and plenary sessions.
- Dec. 1998 Together with R.G. Roberts organizer of annual British Theory Christmas meeting.
- May, 1999 Co-organizer of 3 day meeting on Neutrino Physics together with Subir Sarkar. The meeting was attended by 35 experimentalists from around the world and 15 theorists. It was held in Cosener’s House, Abingdon.
- Dec. 1999 Together with R.G. Roberts organizer of annual British Theory Christmas meeting.
- Dec. 2000 Together with R.G. Roberts organizer of annual British Theory Christmas meeting.
- May. 2004 Together with H.-P. Nilles organizer of Planck-04, annual international conference on supersymmetry model building.
- Oct, 2004 Initiated and organised the meeting NRW-Pheno in Bad Honnef, joint regional meeting of high-energy experimentalists and theorists.
- Aug, 2005 Together with Manuel Drees and H.-P. Nilles organizer of COSMO-05, annual international conference on cosmology and particle physics.
- Feb, 2007 Sole organizer of the LHC-D Beyond the Standard Model workshop in Bonn; national meeting
- Dec., 2007 Together with Achim Stahl (Aachen) and Arnulf Quadt (Göttingen), organizer of the “Helmholtz Allianz-Physics at the Terascale” kick-off international meeting at DESY.
- Aug. 2010 SUSY-2010
- May 2013 16th International Conference From the Planck Scale to the Electroweak Scale (Planck 2013)

WORKSHOPS:

- 1990 LHC Workshop, member of Supersymmetry Working Group. Parallel session talk at final meeting in Aachen. Published contribution on searches for supersymmetry with R-parity violation.
- 1991 Second HERA workshop. Member of the Beyond the Standard Model group. First publication on resonant squark production at HERA via R-parity violation together with Jon Butterworth (ZEUS).

- 1991 EE500 Workshop at Annecy, member of Supersymmetry Working Group. Plenary talk on *Resonant Sneutrino Production*. Results published in proceedings.
- 1992 Tau-Physics Workshop, Columbus, Ohio. Plenary talk on tests of Bell's inequality at LEP via tau lepton decays together with Michael Dittmar. Results published in proceedings.
- 1994 One month at Aspen Summer Institute on *Searches for Physics Beyond the Standard Model*. Talk on Neutrino Masses and Gauge Symmetries.
- 1995 Two months at ITP Santa Barbara, *From the Weak Scale to the Planck Scale* Workshop. Talk on *Anomaly-free Gauged R-Symmetries*.
- 1996 Third HERA Workshop; Convener of the Beyond the Standard Model group. Plenary talk at final meeting to summarize the group's results. Editor of the group's proceedings write-up. Systematic analysis of R-parity violating decays of resonantly produced squarks. Results published in proceedings.
- 1997 Oxford LEP2 Workshop; Convener of the Beyond the SM group. Two plenary talks to present group results. Analysis of non-resonant single sparticle production at LEP. Results published in proceedings.
- 1998 Tevatron Run II Supersymmetry/Higgs Workshop; Convener of the Beyond the MSSM working group. Two plenary talks to present group results. Editor of the final report. Simulation of resonant slepton production. Results published in proceedings.
- 1999 Les Houches Collider Physics Workshop, Convener of the Supersymmetry group.
- 2001-03 ECFA/DESY Workshop on the Next Linear Collider. Convenor for supersymmetry group.
- 2004- Initiator and organizer of the annual NRW-Pheno workshops held twice in Bad Honnef.
- 2006- Together with M. Krämer (Aachen) theory convenor of the "Beyond the Standard Model" group of the LHC-D workshop, which met for the first time April, 2006. It will continue to meet throughout the running of the LHC. Superseded the NRW-Pheno workshops.

COLLABORATIONS WITH EXPERIMENTALISTS:

- 1990 Collaboration with Felicitas Pauss (CMS, L3) on *LHC searches for Supersymmetry with Broken R-Parity*. Published in the Aachen LHC-Workshop proceedings.
- 1991 Collaboration with Jon Butterworth (ZEUS) on *Resonant Squark Production at HERA* within the Second HERA Workshop. Results published in the HERA Workshop proceedings and in Nuclear Physics B.
- 1992 Collaboration with Michael Dittmar (then OPAL, now L3 and CMS) on *A test of Bell's inequality via correlated tau lepton decays at LEP1*. Results published in Physics Letters B.
- 1993 Collaboration with Grahame Blair and Peter Morawitz (then both ZEUS) on a *Monte Carlo Generator for Supersymmetry at HERA*. Documentation published as a ZEUS preprint.
- 1994 Collaboration with Peter Morawitz (then ZEUS, now ALEPH) on *Supersymmetry Searches at HERA*. Results published in Nuclear Physics B.

- 1996 Collaboration with Peter Morawitz (ALEPH) on a possible supersymmetric explanation of the ALEPH 4-jet events. Results published in Physics Letters B.
- 1996 Collaboration with Michael Dittmar (CMS, L3) on a new signature for the Standard Model Higgs search: $H \rightarrow W^+W^- \rightarrow \ell^+\nu_\ell\ell^-\bar{\nu}_\ell$. Results published in Physical Review D and Ringberg Workshop.
- 1996 Collaboration with Emmanuelle Perez and Yves Sirois (both H1) on a systematic study of resonant squark production at HERA followed by supersymmetric gauge decays. Published in the third HERA Workshop proceedings.
- 1997 Collaboration with Peter Morawitz (ALEPH) on a supersymmetric explanation of the high- Q^2 excess at HERA. Results published in Nuclear Physics B.
- 1997 Collaboration with Peter Morawitz and Matt Williams (both ALEPH) on single supersymmetric particle production at LEP. Results published in Physics Letters B.
- 1999 Collaboration with Max Chertok (CDF) and Greg Landsberg (D0) to produce final report for the Tevatron Run II Higgs/Supersymmetry workshop.
- 2001 Collaboration with Giacomo Polesello (NOMAD, ATLAS) on obtaining bounds on supersymmetry with broken R-parity from meson decays.
- 2002 Collaboration with Giacomo Polesello (NOMAD, ATLAS) on obtaining bounds on supersymmetry with broken R-parity from NOMAD data.
- 2004 Collaboration with Thomas Hebbeker (D0, Aachen) on R-parity Violating Signatures at D0.
- 2007 Collaboration with Klaus Desch (ATLAS, Bonn) on scalar tau LSP signatures at the LHC.
- 2007 Collaboration with Peter Wienemann (ATLAS, Bonn) on extracting information on supersymmetry breaking from the measurement of the gaugino masses at the LHC.
- 2009 – Collaboration with Klaus Desch and Philip Bechtle (Atlas Collaboration)