

CURRICULUM VITAE

Dr. Alexander Wurm

Department of Physical & Biological Sciences
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POSTITONS HELD

- 09/09-present **WESTERN NEW ENGLAND UNIVERSITY**
Department of Physical & Biological Sciences
Associate Professor of Physics
Assistant Department Chair (Sept. 2013 – June 2014)
Department Chair (July 2014 – present)
- 09/05-08/09 **WESTERN NEW ENGLAND COLLEGE**
Department of Physical & Biological Sciences
Assistant Professor of Physics
- 09/02-08/05 **THE UNIVERSITY OF TEXAS AT AUSTIN**
Institute for Fusion Studies
Appointment to the U.S. Department of Energy - Fusion Energy
Postdoctoral Research Program (Sept. 2002 - Sept. 2004)
Postdoctoral Fellow (Sept. 2004 - Aug. 2005)
Mentors: Wendell Horton, Ph.D. and Philip J. Morrison, Ph.D.
- 06/00-08/02 **THE UNIVERSITY OF TEXAS AT AUSTIN**
Institute for Fusion Studies
Research Assistant
- 01/97-06/00 **THE UNIVERSITY OF TEXAS AT AUSTIN**
Department of Physics
Assistant Instructor in Physical Science (Jan. 1999 - June 2000)
Teaching Assistant (Jan. 1997 - Dec. 1998)

EDUCATION

- 08/96-05/02 **THE UNIVERSITY OF TEXAS AT AUSTIN**
Department of Physics, Center for Relativity, and Institute for Fusion Studies
Degree received: Ph.D. in Physics, GPA: 4.0
Dissertation: Renormalization Group Applications in Area-Preserving
Nontwist Maps and Relativistic Quantum Field Theory
Mentors: Cécile DeWitt-Morette, Ph.D. and Philip J. Morrison, Ph.D.
- 1995-1996 **UNIVERSITY OF WUERZBURG, GERMANY**
Graduate Program in Physics
Degree received: Diplom in Physik mit Auszeichnung
- 1994-1995 **THE UNIVERSITY OF TEXAS AT AUSTIN**
Department and Physics and Center for Relativity
Graduate Program in Physics
Degree received: Master of Arts in Physics, GPA: 4.0
- 1991-1994 **UNIVERSITY OF WUERZBURG, GERMANY**
Undergraduate Program in Physics
Degree received: Vordiplom in Physik

RESEARCH INTERESTS

Theoretical physics, applications of nonlinear dynamics, Lagrangian and Hamiltonian methods in plasma physics and fluid dynamics, nonlinear waves; Dynamical Systems theory, esp. finite and infinite-dimensional Hamiltonian Systems.

PROFESSIONAL AWARDS / HONORS

- | | |
|------|---|
| 2002 | <ul style="list-style-type: none">• Outstanding Dissertation Award in Physics (Phys. Dept., UT Austin)• Membership in Gamma Beta Phi - Honor Society |
| 2001 | <ul style="list-style-type: none">• Continuing Tuition Fellowship Award (UT Austin)• Professional Development Award (Phys. Dept., UT Austin) |
| 2000 | <ul style="list-style-type: none">• Physics Fellowship Award (Phys. Dept., UT Austin) |
| 1994 | <ul style="list-style-type: none">• Fellowship Award from the German Academic Exchange Service (DAAD) |

PROFESSIONAL ASSOCIATIONS

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| 2011-2016 | <ul style="list-style-type: none">• Elected member of International Sherwood Fusion Theory Meeting Executive Committee (Vice-Chair:2013-2014, Chair:2014-2015) |
| 2009 | <ul style="list-style-type: none">• Membership in the Anacapa Society |
| 1994 | <ul style="list-style-type: none">• Membership in the American Physical Society |

PROFESSIONAL RESEARCH ACTIVITIES

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|------|--|
| 2014 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, March 17-23, 2014. |
| 2012 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, June 4-8, 2012. |
| 2011 | <ul style="list-style-type: none">• IMA New Directions Short Course on Invariant Objects in Dynamical Systems and their Applications, June 20-July 1, 2011, U. of Minnesota, Minneapolis, MN.• Visitor at the Institute for Fusion Studies, UT Austin, May 15-21, 2011. |
| 2010 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, May 30 – June 10, 2010.• 4th ITER International Summer School, May 30 - June 4, 2010, Austin, TX.• Plasma Physics Winter School on Shear Flows and Momentum Transport in Lab and Astrophysical Plasmas, January, 4-8, 2010, UCLA, Los Angeles, CA. |
| 2009 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, May 11-15, 2009. |
| 2008 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, June 11 - July 2, 2008.• Plasma Physics Winter School on Instabilities in Laboratory and Astrophysical Plasmas, January 7-12, 2008, UCLA, Los Angeles, CA. |
| 2007 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, May 19-26, 2007.• Plasma Physics Winter School on Plasma Turbulence and Transport, January 8-13, 2007, UCLA, Los Angeles, CA. |
| 2006 | <ul style="list-style-type: none">• Visitor at the Institute for Fusion Studies, UT Austin, May 16 - June 1, 2006.• Plasma Physics Winter School on Magnetic Reconnection in Plasmas, January 9-14, 2006, UCLA, Los Angeles, CA. |
| 2005 | <ul style="list-style-type: none">• Workshop on Multiscale Processes in Fusion Plasmas, January 10-14, 2005, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, CA.• Plasma Physics Winter School, January 3-7, 2005, UCLA, Los Angeles, CA. |
| 2003 | <ul style="list-style-type: none">• Visitor at the Geophysical Fluid Dynamics Summer School in Woodshole, MA, June 28 - July 10, 2003. |
| 1998 | <ul style="list-style-type: none">• Invited participant, NATO Advanced Study Institute on Quantum Field Theory: Perspective and Prospective, June 15-26, 1998, Les Houches, France. |
| 1996 | <ul style="list-style-type: none">• Invited participant, NATO Advanced Study Institute on Functional Integration: Basics and Applications, September 1-14, 1996, Cargese, France.• Summer School/Conference, “Let’s face Chaos through Nonlinear Dynamics”, June 24 - July 5, 1996, Maribor, Slovenia. |

PROFESSIONAL DEVELOPMENT

- 2014 • Workshop on curricular resources for IPLS courses, Univ. of New Hampshire, July 16, 2014.
- 2014 • Conference on Introductory Physics for the Life Sciences, March 14-16, 2014, Arlington, VA.
- 2009-2011 • “Share the Learning” workshops (WNEC).
- 2011 • Faculty Development Program, “The NET Generation: Who Are They and How Can We Engage Them?”, organized by the Cooperating Colleges of Greater Springfield (CCGS), April 4, 2011 at Westfield State University, Westfield, MA.
- 2009 • Faculty Development Program, “Pedagogical Innovations: Lessons Learned”, organized by the Cooperating Colleges of Greater Springfield (CCGS), March 26, 2009 at the Holyoke Community College, Holyoke, MA.
- 2008 • Faculty Development Program, “What's new at the museums: From art to science to history”, organized by the Cooperating Colleges of Greater Springfield (CCGS), April 3, 2008 at the Springfield Museums at the Quadrangle, Springfield, MA.
- 2007 • Faculty Development Program, “The challenges and rewards of service learning”, organized by the Cooperating Colleges of Greater Springfield (CCGS), March 29, 2007 at Western New England College, Springfield, MA.
- 2006 • 1st SAFE SPACE workshop (WNEC).
- Faculty Development Program, “Promoting civility on campus and in the classroom: An interactive dialogue”, organized by the Cooperating Colleges of Greater Springfield (CCGS), March 30, 2006 at American International College, Springfield, MA.
- 2005-2006 • Advising workshops (WNEC).

GRANTS

- 2015 • Summer research grant (WNEU).
- 2014 • Summer research grant (WNEU).
- Grant from the Center for Teaching and Learning (WNEU) to attend the Conference on Introductory Physics for the Life Sciences, March 14-16, 2014, Arlington, VA.
- 2013 • Summer research grant (WNEU).
- 2012 • Summer research grant (WNEU).
- 2011 • Summer research grant (WNEC).
- IMA travel grant to attend the New Directions Short Course on Invariant Objects in Dynamical Systems and their Applications, June 20-July 1, 2011, U. of Minnesota, Minneapolis, MN.
- 2010 • Summer research grant (WNEC).
- Sabbatical grant for Spring 2012 (WNEC).
- Travel grant to attend Plasma Physics Winter School, January, 4-8, 2010, UCLA, Los Angeles, CA.
- 2009 • Summer research grant (WNEC).
- 2008 • Summer research grant (WNEC).
- Natural science perspective course development grant: Oceans (WNEC).
- Travel grant to attend Plasma Physics Winter School, January 7-12, 2008, UCLA, Los Angeles, CA.
- 2007 • Natural science perspective course development grant: Space Exploration (WNEC).
- Summer research grant (WNEC).
- ILP course development grant: Forensic Physics (WNEC).
- Travel grant to attend Plasma Physics Winter School, January 8-13, 2007, UCLA, Los Angeles, CA.

- 2006
 - Summer research grant (WNEC).
 - Travel grant to attend Plasma Physics Winter School , January 9-14, 2006, UCLA, Los Angeles, CA.
- 2005
 - Travel grant to attend Plasma Physics Winter School, January 3-7, 2005, UCLA, Los Angeles, CA.
- 2002
 - Travel grant to attend TH-2002, International Conference on Theoretical Physics, July 22-27, 2002, Paris, France.
- 2000
 - NSF travel grant to attend the XIII International Congress on Mathematical Physics, July 17-22, 2000, London, UK.
- 1998
 - NSF travel grant to attend the NATO Advanced Study Institute on Quantum Field Theory: Perspective and Prospective at Les Houches, France.
- 1996
 - NSF travel grant to attend the NATO Advanced Study Institute on Functional Integration: Basics and Applications at Cargese, France.

OUTREACH ACTIVITIES

- Judge at St. Michael's Academy 8th Grade Science Fair, May 6, 2014.
- Judge at St. Michael's Academy 8th Grade Science Fair, May 7, 2013.
- Workshop presenter on "Why do some things float, and other things sink?" at STEM Convention, March 1, 2011, WNEC.

PROFESSIONAL SERVICE

- Elected member of the Sherwood Fusion Theory Meeting Executive Committee (2011-2016).
 - Vice-Chair (2013-2014)
 - Chair (2014-2015)
- Co-organizer, Minisymposium on "Nontwist Hamiltonian systems: theory and applications" at SIAM Conference on Applications of Dynamical Systems, May 17-21, 2015, Snowbird, UT.
- Author of press release for the U.S. Department of Energy entitled "Highlights from the 2015 International Sherwood Fusion Theory Conference, New York City, NY."
- Author of press release for the U.S. Department of Energy entitled "Highlights from the 2014 International Sherwood Fusion Theory Conference, San Diego, CA."
- Author of press release for the U.S. Department of Energy entitled "Highlights from the 2013 International Sherwood Fusion Theory Conference, Santa Fe, NM."
- Co-organizer, Minisymposium on "Nontwist Hamiltonian systems: theory and applications" at SIAM Conference on Applications of Dynamical Systems, May 19-23, 2013, Snowbird, UT.
- Co-author (with A. White, MIT) of press release for the U.S. Department of Energy entitled "Highlights from the 2012 International Sherwood Fusion Theory Conference, Atlanta, GA."
- Co-organizer, Minisymposium on "Nontwist Hamiltonian systems: theory and applications" at SIAM Conference on Applications of Dynamical Systems, May 22-26, 2011, Snowbird, UT.
- Co-organizer, Minisymposium on "Nontwist Hamiltonian systems: theory and applications" at SIAM Conference on Applications of Dynamical Systems, May 17-21, 2009, Snowbird, UT.
- Co-organizer, Minisymposium on "Nontwist systems: theory and applications" at SIAM Conference on Applications of Dynamical Systems, May 28 - June 1, 2007, Snowbird, UT.
- Co-organizer, Minisymposium on "Nontwist Hamiltonian systems: theory and applications" at SIAM Conference on Applications of Dynamical Systems, May 22-26, 2005, Snowbird, UT.
- Reviewer for Physical Review E, Physica D, Communications in Nonlinear Science and Numerical Simulations. Chaos

SERVICE AT WESTERN NEW ENGLAND UNIVERSITY

- Chair of the Department of Physical and Biological Sciences (July 2014 - present).
- Assistant Chair of the Department of Physical and Biological Sciences (Sept. 2013- June 2014).
- Chair of Search Committee for Physics Faculty Position (Sept. 2012 - March 2013).
- Member of NEASC re-accreditation self-study subcommittee (Sept. 2010- May 2011).
- Panelist at a panel discussion on “Engaging students in learning activities and assessing their level of engagement”, “Share the Learning” workshop, WNEC, March 29, 2011.
- Search Committee Member for Mathematics Faculty Positions (Sept. 2010 – Feb. 2011).
- Search Committee Member for BME Faculty Positions (Sept. - Dec. 2010).
- Graduate Curriculum Sub-Committee of the Faculty Senate (June 2009 – May 2014).
- Chair of Search Committee for Physics Faculty Position (June 2008 - March 2009).
- Search Committee Member for two Mathematics Faculty Positions (Sept. 2007 - March 2008).
- Academic Standards Committee (June 2007 - June 2008).
- Curriculum Committee of the College of Arts & Sciences (Sept. 2006 – May 2013).
- Diversity Task Force (Sept. 2005 – May 2009).

SEMINARS

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| 2014 | <ul style="list-style-type: none">• Co-presenter at “<i>How To</i> Session for the Flipped Classroom”, Center for Teaching and Learning, December 15, 2014, WNE University.• Workshop on , “Flipping an Introductory Physics Course”, presentation given as part of the workshop on <i>The Flipped Classroom: Making the Most of Class Time Through Interaction and Engagement</i> organized by the Center for Teaching and Learning, October 20, 2014, WNE University.• Brown-bag lunch Seminar, “Flipping an Introductory Physics course - a first experience”, Center for Teaching and Learning, April 15, 2014, WNE University. |
| 2011 | <ul style="list-style-type: none">• Turbulence Seminar, “Introduction to magnetic field line chaos”, Nuclear Science and Engineering, MIT (December 2011)• Research Group Seminar (Prof. P.J. Morrison), “Breakup of shearless tori in cubic and quartic nontwist maps”, May 20, 2011, UT Austin, Austin, TX. |
| 2009 | <ul style="list-style-type: none">• Plasma Physics Seminar, “Destruction of transport barriers in nontwist map models with and without spatial symmetry”, May 2009, UT Austin, Austin, TX. |
| 2008 | <ul style="list-style-type: none">• Plasma Physics Seminar, “Chaotic transport and separatrix reconnection in an area-preserving self-consistent nontwist map model”, June 2008, UT Austin, Austin, TX. |
| 2007 | <ul style="list-style-type: none">• Plasma Physics Seminar, “Recent results on the breakup of invariant tori in nontwist maps”, May 2007, UT Austin, Austin, TX. |
| 2006 | <ul style="list-style-type: none">• Mathematics Colloquium, “Symplectic maps as models of particle orbits in nuclear fusion devices”, November 2006, Western New England College, Springfield, MA.• Plasma Physics Seminar, “Breakup of invariant tori in nontwist maps”, May 2006, UT Austin, Austin, TX. |
| 2002 | <ul style="list-style-type: none">• Plasma Physics Seminar, “Renormalization in the standard nontwist map”, August 2002, UT Austin, Austin, TX.• Relativity Seminar, “Renormalization in area-preserving nontwist maps: recent results”, April 2002, UT Austin, Austin, TX. |
| 1998 | <ul style="list-style-type: none">• Relativity Seminar, “Towards a functional integral representation of the propagator at fixed energy”, May 1998, UT Austin, Austin, TX. |

TEACHING EXPERIENCE

TEACHING AWARDS

- 1998
- University Teaching Award for an International TA/AI (UT Austin)
 - Physics Department Teaching Award (UT Austin)

TEACHING EXPERIENCE AT WESTERN NEW ENGLAND UNIVERSITY

Fall 2005 - present Assistant/Associate Professor of Physics

- Introductory Physics for Engineers I: Mechanics (Calculus based) including Laboratory
- Introductory Physics for Engineers II: Electricity & Magnetism (Calculus based) including Laboratory
- Physics of the Life Sciences I: Mechanics, Fluids, Thermodynamics (Calculus based) including Laboratory
- Physics of the Life Sciences II: Electricity & Magnetism, Waves, Optics, Modern Physics (Calculus based) including Laboratory
- Optics (300 level) including Laboratory Activities
- Forensic Physics (200 level)
- Space Exploration (100 level)
- Oceans (100 level)

TEACHING EXPERIENCE AT THE UNIVERSITY OF TEXAS AT AUSTIN

Department of Physics

Spring 1999 - Spring 2000 Assistant Instructor in Physical Science

- Mechanics and Heat
- Electricity and Magnetism, Waves and Optics

Spring 1997 - Fall 1998 Teaching Assistant

- Advanced Methods in Mathematical Physics (graduate level)
- Electromagnetism Laboratory for Science Majors
- Electromagnetism and Optics Laboratory for Engineers

Center for Teaching Effectiveness

- January 2004 Conductor of workshops at the Fourth Annual Teaching Seminar for TA's & AI's
- September 2003 Conductor of workshop on "Leading Discussion and Problem Sessions" at the Teaching Conference for TA's/AI's
- 1999 – 2003 Panel moderator and conductor of workshops on various topics at the Teaching Workshop for Incoming International TA's

TEACHING EXPERIENCE AT THE AUSTIN COMMUNITY COLLEGE

Summer 1999 Adjunct Faculty Member in Physics

- Lecture and Lab of Physics for Engineers I: Mechanics, Waves

PUBLICATIONS

Peer-reviewed publications

1. I. Keramidas Charidakos, M. Lingam, P.J. Morrison, R. White, **A. Wurm**, “Action Principles for Extended MHD Models”, *Phys. of Plasmas* **21**, 092118 (2014).
2. **A. Wurm** and K.M. Martini, “Breakup of inverse golden mean shearless tori in the two-frequency standard nontwist map”, *Phys. Lett. A* **377**, 622 (2013).
3. **A. Wurm** and K. Fuchss Portela, “Breakup of shearless invariant tori in cubic and quartic nontwist maps”, *Commun. Nonlinear Sci. Numer. Simulat.* **17**, 2215 (2012).
4. P.J. Morrison and **A. Wurm**, “Nontwist maps”, *Scholarpedia*, 4(9):3551 (2009).
5. **A. Wurm** and M. Berg, “Wick calculus”, *Am. J. Physics* **76**, 65 (2008).
6. K. Fuchss, **A. Wurm**, and P.J. Morrison, “On a new fixed point of the renormalization group operator for area-preserving maps”, *Phys. Lett. A* **366**, 437 (2007).
7. K. Fuchss, **A. Wurm**, A. Apte, and P.J. Morrison, “Breakup of shearless meanders and “outer” tori in the standard nontwist map”, *Chaos* **16**, 033120 (2006).
8. W. Horton, H.V. Wong, P.J. Morrison, **A. Wurm**, J.H. Kim, J.C. Perez, J. Pratt, G.T. Hoang, B.P. LeBlanc, R. Ball, “Temperature driven electron transport in NSTX and Tore Supra”, *Nucl. Fusion* **45**, 976 (2005).
9. **A. Wurm**, A. Apte, K. Fuchss, and P.J. Morrison, “Meanders and reconnection-collision sequences in the standard nontwist map”, *Chaos* **15**, 23108-1 (2005).
10. A. Apte, **A. Wurm**, and P.J. Morrison, “Renormalization for breakup of invariant tori”, *Physica D* **200**, 47 (2005).
11. **A. Wurm**, A. Apte, and P.J. Morrison, “On reconnection phenomena in the standard nontwist map”, *Braz. J. Phys.* **34**, 1700 (2004).
12. A. Apte, **A. Wurm**, and P.J. Morrison, “Renormalization and destruction of $1/\gamma^2$ tori in the standard nontwist map”, *Chaos* **13**, 421 (2003).
13. **A. Wurm**, N. Krausz, C. DeWitt-Morette, and M. Berg, “Fourier transforms of Lorentz invariant functions”, *J. Math. Phys.* **44**, 352 (2003).
14. **A. Wurm** and J. LaChapelle, “Comment on: Path integral solution of the Schrödinger equation in curvilinear coordinates: A straightforward procedure”, *J. Math. Phys.* **38**, 2755 (1997).

Book Chapters

1. **A. Wurm**, contributed appendix on “Wick calculus” (5 pages) in: *Functional Integration: Action and Symmetries* by P. Cartier and C. DeWitt-Morette, Cambridge Monographs on Mathematical Physics, Cambridge University Press, Cambridge, UK (2007).
2. P. Cartier, M. Berg, C. DeWitt-Morette and **A. Wurm**, “Characterizing Volume Forms”, in: *Fluctuating Paths and Fields*, eds. A. Pelster et al., World Scientific (2001).
3. **A. Wurm**, Lecture Notes “A Rigorous Mathematical Foundation of Functional Integration” based on lectures by P. Cartier, in: *Functional Integration: Basics and Applications*, eds. C. DeWitt-Morette, P. Cartier and A. Folacci, Plenum Press, New York (1997).

Conference Proceedings

1. W. Horton, H. Vernon Wong, P.J. Morrison, **A. Wurm**, J. Perez, J.H. Kim, G.T. Hoang, B.P. LeBlanc, “Electron thermal transport in Tore Supra and NSTX”, in: Proceedings of the 20th IAEA Fusion Energy Conference, November 1-6, 2004, Vilamoura, Portugal.
2. **A. Wurm**, A. Apte, K. Fuchs, and P.J. Morrison, “Separatrix reconnection and meanders in the standard nontwist map”, in: Proceedings of 31st European Physical Society Conference on Plasma Physics, June 28 - July 2, 2004, Imperial College, London, UK.

Theses

1. **A. Wurm**, Ph.D. dissertation, “Renormalization Group Applications in Area-Preserving Nontwist Maps and Relativistic Quantum Field Theory”, The University of Texas at Austin, May 2002.
2. **A. Wurm**, Diplomarbeit, “The Cartier/DeWitt Path Integral Formalism and its Extension to Fixed Energy Green’s Functions”. (filed at: Physikalisches Institut der Universität Würzburg, Germany).
3. **A. Wurm**, Master Thesis, “Angular Momentum-to-Angular Momentum Transition in the DeWitt/Cartier Path Integral Formalism”. (filed at: PCL Stacks, UT Austin).

CONFERENCE PRESENTATIONS

- International Sherwood Fusion Theory Meeting, March 16-18, 2015, New York City, NY
 - A. Wurm**, M. Lingam, and P.J. Morrison, “Deriving 3D-MHD models with gyroviscous-like contributions using a Hamiltonian and Action Principle Approach” (poster)
- APS - Division of Plasma Physics Meeting, October 27-31, 2014, New Orleans, LA
 - A. Wurm**, M. Lingam, and P.J. Morrison, “Derivation of Hamiltonian magnetofluid models with gyroviscous-like contributions using a gyro-map” (poster)
 - I. Keramidias Charidakos, M. Lingam, P. J. Morrison, R. L. White, and **A. Wurm**, “Building Action Principles for Extended MHD Models” (poster)
- International Sherwood Fusion Theory Meeting, March 24-26, 2014, San Diego, CA
 - A. Wurm**, I. Keramidias, M. Lingam, R. White, and P.J. Morrison, “Action principles for reduced fluid models” (poster)
- Conference on Introductory Physics for the Life Sciences, March 14-16, 2014, Arlington, VA
 - A. Wurm**, “Flipping an Introductory Physics Course – A first experience” (poster)
- APS - Division of Plasma Physics Meeting, November 11-15, 2013, Denver, CO
 - A. Wurm**, “Reconnection and transport in a two-frequency nontwist map model of a reversed magnetic shear tokamak” (poster)
- SIAM Conference on Applications of Dynamical Systems, May 19-23, 2013, Snowbird, UT
 - A. Wurm**, “Breakup of shearless tori in multi-harmonic area-preserving nontwist maps” (talk in minisymposium on Nontwist Hamiltonian Systems: Theory and Applications)
- International Sherwood Fusion Theory Meeting, April 15-17, 2013, Santa Fe, NM
 - A. Wurm** and P.J. Morrison, “Derivation of Hamiltonian magnetofluid models with gyroviscous-like contributions using a gyro-map” (poster)
- International Sherwood Fusion Theory Meeting, March 31 - April 3, 2012, Atlanta, GA
 - A. Wurm** and P.J. Morrison, “Lagrangian and Hamiltonian structure of magnetofluid models with gyroviscous-like contributions” (poster)
- APS - Division of Plasma Physics Meeting, November 14-18, 2011, Salt Lake City, UT
 - A. Wurm**, P.J. Morrison, and R.D. Hazeltine “Hamiltonian structure of magnetofluid models with gyroviscous-like contributions” (poster)
- SIAM Conference on Applications of Dynamical Systems, May 22-26, 2011, Snowbird, UT
 - A. Wurm**, “Transition to global transport in nontwist area-preserving maps: recent results” (talk in minisymposium on Nontwist Hamiltonian Systems: Theory and Applications)
- International Sherwood Fusion Theory Meeting, May 2-4, 2011, Austin, TX
 - A. Wurm**, P.J. Morrison, and R.D. Hazeltine, “Hamiltonian and Lagrangian structure of some gyroviscous magnetofluid models” (poster)

- 4th ITER International Summer School, May 30 - June 4, 2010, Austin, TX
 - A. Wurm**, “Nontwist area-preserving maps used as models for magnetic field lines in toroidal magnetic fusion devices” (poster)
- International Sherwood Fusion Theory Meeting, April 19-21, 2010, Seattle, WA
 - A. Wurm**, “Transport in area-preserving nontwist maps” (poster)
- APS - Division of Plasma Physics Meeting, November 2-6, 2009, Atlanta, GA
 - A. Wurm** and P.J. Morrison, “Action principle derivation of one-fluid models from two-fluid actions” (poster)
- SIAM Conference on Applications of Dynamical Systems, May 17-21, 2009, Snowbird, UT
 - A. Wurm**, “Breakup of shearless invariant tori in nontwist area-preserving maps: recent results” (talk in minisymposium on Nontwist Hamiltonian Systems: Theory and Applications)
- International Sherwood Fusion Theory Meeting, May 2-5, 2009, Denver, CO
 - A. Wurm** and P.J. Morrison, “Action principle derivation of one-fluid models from two-fluid actions” (poster)
- APS - Division of Plasma Physics Meeting, November 17-21, 2008, Dallas, TX
 - A. Wurm**, “Destruction of transport barriers in nontwist map models with and without spatial symmetry” (poster)
- International Sherwood Fusion Theory Meeting, March 31 - April 2, 2008, Boulder, CO
 - A. Wurm** and M. Martini, “Breakup of invariant tori in the extended standard nontwist map” (poster)
- APS - Division of Plasma Physics Meeting, November 12-16, 2007, Orlando, FL
 - A. Wurm**, “Destruction of transport barriers in a nontwist map model of a reversed magnetic shear tokamak with ergodic magnetic limiter” (poster)
- SIAM Conference on Applications of Dynamical Systems, May 28 - June 1, 2007, Snowbird, UT
 - A. Wurm**, “Renormalization and breakup of shearless invariant tori - recent results” (talk in minisymposium on Nontwist Systems: Theory and Applications)
 - A. Apte, **A. Wurm**, and P.J. Morrison “Break-up of non-symmetric shearless circles” (talk in minisymposium on Nontwist Systems: Theory and Applications)
- International Sherwood Fusion Theory Meeting, April 23-25, 2007, Annapolis, MD
 - A. Wurm** and D. del-Castillo-Negrete, “Chaotic transport and separatrix reconnection in an area-preserving self-consistent nontwist map model” (poster)
- APS - Division of Plasma Physics Meeting, October 29 - November 3, 2006, Philadelphia, PA
 - A. Wurm**, K. Fuchss, and P.J. Morrison, “Recent results of invariant torus breakup in nontwist maps” (poster)

- International Sherwood Fusion Theory Meeting, April 22-25, 2006, Dallas, TX
 - A. Wurm**, K. Fuchss, and P.J. Morrison, “On transport barriers in a nontwist map model of a reversed magnetic shear tokamak with ergodic magnetic limiter” (poster)
 - K. Fuchss, **A. Wurm**, and P.J. Morrison, “Breakup of shearless tori in the standard nontwist map” (poster)
- Plasma Physics Winter School on Magnetic Reconnection in Plasmas, January 9-14, 2006, UCLA, Los Angeles, CA
 - A. Wurm**, “Magnetic reconnection in reversed-shear tokamaks - a low-dimensional model” (talk)
- APS - Division of Plasma Physics Meeting, October 24-28, 2005, Denver, CO
 - A. Wurm**, K. Fuchss, A. Apte, and P.J. Morrison, “Recent studies of reconnection and transport in the standard nontwist map” (poster)
 - K. Fuchss, **A. Wurm**, A. Apte, and P.J. Morrison, “Breakup of central meanders and outer shearless tori in the standard nontwist map” (poster)
- SIAM Conference on Applications of Dynamical Systems, May 22-26, 2005, Snowbird, UT
 - A. Wurm**, “Nontwist Hamiltonian systems: An introduction” (review talk in minisymposium on Nontwist Hamiltonian Systems: Theory and Applications)
 - K. Fuchss, **A. Wurm**, A. Apte, and P.J. Morrison, “Reconnection/collision processes and meanders in the standard nontwist map” (poster)
- International Sherwood Fusion Theory Meeting, April 11-13, 2005, Stateline, NV
 - A. Wurm** and P.J. Morrison, “Hamiltonian and Lagrangian structure of some gyroviscous magnetofluid models” (poster)
 - K. Fuchss, A. Apte, **A. Wurm**, and P.J. Morrison, “Meander and non-standard reconnection/collision processes in the standard nontwist map” (poster)
- APS - Division of Plasma Physics Meeting, November 15-19, 2004, Savannah, GA
 - A. Wurm** and P.J. Morrison, “Variational derivation of gyrofluid models” (poster)
 - K. Fuchss, A. Apte, **A. Wurm**, and P.J. Morrison, “Reconnection and meander phenomena in the standard nontwist map” (poster)
- IAEA Fusion Energy Conference, November 1-6, 2004, Vilamoura, Portugal
 - W. Horton, H. Vernon Wong, J. Perez, J.-H. Kim, P.J. Morrison, **A. Wurm**, G.T. Hoang, C. Bourdelle, B.P. LeBlanc, “Electron thermal transport in Tore Supra and NSTX” (poster)
- 31st European Physical Society Conference on Plasma Physics, June 28 - July 2, 2004, Imperial College, London, UK
 - A. Wurm**, A. Apte, and P.J. Morrison, “Separatrix reconnection and meanders in the standard nontwist map” (poster)
- International Sherwood Fusion Theory Meeting, April 26-28, 2004, Missoula, MT
 - A. Wurm** and P.J. Morrison, “Action principle derivation of reduced fluid models” (poster)
 - A. Apte, **A. Wurm**, and P.J. Morrison, “On reconnection phenomena in the standard nontwist map” (poster)

- APS - Division of Plasma Physics Meeting, October 27-31, 2003, Albuquerque, NM
 - A. Wurm** and P.J. Morrison, “Action principle derivation of magnetofluid models” (poster)
 - A. Apte, **A. Wurm**, and P.J. Morrison, “On reconnection phenomena in the standard nontwist map” (poster)

- SIAM Conference on Applications of Dynamical Systems, May 27-31, 2003, Snowbird, UT
 - A. Wurm** and P.J. Morrison, “Action principle derivation of reduced fluid models” (talk)
 - A. Apte, **A. Wurm**, and P.J. Morrison, “Renormalization and destruction of tori in the standard nontwist map: recent results” (poster)

- International Sherwood Fusion Theory Meeting, April 28-30, 2003, Corpus Christi, TX
 - A. Wurm** and P.J. Morrison, “Action principle derivation of generalized magnetofluid models” (poster)

- APS - Division of Fluid Dynamics Meeting, November 24-26, 2002, Dallas, TX
 - A. Wurm** and P.J. Morrison, “Action principle derivation of reduced fluid models” (poster)

- APS -Division of Plasma Physics Meeting, November 11-15, 2002, Orlando, FL
 - A. Wurm**, A. Apte, and P.J. Morrison, “Renormalization and destruction of tori in the standard nontwist map: recent results” (poster)
 - A. Wurm** and P.J. Morrison, “Action principle derivation of reduced fluid models” (poster in mini-conference on Hamiltonian and Lagrangian methods)
 - A. Apte, **A. Wurm**, and P.J. Morrison, “Renormalization and destruction of tori in the standard nontwist map”, (poster in mini-conference on Hamiltonian and Lagrangian methods)

- TH-2002, International Conference on Theoretical Physics, July 22-27, 2002, Paris, France
 - A. Wurm**, A. Apte, and P.J. Morrison, “Renormalization and destruction of tori in the standard nontwist map: recent results” (poster)

- International Sherwood Fusion Theory Meeting, April 22-24, 2002, Rochester, NY
 - A. Apte, **A. Wurm**, and P.J. Morrison, “Renormalization and destruction of tori in the standard nontwist map” (poster)

- SIAM Conference on Applications of Dynamical Systems, May 20-24, 2001, Snowbird, UT
 - A. Wurm** and P.J. Morrison, “Renormalization and destruction of tori in the piecewise-linear standard nontwist map” (talk)

- XIII International Congress on Mathematical Physics, July 17-22, 2000, London, UK
 - M. Berg, P.Cartier, C. DeWitt-Morette, N. Krausz, and **A. Wurm**, “A program: Functional integrals as foundation and techniques for Minkowski quantum fields” (poster)