

**Curriculum Vitae<sup>1</sup>**  
**STEVEN HURDER**

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**EDUCATION**

- University of Illinois, Urbana-Champaign, Illinois
  - **Degree:** Ph.D. in Mathematics, May 1980
  - **Thesis Title:** *Dual Homotopy Invariants of G-Foliations*
  - **Thesis Advisor:** Franz W. Kamber
- Rice University, Houston, Texas
  - **Degree:** B.A. in Mathematics, May 1975

**UNIVERSITY POSITIONS HELD**

**Academic Appointments**

- Professor Emeritus, University of Illinois at Chicago, 2012–present
- Director of Undergraduate Studies, University of Illinois at Chicago, 2007–2011
- Director of Graduate Studies, University of Illinois at Chicago, 2004–2006
- Professor, University of Illinois at Chicago, 1990–2012
- Ulam Visiting Professor, University of Colorado, 1988–89
- Member, Institute for Advanced Study, Princeton, Fall 1987
- Associate Professor, University of Illinois at Chicago, 1986–89
- Assistant Professor, University of Illinois at Chicago, 1985–86
- Member, Mathematical Sciences Research Institute, Berkeley, 1983–85
- Instructor, Princeton University, 1981–83
- Member, Institute for Advanced Study, Princeton, 1980–81

**Visiting**

- Professor Invité, Université de Strassbourg, France, October/November 2012
- Professor Invité, Université de Nice, France, 2012
- Visitor, Centre de Recerca Matemàtica, Barcelona, Spain, April–May 2010
- Professor Invité, Institut Henri Poincaré, Paris, France, January–March 2007
- Invited Professor, Chuo University, Tokyo, Japan, September 2003
- Professor Invité, Université de Bourgogne, Dijon, France, March 1999
- Professor Invité, École Normale Supérieure, Paris, June 1998
- Professor Invité, Université de Toulouse, France, March 1996
- Visitor, Universidade de Santiago de Compostela, Spain, September 1994
- Invited Professor, University of Tokyo, Japan, April 1994
- Member, Institut Hautes Etudes Scientifique, Bures-sur-Yvette, February, 1994
- Professor Invité, Université de Lyon I, February 1994
- Visitor, Humbolt University, Berlin, June 1993
- Visitor, Universidade de Santiago de Compostela, Spain, May 1992
- Member, Mathematical Sciences Research Institute, Berkeley, April 1992
- Member, Institut Hautes Etudes Scientifique, Bures-sur-Yvette, June, 1987
- Visitor, Free University of Berlin, Germany, May 1987
- Visitor, Mathematical Institute, Oxford, Spring, 1987
- Professor Invité, Université de Lille, I, France, May 1986

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<sup>1</sup>October 20, 2024

## RESEARCH INTERESTS

- Differential topology & geometry of foliations
- Ergodic theory & dynamics of foliations
- Smooth ergodic theory & rigidity of group actions
- Spectral & index theory of foliated operators

## FELLOWSHIPS, AWARDS AND PROFESSIONAL RECOGNITION

- Institute for Advanced Study Fellowship, 1980-81
- Mathematical Sciences Research Institute Fellowship, 1983-85
- Alfred P. Sloan Foundation Fellowship, 1985-87
- Invited Hour Speaker, A.M.S. Regional Meeting, Kansas, October 1988.
- University Scholar, University of Illinois, 1991-94
- UIC ALTHE Grant for Curriculum Development, 1995-97
- UIC Teaching Recognition Program Award, 1997
- UIC Award for Excellence in Teaching, 2007
- UIC Luminary Award, 2010

## COMMUNITY AWARDS

- Illinois State Board of Education “Award of Excellence”, 1997-1998.  
(Highest award given by the State of Illinois for citizen contributions to the public schools.)

## GRANT SUPPORT

- Simons Foundation, Collaboration Grant for Mathematicians, 2014-2020.
- Principal Investigator, NSF Research Grants at UIC, 1984-86; 1986-89; 1989-1991; 1991-94; 1994-97; 1997-2000; 2004-07.
- Principal Investigator, NSF Grant on Geometric Rigidity, Boulder May 1989
- Principal Investigator, NSF Grant for Geometry Special Year at UIC, 1987-88
- NSF Summer Grant at Princeton University, 1981-83

## DEPARTMENT SERVICE

- Advisory Committee, 1992-1994; 2003-2012: Chair, 1992-1993; 2004-2006; 2007-2009
- Salary Committee, 1990-1991; 1992-1995, 2006, 2008, 2009
- Committee on Statistics, Fall 1989
- Classification Committee, 1990-1991
- Colloquium Chair, 1990-1991
  
- Director of Graduate Studies, 2004-2006
- Graduate Studies Committee, 1994-1996, 1998-2001, 2002-2004
- Doctor of Arts Subcommittee, 1994-2001; 2004-2007: Chair, 1998-2001, 2007-2011
- Graduate Student Teaching Award Committee, 2004, 2005, 2006, 2008, 2009
  
- Director of Undergraduate Studies, 2007-2011
- Chair Undergraduate Studies Committee, 2007-2011
- Math Club Advisor, 2007-2011
- Student Awards Committee, 2007-2011
- ComEd Scholarship Committee, 2008-2011
  
- Visitors Committee, 2003-2004
- Faculty Search Committee, 1994-1995, 1996-1998
- Tenure-Track Search Committee, 2007-2008
- RAP Search Committee, 2008-2010
- Computer Systems Administrator Search Committee, 2008
- Chair, Promotion Committee X, 2003-2004

- Faculty Peer Review Committee: Alex Furman, 2004, 2005, 2006
  - Faculty Peer Review Committee: Kevin Whyte, 2004, 2005, 2006
  - Faculty Peer Review Committee: Allison Castro-Superfine, 2007, 2008, 2009, 2011
  - Faculty Peer Review Committee: Laura DeMarco, 2007, 2008, 2010, 2011
  - Faculty Peer Review Committee: Michael Greenblatt, 2009
  - Faculty Peer Review Committee: Bonnie Saunders, 2012
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- Master Exam Committee, Real Analysis, 2003
  - Master Exam Committee, Real Analysis, 2004
  - Master Exam Committee, Real Analysis, 2006
  - Master Exam Committee, Topology, 1992
  - Master Exam Committee, Topology, 2000
  - Master Exam Committee, Topology, 2008
  - Master Exam Committee, Topology, 2010
  - Master Exam Committee, Topology, 2011
  - Master Exam Committee, Complex Analysis, 2012
- 
- Computer Facilities Committee, 1995-1998
  - Co-sponsored (with Hanson & Tier) funding proposal to Administration for an Undergraduate Computer Laboratory, December 1992, and revised February 1993.
  - Installed and maintained software on NeXT computer server (1991-93)
  - Developed and maintained MSCS web homepage, 1994-1999
  - Redesign department web site, December 2004

#### **UNIVERSITY SERVICE**

- LAS Executive Committee, 2006-2008
  - LAS Committee on Contingent Faculty, 2010-2011
  - Senate Academic Services Subcommittee on Computing and Communications, 1998-2001
  - TOEFL Standards Setting Panel, Graduate College, May 2005
  - Vice Provost's Meeting on International Teaching Assistants, December 2004
- 
- University Scholarship Award Committee, 2007-2011
  - Klassen Awards Committee, 2008
  - LAS Goldwater Selection Committee, 2010-2012
  - Commencement Marshall for MSCS, 2008, 2009, 2011

#### **PROFESSIONAL SERVICE**

- AMS Working Group on the Nominee Program of the AMS, 2009-2011
  - AMS Chair Committee to Select Hour Speakers, Central Section Regional Meetings, 1997
  - AMS Member, AMS-IMS-SIAM Joint Summer Research Conferences in the Mathematical Sciences, Selection Committee, 1998-2001
- 
- MAA Committee on the Participation of Women, 2007-2013
- 
- NSF Committee of Visitors, oversight of DMS Modern Analysis Program, May 1995
  - NSF Referee for numerous NSF Summer grant proposals, 1986-2010
  - NSF Summer Grants Review Panel, 1996, 1997, 1999, 2000, 2004, 2006
- 
- Referee for various research journals, 1982-2016
  - Reviewer for Math Reviews, 1980-2012
  - Wrote promotion letters to tenure-track and tenure (average 2 per year), 1992-2016
  - Wrote Letters of Recommendation (undergraduates, graduate students, faculty), 1990-2016

## THESIS SUPERVISED

- Andrew Rich: *A Lefschetz Theorem for Foliated Manifolds*, August 1989.
- Mohan Ramachandran: *Eta Invariants for Open Manifolds with Boundary*, August 1990.
- Arek Goetz: *Dynamics of Piecewise Isometries*, August 1996.
- Kristen (Wottreng) Schreck: *Computer Methods in Descriptive and Differential Geometry: Monge's Legacy*, August 1999.
- Wojciech Florek: *Foliations: A Probabilistic, Potential Theory Approach*, December 2003.
- Joseph Shive: *Conjugation Problems for Hirsch Foliations*, August 2005.
- Jessica Dyer: *Dynamics of Equicontinuous Group Actions on Cantor Sets*, December 2015.
- Daniel Ingebretson: *Hausdorff dimension of Kuperberg minimal sets*, August 2018.

## POSTDOCTORAL RESEARCH SUPERVISION

- Chris Connell, doctorate from University of Michigan, 1999  
NSF Postdoctoral Fellowship 1999-2001
- Hellen Colman, doctorate from University of Santiago de Compostela, 1998  
Fellowship from the Xunta Galicia, Spain 1999-2000
- Andrzej Biś, doctorate from Lodz University, Poland, 1995  
European Union Fellowship Commission Marie-Curie Fellowship, January 2005–2006
- Dirk Töben, doctorate from University of Köln, 2003  
Fellowship from the Schwerpunktprogramm SPP 1154 of the Deutsche Forschungsgemeinschaft, September 2005 to October 2006, September–October 2007, February–March 2008.
- Ana Rechtman, doctorate from École Normale Supérieure, Lyon, France, 2009  
CONACyT Postdoctoral Research Fellow, January-December 2010.

## UNDERGRADUATE RESEARCH PROJECTS DIRECTED

- Kevin Jones: *Galois Theory*, Spring 2000 (supported by VIGRE Grant)
- Chris Mason: *An Excursion in Arithmetic*, Spring 2002 (supported by VIGRE Grant)
- Tyler Bray: *Classification of Cantor Sets*, Spring 2003 (supported by VIGRE Grant)
- Kenneth Lauer: *The Dynamics of Fractals with Computer Examples*, Spring 2006
- Yelena Shagall: *Cantor's Continuum Hypothesis*, Summer 2006

## GRADUATE RESEARCH SEMINARS ORGANIZED

- “Analytic Torsion and Algebraic K-Theory”, Fall 1985.
- “Foliations and Physics”, Spring 1988.
- “KK-theory”, Spring 1990.
- “Exotic cohomology”, Fall 1990.
- “KK, AKK & Cyclic Cohomology Theories”, (with Mel Rothenberg) Spring 1991.
- “Graduate Student Geometry Seminar”, (with Sa’ar Herbronsky) Spring 1992.
- “Differential Geometry”, Summer 1992.
- “1-Dimensional Dynamical Systems”, Fall 1992.
- “Dynamics and Foliations”, Spring 1993.
- “Novikov Conjecture”, (with Mel Rothenberg) Spring 1993.
- “Hyperbolic Groups”, (with Howard Masur) Fall 1993.
- “Geometric Group Theory”, (with Howard Masur) Spring 1994.
- “Current Aspects of Geometry and Topology”, (with Howard Masur) Spring 1996.
- “Dynamical Systems and Laminations”, (with Laura DeMarco) Fall 2007.
- “Geometry, Topology, and Dynamical Systems” 1985–2012 (at various times with Laura DeMarco, Alex Furman, Howard Masur and Kevin Whyte.)
- “Topological and smooth dynamical systems”, (with Olga Lukina) Fall 2013 - Spring 2016.

## CONFERENCES ORGANIZED at UIC

- “Midwest Topology”, (with Brayton Grey) February 1987; April 1991; February 1993; February 1995; February 1996; February 2001; February 2002
- “Foliations Workshop”, March 1988.
- “Analysis and Geometry Workshop”, (with Howard Masur) 1988.
- “Midwest Index Theory”, May 1995.
- “Midwest Dynamical Systems”, (with Laura DeMarco & Alex Furman) November 2009.
- “Undergraduate Mathematics Symposium”, (principal organizer, David Dumas) October 2010, 2011 & 2012.
- “GroupoidFest 2018”, (with Olga Lukina) November 2018.
- “Midwest Dynamical Systems”, November 2019.

## CONFERENCES ORGANIZED ELSEWHERE

- “Analysis and Geometry”, special session at A.M.S. Regional Meeting, Kansas, October 1988 (with Norberto Salinas).
- “Cyclic Chern Character Workshop” at University of Colorado at Boulder, April 1989.
- “Geometric Rigidity”, Conference & Workshop at University of Colorado at Boulder, May 1989 (supported by N.S.F.).
- “Geometry and Dynamical Systems”, special session at A.M.S. Regional Meeting, Chicago, September 1998 (with Ralf Spatzier).
- “Rigidity in Dynamics, Geometry, and Group Theory”, special session at A.M.S. Regional Meeting, New York, April 2003 (with David Fisher and Kevin Whyte).
- “Foliations 2005”, International Conference on Foliation Theory and Related Fields, Uniwersytet Łódzki, Łódź, Poland (with Rémi Langevin, Takashi Tsuboi and Paweł Walczak).
- “Real Dynamics”, special session at Joint International Meeting of the American Mathematical Society (AMS) and the Polish Mathematical Society (PTM), Warsaw, Poland, August 2007, (with Paweł Walczak and Michał Misiurewicz).
- “Foliations and Dynamics”, special session at Joint International Meeting of the American Mathematical Society (AMS) and the Sociedad de Matemática de Chile, Puñón, Chile, December 2010, (with Andrés Navas).
- “Dynamical Systems”, satellite meeting of the British Mathematics Colloquium, Leicester, UK, April 2011, (Co-organizer of Special Session with Alex Clark and Olga Lukina).
- “Trends in Dynamics”, International Conference on Dynamical Systems, Evanston, IL, April 2011, (Bryna Kra and Amie Wilkinson, local organizers).
- “Foliations 2012”, International Conference on Topology, Geometry and Dynamics of foliations, Lodz, Poland, June 2012, (Maciej Czarnecki and Paweł Walczak, local organizers).
- “Workshop Geometry and Dynamics of Foliations”, ICMAT, Madrid, September 2014.

## INVITED TALKS

### Talks at International Conferences

- Chern Symposium, Berkeley, June 1980.
- Georgia Topology Conference, July 1980.
- Conference “Ergodic Theory and Geometry”, MSRI, Berkeley, May 1984.
- Conference “Operator Algebras and Geometry”, Berkeley, June 1985.
- Conference “Scattering Theory and Harmonic Analysis”, Stanford University, July 1985.
- Conference “Dynamical Systems and Smooth Ergodic Theory”, Univ. of Maryland, March 1987.
- Conference “Cyclic Cohomology and Its Applications”, Mathematical Institute, Warwick, U.K., April 1987.
- Conference, U.S.-U.K. Summer Workshop, New Hampshire, July 1987.
- A.M.S. Summer Institute “Analytic Invariants of Elliptic Operators”, Bowdoin, Maine, July 1988.
- Conference “Foliations”, Univ. of Maryland, College Park, September 1989.
- Workshop “Applications of Algebraic Topology to Geometry and Analysis”, MSRI, Berkeley, January 1990.
- Conference “Ergodic Theory”, Göttingen, July 1990.
- International Colloquium “Dynamical Systems”, Lyon, July 1990.
- Workshop “Topology”, Rio de Janeiro, January 1992.
- Conference “Lie groups and geometric rigidity”, MSRI, Berkeley, April 1992.
- Conference “Cyclic cohomology and geometry”, Oxford University, July 1992
- Workshop “Index theory and Novikov conjectures”, Oberwolfach, Germany, September 1993.
- Symposium “Geometric Study of Foliations, Tokyo, November 1993.
- Workshop “Ergodic Theory of Abelian Actions”, Warwick, June 1994.
- Workshop “Spectral theory of singular spaces”, Oberwolfach, Germany, July 1994.
- Symposium “Differential Geometry Analysis and Geometry in Foliated Manifolds”, Santiago de Compostela, Spain, July 1994.

- Symposium “Foliations: Geometry and Dynamics”, Banach Center, Warsaw, May 1995.
- Symposium “Ergodic Theory and Dynamical Systems”, Banach Center, Warsaw, June, 1995.
- Conference “Workshop on Hyperbolic Dynamical Systems”, Warwick, England, July 10-20, 1995.
- Symposium “Index Theory, Coarse Geometry and Topology of Manifolds”, Boulder, August 15-19, 1995.
- Workshop “Dynamical Systems and Related Topics”, Penn. State University, October 18-20, 1995
- Conference “Index Theory in Honor of Paul Baum”, University of Colorado, Boulder, July 15-19, 1996.
- Conference “Ergodic Theory, Geometry and Arithmetic”, Erwin Schrödinger Institute, Vienna, February 3-14, 1997.
- Conference “Geometry and Dynamics of Foliations and Laminations”, Stony Brook, May 1998.
- Conference “Dirac operators, index theorems and numerical invariants of manifolds”, Usedom, Germany, March 7-13, 1999.
- Conference “Workshop on the Baum-Connes conjecture”, E.T.H., Zürich, May 2-5, 1999.
- Conference “Groupoids in Physics and Geometry”, Boulder, Colorado, June 20-25, 1999.
- Conference “Workshop on Ergodic theory of  $Z^d$ -actions”, Mathematical Institute of the University of Warwick, April 3-7, 2000.
- Conference “Foliations: Geometry and Dynamics”, Banach Center, Warsaw, Poland, May 29-June 9, 2000.
- Conference “Noncommutative Geometry”, Mount Holyoke College, Massachusetts, June 18-29, 2000.
- Conference “Lusternick-Schnirelmann Category in the New Millennium”, Mount Holyoke College, Massachusetts, July 29-August 2, 2001.
- Conference “Geometry and Foliations 2003”, Kyoto, Japan, September 10-19, 2003.
- Conference “BGamma School”, Chuo University, Tokyo, Japan, September 29 to October 2, 2003.
- Conference “Recent Progress in Dynamics”, MSRI, Berkeley, September 27, 2004 to October 1, 2004.
- Conference “Foliations 2005”, Lodz, Poland, June 14-23, 2005.
- Workshop “Global Dynamics Beyond Uniform Hyperbolicity”, Northwestern University, Evanston, May 17-22, 2006
- Workshop “Ergodic Theory and Dynamical Systems”, Szklarska Poreba, Poland, June 18 - 24, 2006
- Workshop “Groupoids in operator algebras and noncommutative geometry”, Institut Henri Poincaré, Paris, France, February 26 - March 2, 2007.
- Conference “Foliations, Topology and Geometry in Rio”, PUC-Rio, Rio de Janeiro, Brazil, August 6-10, 2007.
- Conference “Geometry and Topology”, Jagiellonian University, Krakow, Poland, June 30-July 5, 2008.
- Conference “VIII International Colloquium of Differential Topology”, Santiago de Compostela, Spain, July 2008.
- Workshop “Solenoids”, Delft, Netherlands, August 2009.
- Conference “Gfest 2009”, Boulder, CO, October 2009.
- Workshop “Geometry of Foliations”, CRM Barcelona, April 2010.
- Minicourse “Dynamics of Foliations”, CRM Barcelona, May 2010.
- Conference “Geometry and Topology of Foliations”, CRM Barcelona, July 2010.
- Invited 45 minute talk, Joint Meeting AMS-SMC, Pucon, Chile, December 2010.
- Workshop “ANR SubTile”, Université Claude Bernard Lyon 1, Lyon, France, March 2011.
- Colloquium, “British Mathematics Colloquium”, Leicester, UK, April 2011
- Conference “11th Nagoya International Mathematics Conference”, Nagoya, Japan, March 2012.
- Conference “Sixth European Conference on Mathematics”, Krakow, Poland, July 2012.
- Conference “International Conference Beyond Uniform Hyperbolicity”, Bedlewo, Poland, June 2013.
- Conference “Geometry and Foliations 2013”, Tokyo, Japan, September 2013.
- Minicourse at Conference “29th Summer Conference on TOPOLOGY and its APPLICATIONS”, Staten Island, NY, July 2014.
- Conference “Automatic Sequences, Aperiodic Order, Number Theory”, Delft, The Netherlands, October 2015.
- Conference “50th Spring Topology and Dynamical Systems Conference”, Waco, TX, March 2016.
- Conference “FOLIATIONS 2016”, Bedlewo, Poland, July 2016.
- Conference “31st Summer Conference on Topology and its Applications”, Leicester, England, August 2016.
- Conference “Mathematical Congress of Americas MCA2017”, Montreal, Canada, July 2017.
- Conference “Tiling and Recurrence”, CIRM Luminy, Marseille, France, December 2017.
- Conference “52nd Spring Topology and Dynamical Systems Conference”, Auburn University, March 2018.
- Conference “Arithmetic and Analysis”, Münster, Germany, April 2018.
- Conference “Systmes dynamiques et systmes complexes”, Nice, France, June 2018.
- Conference “New trends on Foliated and Stratified Spaces”, Santiago do Compostela, Spain, June 2018.
- Conference “2020 Vision for Dynamics”, Bedlewo, Poland, August 2019.
- Conference “36th Summer Topology Conference”, Vienna, Austria, July 2022.
- Conference “Geometry & Topology”, Rio de Janeiro, Brazil, November 2022.
- Conference “Second Australia-China-Japan-Singapore-U.S. Index Theory”, Tokyo, Japan, June 2023.

## Talks at AMS Special Sessions

- “Dual homotopy invariants of G-foliations”, Bloomington, IN, April 1980.
- “Ergodic theory and the Weil measure”, East Lansing, MI, November 12 1982.
- “Spectral invariants and the geometry of foliations”, New Orleans, LA, January 1986.
- “Renormalized Chern character for foliations”, Indianapolis, IN, April 1986.
- “Transverse Index and KK-theory for Riemannian Foliations”, San Francisco, CA, January 1991.
- “Exotic index theory and the Baum-Connes Conjecture for foliations”, Springfield, MO, March 1992.
- “Pure point spectrum of foliation operators”, Los Angeles, CA, November 8, 1992.
- “Exotic index and almost flat spectrum”, College Station, TX, October 22, 1993.
- “Exotic theory and the Novikov Conjecture”, Cincinnati, OH, January 14, 1994.
- “Index Theory and Non-commutative Geometry”, San Diego, CA, January 8, 1997.
- “Geometric and Symbolic Dynamical Systems”, San Francisco, CA, October 22-23, 2000.
- “Category of Riemannian Foliations”, Seville, Spain, June 18-21, 2003.
- “Local entropy of foliations and groupoids”, San Antonio, TX, January 12-15, 2006.
- “Markov minimal sets of foliations”, San Francisco, CA, April 29-30, 2006.
- “Solenoidal minimal sets in foliations”, Chicago, IL, October 5-6, 2007.
- “Hyperbolic attractors in foliations”, San Diego, CA, January 6, 2008.
- “Dynamics of Group Actions and their Minimal Sets”, Pucon, Chile, December 18, 2010.
- “Lipshitz matchbox manifolds”, St. Louis, MO, October 19, 2013.
- “Entropy for Y-like matchbox manifolds”, San Antonio, TX, January 12, 2015
- “The Semicentennial Anniversary of University of Illinois at Chicago”, Chicago, IL, October 3, 2015
- “Entropy of the Kuperberg pseudogroup”, Memphis, TN, October 18, 2015
- “Foliation index theory for weak solenoids”, Honolulu, HI, March 24, 2019
- “Classification of weak solenoids”, Denver, CO, January 18, 2020

## Talks at Regional Meetings

- “Transverse cyclic Chern characters”, Midwest Topology Conf., Univ. of Chicago, April 1986.
- “The geometry of the foliation index theorem”, invited hour address, A.M.S. Regional Meeting, Lawrence, Kansas, October 1988.
- “Spectral theory of foliation operators”, Conf. on Foliations, College Park, Maryland, September 1989.
- “Topology and spectral theory”, Midwest Topology Conf., Northwestern Univ., March 1990.
- “Rigidity for Anosov actions of higher rank lattices”, Conf. on Geometric Rigidity and Manifolds with Non-positive Curvature, Northwestern Univ., March 1990.
- “Rigidity of  $SL(n, \mathbb{Z})$  - action on tori”, Geometry Festival, Eastern Illinois Univ., November 1990.
- “Rigidity for actions of higher rank lattice”, Conference on Geometric Rigidity and Hyperbolic Dynamics, Penn. State University, March 1991.
- “Exotic theory for foliations”, CBMS Meeting on K-Homology and Index Theory, Boulder, CO, August 1991.
- “Exotic cohomology for foliations”, Ohio State Topology Festival, Columbus, November 1991.
- “Dynamical Systems and Related Topics”, Penn. State University, October 18-20, 1995.
- “Midwest Index Theory Conference” UIUC, April 19, 1997.
- “Workshop on Dynamical Systems and Related Topics”, Penn State University, October 26-29, 2000.
- “Larry Fest: Conference in Honor of Larry Conlon”, Washington University St. Louis, April 6-7, 2001.
- Special Session, “General Topology and its Applications”, New York, NY, July 2011
- Plenary Address, “General Topology and its Applications”, New York, NY, July 2011
- “Arboreal Dynamics”, Midwest Topology Conf., Northwestern Univ., November 2021.

## Colloquia & Seminars

- U.I.U.C., Differential Geometry Seminar, “Homotopy invariants of a differentiable map”, February 20, 1979.
- U.I.U.C., Differential Geometry Seminar, “ ‘Minimal models’ meets ‘foliations’, I”, April 10, 1979.
- U.I.U.C., Differential Geometry Seminar, “ ‘Minimal models’ meets ‘foliations’, II”, April 17, 1979.
- U.I.U.C., Differential Topology Seminar, “Non-triviality of the Riemannian secondary characteristic classes”, October 9, 1979.
- U.I.U.C., Differential Topology Seminar, “What is  $\pi_{1,000,000}(BR\Gamma^q)$ ?”, October 16, 1979.
- U.I.U.C., Differential Topology Seminar, “How to slice a  $\pi$  : Homotopy Koszul resolutions”, October 23, 1979.
- U.I.U.C., Differential Topology Seminar, “A resolution of the homotopy groups of a space”, October 30, 1979.
- U.I.U.C., Differential Topology Seminar, “Detecting free Lie algebras with forms”, November 6, 1979.
- U.I.U.C., Differential Topology Seminar, “Characteristic classes of flat bundles”, February 19, 1980.
- I.A.S., Princeton, Members Seminar, “Deformations of foliations”, January 26, 1981.

- Rutgers University, New Brunswick, Topology Seminar, “Deformations of foliations”, February 24, 1981.
- Yale University, New Haven, Topology Seminar, “Homotopy invariants of foliations”, April 8, 1981.
- I.A.S., Princeton, Topology Seminar, “Exotic characteristic classes for measured foliations”, December 3, 1981.
- Yale Univ., Topology Seminar, “Weil operators and their applications”, June 3, 1982.
- S.U.N.Y., Stony Brook, Colloquium, “Foliation invariants, Weil measures and group actions”, September 29 1982.
- University of Maryland, College Park, Colloquium, “Weil measures and the geometry of foliations”, February 15, 1983.
- University of Pennsylvania, Philadelphia, Colloquium, “Weil measures and the geometry of foliations”, February 17, 1983.
- University of Georgia, Athens, Colloquium, “Weil measures of a foliated manifold”, February 28, 1983.
- I.A.S., Princeton, Topology Seminar, “Weil measures of a foliated manifold”, March 31, 1983.
- U.C.-Berkeley, “The geometry of the Godbillon-Vey classes”, April 1984.
- Washington Univ., Colloquium, “The Sullivan conjecture and ergodic theory of foliations”, October 1984.
- California Institute of Technology, Colloquium, “Secondary invariants and ergodic theory”, March 1985.
- U.C.L.A., Ergodic Theory Seminar, “Cocycles and non-commutative geometry I, II”, March 1985.
- Univ. of North Carolina, Colloquium, “Characteristic classes for dynamical systems”, May 1985.
- M.S.R.I., Differential Geometry Seminar, “Characteristic classes for geodesic flows”, May 1985.
- M.S.R.I., Connes’ Seminar, “The eta-invariant and cyclic cocycles,” May 1985.
- Univ. of Michigan, Topology Seminar, “Eta-invariants and foliation algebras”, September 1985.
- Purdue Univ., Colloquium, “Eta-invariants and foliation algebras”, October 1985.
- Northwestern Univ., Dynamics Seminar, “Symmetry breaking in codimension-one Anosov systems, November 1985.
- Pennsylvania State Univ., Colloquium, “Eta invariants, index theory and foliations”, December 1985.
- Univ. de Lille, Geometry Seminar, “Characteristic classes for dynamical systems”, May 1986 (2 hr. invited talk).
- Univ. de Genève, Geometry Seminar, “Characteristic classes for dynamical systems”, May 1986.
- Mathematical Institute, Oxford, Geometry Seminar, “Secondary invariants and renormalized cyclic cocycles”, June 1986.
- Univ. of Colorado, Colloquium, “Spectral geometry of group actions”, September 1986.
- Univ. of Chicago, Analysis and Physics Seminar, “Spectral invariants for foliations”, October 1986.
- U.I.U.C., “Index theorems and regulators in algebraic K-theory”, November 1986.
- Cal. Inst. Tech, Colloquium, “Analytic invariants for algebraic K-theory”, January 1987.
- Univ. of Notre Dame, Colloquium, “Analytic invariants for algebraic K-theory”, February 1987.
- S.U.N.Y. at Stony Brook, Geometry Seminar, “Analytic invariants for foliations”, March 1987.
- Mathematical Institute, Oxford, Colloquium, “Horocycles and rigidity for surfaces”, April 1987.
- Mathematical Institute, Oxford, Geometry Seminar: (4 talks), “Analysis on foliations”, April-May 1987.
- Freie Universität, Berlin, Geometry Seminar: (4 talks, 2hrs. each), “Homotopy theory of foliations”, June 1987.
- New York Univ. Graduate Center, Sullivan’s Seminar, “Ergodic theory of foliations and a theorem of Sacksteder”, November 1987.
- Univ. of Maryland, Geometry Seminar, “Ergodic theory of smooth actions of groups and foliations”, October 1987.
- New York Univ., Graduate Center, “Ergodic theory of foliations and a theorem of Sacksteder”, November 1987.
- New York Univ., Colloquium, “Fock space representations and rigidity of surfaces”, December 1987.
- S.U.N.Y., Stony Brook, Colloquium, “Toeplitz operators and the rigidity of surfaces”, March 1988.
- Univ. of Southern California, Seminar, “Analysis of foliation Dirac operators”, March 1989.
- California Institute of Technology, Seminar, “Fock space representations and rigidity”, March 1989.
- Univ. of Maryland, Dynamics Seminar, “Rigidity for discrete toral automorphisms”, September 1989.
- Univ. of Colorado, Dynamical Systems Seminar, “Rigidity for  $SL(n, \mathbb{Z})$  acting on  $T^n$ ”, October 1989.
- Northwestern Univ., Dynamics Seminar, “Deformation rigidity for Anosov actions of higher rank lattices”, January 1990.
- S.U.N.Y., Buffalo, Colloquium, “The rigidity of  $SL(n, \mathbb{Z})$  acting on the n-torus”, February 1990.
- Univ. of Chicago, Lie Groups seminar, “Rigidity of actions of lattices”, April 1991.
- S.U.N.Y. Stony Brook, Colloquium, “Rigidity for the integer matrices”, September 1991.
- S.U.N.Y. Stony Brook, Analysis seminar, “Non-commutative isoperimetric theory and spectral density”, September 1991.
- U.I.U.C., Colloquium, “Rigidity for the integer matrices, October 1991.
- Univ. of North Carolina, Chapel Hill, Colloquium, “New results in the rigidity theory of lattice actions”, March 1992.



- Univ. of Michigan, Geometry/Topology Seminar, “Affine actions without fixed-points”, November 16, 1992
- L’Ecole Polytechnique - Paris, “New results in the rigidity theory of lattice actions”, May 20, 1992.
- University do Santiago do Compostela, Colloquium, “Exotic index theory for foliations”, May 15, 1992.
- Humboldt University, Colloquium, “Almost flat spectrum and coarse geometry”, June 9, 1993.
- Humboldt University, Seminar, “Exotic index theory and Novikov Conjecture”, June 11, 1993.
- Minicourse “Coarse Geometry of Foliations”, 3 lectures, Conference on Geometric Study of Foliations, Tokyo, November 1993.
- Université Lyon I, Geometry Seminar, “Course geometry of foliations”, February 11, 1994.
- École Normale Sup. Lyon, Geometry Seminar, “Entropy for leaves of foliations”, February 16, 1994.
- Institut Fourier, Grenoble, Colloquium, “Coarse geometry and the Novikov Conjecture”, February 17, 1994.
- Université Lyon I, Geometry Seminar, “Baum-Connes Conjecture and coarse geometry”, February 18, 1994.
- University of Buffalo, SUNY, Colloquium, “Fine invariants from coarse families”, March 3, 1994.
- University of Buffalo, SUNY, Colloquium, “Spectral entropy (or, dance of the skeleta)”, March 4, 1994.
- University de Bourgogne, Colloquium, “Dynamics and the Godbillon-Vey Classes”, May 19, 1999.
- University of Sheffield, England, Colloquium, “Foliations: at the Crossroads of Geometry and Topology”, November 22, 2000.
- University of Chicago, Geometry Seminar, “Alternatives in 1-dimensional dynamics”, April 19, 2001.
- Facultad de Ingeniería Universidad de la República, Montevideo, Geometry/Dynamics seminar, “Dynamics of actions on the circle”, December 14, 2001.
- Northwestern University, Dynamical Systems Seminar, “Hyperbolic minimal sets”, November 15, 2005.
- University of North Texas, Colloquium, “Foliations - a playground for topology and dynamical systems”, April 14, 2006.
- University of Lodz, Poland, Geometry Seminar, “Solenoidal minimal sets for foliations”, June 14, 2006.
- Minicourse “Dynamics and Analysis of Foliations”, six 2-hour lectures in mini-course, part of trimester program on “Groupoids and stacks in physics and geometry” at Institut Henri Poincaré, Paris, France, January–February 2007.
- University of Cologne, Germany, Geometry Seminar, “Local entropy and the Godbillon-Vey Class”, March 13, 2007.
- Utrecht University, Colloquium, “Dynamics of Foliations: classifying foliations by their behavior”, May 10, 2007.
- University of Chicago, Dynamics Seminar, “Classifying foliation dynamics”, November 7, 2007.
- Northwestern University, Dynamical Systems Seminar, “Classifying Foliation Dynamics”, February 2008.
- University of Leicester, Colloquium, “Foliations, Fractals and Cohomology”, February 19, 2009.
- SUNY Buffalo, Colloquium, “Classifying Foliations”, March 26, 2009.
- Minicourse “Dynamics of Foliations”, five 1-hour lectures in mini-course, program on “Foliations: Dynamics-Geometry-Topology”, Centre de Recerca Matemàtica, Barcelona, Spain, May 3–7, 2010.
- Brigham Young University, “Dynamics and matchbox manifolds”, November 14, 2011.
- Université Nice-Sophia Antipolis, France, Dynamical Systems and Geometry Seminar, “Dynamical Invariants of Foliations”, April 10, 2012.
- Université Strassbourg, France, Colloquium, “Dynamical Invariants of Foliations”, October 19, 2012.
- Université Strassbourg, France, “LS category of foliations and Følner properties”, October 22, 2012.
- Université Metz, France, “Index Theory for Foliation Minimal Sets”, October 25, 2012.
- University of Chicago, Dynamics Seminar, “The dynamics of Kuperberg flows”, January 28, 2013.
- Penn. State University, Dynamics Seminar, “The dynamics of Kuperberg flows”, April 24, 2013.
- University of Illinois at Urbana-Champaign, Colloquium, “Foliations - Thurston Zebras to Cantor Geometries”, October 17, 2013.
- Université Strassbourg, France, “Shape and dynamics”, March 31, 2014.
- Depaul University, Colloquium, Chicago, IL “The dynamics of flows in 3-dimensions”, April 8, 2016.
- UNAM, Colloquium, Mexico City, Mexico “The dynamics of flows in 3-dimensions”, April 19, 2016.
- UNAM, Mexico City, Seminar, Mexico “Homeomorphisms of solenoids”, April 21, 2016.
- University of Iowa, Iowa City, IA, Seminar, “Stable Cantor dynamics”, February 18, 2020.
- IUPUI, Indianapolis, Seminar, “Geometry and Dynamics of Solenoids”, October 19, 2020.
- University of Illinois at Chicago, Chicago, IL, Seminar, “Cantor dynamics of renormalizable groups”, March 9, 2020.
- University of Vienna, Vienna, Austria, IL, Seminar, “Cantor dynamics of renormalizable groups”, June 4, 2020.
- University of Tokyo, Tokyo, Japan, Seminar, “Cantor dynamics of renormalizable groups”, June 23, 2020.
- Pontifica University, Rio de Janeiro, Brazil, Resistência Dinâmica Seminar, “The dynamical classification of arboreal actions”, March 12, 2021.
- University of Wisconsin Milwaukee, Milwaukee, WI, Topology Seminar, “Homeomorphisms of solenoidal manifolds”, April 17, 2023.

- Purdue University, West Lafayette, IN, Group Theory Working Seminar, “Applications of the Contraction Mapping Theorem: Circle actions”, April 15, 2024.
- Purdue University, West Lafayette, IN, Group Theory Working Seminar, “Applications of the Contraction Mapping Theorem: Toral actions”, April 16, 2024.
- Purdue University, West Lafayette, IN, Group Theory Working Seminar, “Applications of the Contraction Mapping Theorem: Actions on Cantor sets”, April 17, 2024.

Additionally, approximately 75 talks were given in the seminar “Geometry, Topology and Dynamical Systems” at U.I.C. during the period 1985-2016.

## PUBLICATIONS

- (1) Dual homotopy invariants of  $G$ -foliations. *Topology*, 20(4):365–387, 1981.
- (2) (with F. W. Kamber) Homotopy invariants of foliations. In *Topology Symposium, Siegen 1979 (Proc. Sympos., Univ. Siegen, Siegen, 1979)*, volume 788 of *Lecture Notes in Math.*, pages 49–61. Springer, Berlin, 1980.
- (3) On the homotopy and cohomology of the classifying space of Riemannian foliations. *Proc. Amer. Math. Soc.*, 81(3):485–489, 1981.
- (4) On the secondary classes of foliations with trivial normal bundles. *Comment. Math. Helv.*, 56(2):307–326, 1981.
- (5) Exotic classes for measured foliations. *Bull. Amer. Math. Soc. (N.S.)*, 7(2):389–391, 1982.
- (6) Independent rigid secondary classes for holomorphic foliations. *Invent. Math.*, 66(2):313–323, 1982.
- (7) Global invariants for measured foliations. *Trans. Amer. Math. Soc.*, 280(1):367–391, 1983.
- (8) Vanishing of secondary classes for compact foliations. *J. London Math. Soc. (2)*, 28(1):175–183, 1983.
- (9) (with A. Katok) Secondary classes and transverse measure theory of a foliation. *Bull. Amer. Math. Soc. (N.S.)*, 11(2):347–350, 1984.
- (10) (with J. Heitsch) Secondary classes, Weil measures and the geometry of foliations. *J. Differential Geom.*, 20(2):291–309, 1984.
- (11) The classifying space of smooth foliations. *Illinois J. Math.*, 29(1):108–133, 1985.
- (12) Foliation dynamics and leaf invariants. *Comment. Math. Helv.*, 60(2):319–335, 1985.
- (13) Problems on rigidity of group actions and cocycles. *Ergodic Theory Dynam. Systems*, 5(3):473–484, 1985.
- (14) The Godbillon measure of amenable foliations. *J. Differential Geom.*, 23(3):347–365, 1986.
- (15) (with Dorte Olesen, Iain Raeburn, and Jonathan Rosenberg) The Connes spectrum for actions of abelian groups on continuous-trace algebras. *Ergodic Theory Dynam. Systems*, 6(4):541–560, 1986.
- (16) (with A. Katok) Ergodic theory and Weil measures for foliations. *Ann. of Math. (2)*, 126(2):221–275, 1987.
- (17) (Appendix to book by Calvin C. Moore and Claude Schochet) *Global analysis on foliated spaces, Mathematical Sciences Research Institute Publications*, Vol. 9. Springer-Verlag, New York, 1988. Revised 2nd ed., 2006. With appendices by S. Hurder, Moore, Schochet and Robert J. Zimmer.
- (18) (with Ronald G. Douglas and Jerome Kaminker) Toeplitz operators and the eta invariant: the case of  $S^1$ . In *Index theory of elliptic operators, foliations, and operator algebras (New Orleans, LA/Indianapolis, IN, 1986)*, *Contemp. Math.*, Vol. 70, Amer. Math. Soc., Providence, RI, 1988, pages 11–41.
- (19) Ergodic theory of foliations and a theorem of Sacksteder. In *Dynamical systems (College Park, MD, 1986–87)*, *Lecture Notes in Math.*, Vol. 1342, Springer, Berlin, 1988, pages 291–328.
- (20) (with R. G. Douglas and J. Kaminker) Eta invariants and von Neumann algebras. *Bull. Amer. Math. Soc. (N.S.)*, 21(1):83–87, 1989.
- (21) Eta invariants and the odd index theorem for coverings. In *Geometric and topological invariants of elliptic operators (Brunswick, ME, 1988)*, *Contemp. Math.*, Vol. 105, Amer. Math. Soc., Providence, RI, 1990, pages 47–82.
- (22) (with D. Lehmann) Homotopy characteristic classes of foliations. *Illinois J. Math.*, 34(3):628–655, 1990.
- (23) (with A. Katok) Differentiability, rigidity and Godbillon-Vey classes for Anosov flows. *Inst. Hautes Études Sci. Publ. Math.*, (72):5–61, 1990.

- (24) Deformation rigidity for subgroups of  $SL(n, \mathbf{Z})$  acting on the  $n$ -torus. *Bull. Amer. Math. Soc. (N.S.)*, 23(1):107–113, 1990.
- (25) (with R. G. Douglas and J. Kaminker) Cyclic cocycles, renormalization and eta-invariants. *Invent. Math.*, 103(1):101–179, 1991.
- (26) (with R. G. Douglas and J. Kaminker) The longitudinal cocycle and the index of Toeplitz operators. *J. Funct. Anal.*, 101(1):120–144, 1991.
- (27) Exceptional minimal sets of  $C^{1+\alpha}$ -group actions on the circle. *Ergodic Theory Dynam. Systems*, 11(3):455–467, 1991.
- (28) (with Y. Mitsumatsu) The intersection product of transverse invariant measures. *Indiana Univ. Math. J.*, 40(4):1169–1183, 1991.
- (29) Rigidity for Anosov actions of higher rank lattices. *Ann. of Math. (2)*, 135(2):361–410, 1992.
- (30) Topology of covers and the spectral theory of geometric operators. In *Index theory and operator algebras (Boulder, CO, 1991)*, *Contemp. Math.*, Vol. 148, Amer. Math. Soc., Providence, RI, 1993, pages 87–119.
- (31) A product theorem for  $\Omega B\Gamma_G$ . *Topology Appl.*, 50(1):81–86, 1993.
- (32) Affine Anosov actions. *Michigan Math. J.*, 40(3):561–575, 1993.
- (33) (with Yoshihiko Mitsumatsu) The Transverse Euler Class for Amenable Foliations. preprint, 1993
- (34) Exotic Theory for Foliated Spaces. preprint, 1993
- (35) (with Jesús Alvarez Lopez) Pure-point spectrum for foliation geometric operators. preprint, 1994
- (36) Topological rigidity of strong stable foliations for Cartan actions. *Ergodic Theory Dynam. Systems*, 14(1):151–167, 1994.
- (37) Paul A. Schweitzer, Steven Hurder, Nathan Moreira dos Santos, and José Luis Arraut, editors. *Differential topology, foliations, and group actions*, *Contemp. Math.*, Vol. 161, Amer. Math. Soc., Providence, RI, 1994.
- (38) (with Yoshihiko Mitsumatsu) Transverse Euler classes of foliations on non-atomic foliation cycles. In *Differential topology, foliations, and group actions (Rio de Janeiro, 1992)*, *Contemp. Math.*, Vol. 161, Amer. Math. Soc., Providence, RI, 1994, pages 29–39.
- (39) A survey of rigidity theory for Anosov actions. In *Differential topology, foliations, and group actions (Rio de Janeiro, 1992)*, *Contemp. Math.*, Vol. 161, Amer. Math. Soc., Providence, RI, 1994, pages 143–173.
- (40) Coarse geometry of foliations. In *Geometric study of foliations (Tokyo, 1993)*, pages 35–96. World Scientific Press, River Edge, NJ, 1994.
- (41) Infinitesimal rigidity for hyperbolic actions. *J. Differential Geom.*, 41(3):515–527, 1995.
- (42) Exotic index theory and the Novikov conjecture. In *Novikov conjectures, index theorems and rigidity, Vol. 2 (Oberwolfach, 1993)*, *London Math. Soc. Lecture Note Ser.*, volume 227, Cambridge Univ. Press, Cambridge, 1995, pages 255–276.
- (43) (with Oliver Attie) Manifolds which cannot be leaves of foliations. *Topology*, 35(2):335–353, 1996.
- (44) Dynamics and the Godbillon-Vey class: a History and Survey. In *Foliations: Geometry and Dynamics (Warsaw, 2000)*, World Scientific Press, River Edge, NJ, 2002, pages 29–60.
- (45) (with James L. Heitsch) Coarse cohomology for families. *Illinois J. Math.*, 45(2):323–360, 2001.
- (46) (with Hellen Colman) Tangential LS category and cohomology for foliations. In *Lusternik–Schnirelmann Category and Related Topics*, *Contemp. Math.*, Vol. 316, Amer. Math. Soc., Providence, RI, 2002, pages 41–64.
- (47) (with Hellen Colman) LS-category of compact Hausdorff foliations. *Trans. Amer. Math. Soc.* 356 (2004), no. 1, 1463–1487.
- (48) Dynamics of expansive group actions on the circle. *Geom. Ded.*, accepted 2005.
- (49) Exceptional minimal sets and the Godbillon-Vey class. *Annales Inst. Fourier*, accepted 2005.
- (50) Category and compact leaves *Topology and Its Applications*, 153 (2006), 2135–2154.
- (51) (with Andrzej Biś and Joseph Shive) Hirsch foliations in codimension greater than one. In *FOLIATIONS 2005*, World Scientific Press, River Edge, NJ, 2006, pages 71–108.

- (52) Foliations Lodz 2005 Problem Set. In *FOLIATIONS 2005*, World Scientific Press, River Edge, NJ, 2006, pages 441–475.
- (53) (with Rémi Langevin , Takashi Tsuboi , Pawel Walczak, editors) *FOLIATIONS 2005*, World Scientific Press, River Edge, NJ, 2006.
- (54) *The  $\bar{\partial}$ -Operator* (revised). Appendix A in *Global Analysis on Foliated Spaces*, 2nd ed. (revised), by C.C. Moore and C. Schochet, Cambridge University Press , 2006, 225–248.
- (55) (with Dirk Töben) Transverse LS-category for Riemannian foliations. *Trans. Amer. Math. Soc.*, 261 (2009), pages 5647–5680.
- (56) (with Dirk Töben) The equivariant LS-category of polar actions. *Topology Apps.*, 156 (2009), 500–514.
- (57) Characteristic classes for Riemannian foliations. In *DIFFERENTIAL GEOMETRY. Proceedings VIII International Colloquium, Santiago de Compostela*, World Scientific Press, River Edge, NJ, 2009, pages 11–35.
- (58) Classifying foliations. In *Foliations, geometry, and topology*, editors N. Saldanha, L. Conlon, P. Walczak, R. Langevin and T. Tsuboi, Contemp. Math., Vol. 498, Amer. Math. Soc., Providence, RI, 2009, 1–61.
- (59) (with Alex Clark) Embedding solenoids in foliations. *Topology Apps.*, 158:1249–1270, 2011.
- (60) (with Alex Clark) Homogeneous matchbox manifolds. *Trans. Amer. Math. Soc.*, 365:3151–3191 , 2013.
- (61) (with Alex Clark and Olga Lukina) Voronoi tessellations for matchbox manifolds. *Top. Proceedings*, 41:167–259, 2013.
- (62) Problem Session – FOLIATIONS 2012. *Foliations 2012*, Łódź, June 24–30, 2012, Poland, World Scientific Press, River Edge, NJ, 2013.
- (63) *FOLIATIONS 2012*, Proc. Conference held June 24-30, 2012, Lodz, Poland, World Scientific Press, River Edge, NJ, 2013.
- (64) Lectures on Foliation Dynamics, *Foliations: Dynamics, Geometry and Topology*, Advanced Courses in Mathematics CRM Barcelona, 2014. <https://arxiv.org/abs/1104.4852>.
- (65) (with Ana Rechtman) The dynamics of generic Kuperberg flows. *Asterisque*, Vol. 377, 2016. <https://arxiv.org/abs/1306.5025>.
- (66) (with Alex Clark and Olga Lukina) Shape of matchbox manifolds. *Indagationes Math.*, 25:669–712, 2014. <https://arxiv.org/abs/1308.3535>
- (67) Lipschitz matchbox manifolds. *Geometry, Dynamics, and Foliations 2013*, Advanced Studies in Pure Math. Vol. 72, 2017, pages 71-115. <https://arxiv.org/abs/1309.1512>
- (68) (with Jessica Dyer and Olga Lukina) The discriminant invariant of Cantor group actions. *Topology and its Applications*, 208:64–92, 2016. <https://arxiv.org/abs/1509.06227>
- (69) (with Jessica Dyer and Olga Lukina) Growth and homogeneity of matchbox manifolds. *Indagationes Math.*, 28:145–169, 2017. <https://arxiv.org/abs/1602.00784>
- (70) (with Ana Rechtman) Perspectives on Kuperberg flows. *Topology Proceedings*, Vol. 51, 197-244, 2017. <https://arxiv.org/abs/1607.00731>
- (71) (with Jessica Dyer and Olga Lukina) Molino theory for matchbox manifolds. *Pacific Journal Math.*, Vol. 289:91–151, 2017. <https://arxiv.org/abs/1610.03896>
- (72) (with Rémi Langevin) Dynamics and the Godbillon-Vey Class of  $C^1$  Foliations. *Journal Math. Society Japan*, Vol. 70:423–462, 2018. <https://arxiv.org/abs/1403.0494>
- (73) (with Pawel Walczak) Compact foliations with finite transverse category. *Journal Math. Society Japan*, Vol. 70:1015–1045, 2018. <https://arxiv.org/abs/1612.03022>
- (74) (with Ana Rechtman) Aperiodicity at the boundary of chaos. *Ergodic Theory Dynamical Systems*, Vol. 38:2683–2728, 2018. <https://arxiv.org/abs/1603.07877>
- (75) (with Alex Clark and Olga Lukina) Classifying matchbox manifolds. *Geometry & Topology*, Vol. 23:1–38, 2019. <https://arxiv.org/abs/1311.0226>
- (76) (with Olga Lukina) Wild solenoids. *Transactions A.M.S.*, Vol. 371:4493–4533, 2019. <https://arxiv.org/abs/1702.03032>
- (77) (with Alex Clark and Olga Lukina) Manifold-like matchbox manifolds, *Proceedings A.M.S.*, vol. 147:3579–3594, 2019. <https://arxiv.org/abs/1702.03032>

- (78) (with Alex Clark and Olga Lukina) Pro-groups and a generalization of a theorem of Bing, *Topology and Its Applications*, vol. 271:1–26, 2020. <https://arxiv.org/abs/1811.00288>
- (79) (with Olga Lukina) Orbit equivalence and classification of weak solenoids, *Indiana Univ. Math. J.*, vol. 69:2339–2363, 2020. <https://arxiv.org/abs/1803.02098>
- (80) (with Olga Lukina) Limit group invariants for wild Cantor actions, *Ergodic Theory Dynam. Systems*, vol. 41:1751–1794, 2021. <https://arxiv.org/abs/1904.11072>
- (81) (with Olga Lukina) Nilpotent Cantor actions, *Proceedings A.M.S.*, vol. 150, 289-304, 2022. <https://arxiv.org/abs/1905.07740>
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- (83) (with Ana Rechtman) Kuperberg dreams, *Celebratio.org*, November 2021. <https://arxiv.org/abs/2103.06825>
- (84) (with Olga Lukina) Essential holonomy of Cantor actions, *Journal Math. Society Japan*, 2023. <https://arxiv.org/abs/2205.06285>
- (85) (with Olga Lukina) Type invariants for non-abelian odometers, *submitted*, 2023. <https://arxiv.org/abs/2305.00863>
- (86) (with Olga Lukina) Prime spectrum and dynamics for nilpotent Cantor actions, *Pacific Journal Math.*, vol. 327:107–128, 2023. <https://arxiv.org/abs/2305.00896>
- (87) Characteristic classes for flat Diff(M)-foliations, *preprint*, 2023. <https://arxiv.org/abs/2311.09160>
- (88) Rigid secondary characteristic classes, *preprint*, 2024. <https://arxiv.org/abs/2403.09371>