

# CURRICULUM VITAE

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### Education

- 1992-1998** **Ph.D. in Mathematics**, Cornell University.  
**Thesis:** *Holomorphic functions and the heat kernel measure on an infinite dimensional complex orthogonal group*. Advisor: Professor Leonard Gross.
- 1991-1992** Graduate student at the Department of Mathematics and Mechanics, Leningrad State University. Advisor: Professor Alexey B. Aleksandrov.
- 1985-1990** **Diploma in Mathematics and Education**, Leningrad State University.  
**Thesis:** *The denseness of fractions in  $L_p$  for  $0 < p < 1$* . Advisor: Professor Alexey B. Aleksandrov.

### Honors, awards, external and internal funding

- **MSRI Research Professorship**, Semester Program *The Analysis and Geometry of Random Spaces*, Spring 2022, MSRI, Berkeley, CA
- **HIM Trimester Program**, Trimester Program *The Interplay between High-Dimensional Geometry and Probability*, Spring 2021, Bonn, Germany
- **NSF grant** DMS-1954264 (single PI), 2020-2023, \$ 330,000.
- **NSF REU site grant**, senior personnel, 2020-2023
- **NSF grant** DMS-1712427 (single PI), 2017-2021, \$ 210,000
- **NSF REU site grant**, senior personnel, 2017-2020
- **Simons Center** at Stony Brook, program *Renormalization and Universality in Conformal Geometry, Dynamics, Random Processes, and Field Theory*
- **NSF grant** DMS-1405169 (single PI), 2014-2018, \$ 288,000.
- **Simons Fellow**, one of the 37 Simons Fellows for 2016-2017
- **NSF REU site grant**, senior personnel, 2013-2016

- **MSRI research membership**, semester program *New Challenges in PDE*, Fall 2015, MSRI, Berkeley, CA
- **Centre Interfacultaire Bernoulli (CIB)**, semester program *Geometric Mechanics, Variational and Stochastic Methods*, January-June 2015, EPFL, Switzerland
- **Humboldt Research Fellowship extension (Germany)**, Summer 2013
- **NSF grant** DMS-1007496 (individual grant), 2010-2015, \$ 240,000
- **The Ruth I. Michler Memorial Prize of the AWM (the Association for Women in Mathematics)**, 2009-2010,  
*the Ruth I. Michler Memorial Prize of the AWM is awarded annually to a woman recently promoted to Associate Professor or an equivalent position in the mathematical sciences. The \$45,000 prize provides a fellowship for the awardee to spend a semester in the Mathematics Department of Cornell University without teaching obligations.*
- **two month visiting position at the Max Planck Institute in Bonn (Germany)**, 2009
- **UCRF/AAUP Travel Award**, multiple years, 2003-present
- **Humboldt Research Fellowship extension (Germany)**, Summer 2008
- **NSF grant** DMS-0706784 (single PI), July 2007-July 2011, \$ 219,938
- **Grant from the De Giorgi Center, Scuola Normale Superiore, Pisa, Italy**, 2006
- **Humboldt Research Fellowship (Germany)**, 2005-2007
- **NSF grant** DMS-0306468 (single PI), June 2003-June 2007, \$ 95,942
- **NSF Postdoctoral Fellowship**, 2000-2002
- **NSF grant** to participate in XIII International Congress on Mathematical Physics, London, UK, 2000
- **Postdoctoral Fellowship, McMaster University**, 1998-2000
- **Hutchinson Fellowship**, Cornell University, Spring 1996.  
*The Hutchinson Fellowship is awarded to mathematics graduate students who have been outstanding in their work as teaching assistants or students in the graduate program. (From the Mathematics Department Annual Report, 1995-1996)*
- **Summer Graduate Research Fellowships**, Cornell University, 1997, 1998
- **Award from the MSRI** to participate in the workshop on *Infinite Dimensional Stochastic Analysis*, 1997
- **Diploma with Honors**, Leningrad State University (equivalent of *Summa Cum Laude in Mathematics* and *Distinguished in All Subjects*)

- **Special Fellowship**, Leningrad State University (1988, 1989, 1990) given to the top five students among 1500 students in mathematics

## Employment

- 2013-present** Professor at the Department of Mathematics, University of Connecticut
- 2007-2013** Associate Professor at the Department of Mathematics, University of Connecticut
- 2003-2007** Assistant Professor at the Department of Mathematics, University of Connecticut
- 2000-2002** NSF Postdoctoral Fellow at the Department of Mathematics, University of California at San Diego
- 1998-2000** Postdoctoral Fellow at the Department of Mathematics and Statistics, McMaster University, Canada
- 1990-1992** Lecturer at the Mathematics Department, Leningrad Electro-Technical Institute

## Teaching Experience

- 2013-present** Professor at the Department of Mathematics, University of Connecticut
- 2017 SS17** graduate course V5F3 *Advanced Topics in Stochastic Analysis*, BIGS Mathematics (the Bonn International Graduate School of Mathematics)
- 2007-2013** Associate Professor at the Department of Mathematics, University of Connecticut
- 2003-2007** Assistant Professor at the Department of Mathematics, University of Connecticut
- 2001-2002** Instructor at the Department of Mathematics, University of California at San Diego
- 1998-2000** Lecturer at McMaster University for second and third year courses on differential equations
- 1992-1997** Lecturer at Cornell University for a first year calculus course  
Recitation instructor for honors calculus courses and an engineering calculus course  
Grading and consulting for graduate and upper level undergraduate courses in *Partial Differential Equations*, *Real and Complex Analysis*, *Lebesgue Integration*, *Groups and Symmetry*
- 1990-1992** Lecturer (at the Assistant Professor level) for calculus courses and a special course on Fourier analysis for radiophysics students at Leningrad Electro-Technical Institute, Leningrad, Russia

- 1990-1992** Leader of a project on learning programs and computerized tests for a technical college
- 1985-1990** Teacher at the School for Young Mathematicians, Leningrad, Russia. Director of the School in 1988-1990
- 1986, 1987** Organizer and teacher at Summer Camps for Young Mathematicians, Leningrad, Russia

## Other professional activities

- 2021-present** Associate Editor, *La Matematica*
- 2022** Oberwolfach workshop organizer (with Takashi Kumagai, Laurent Saloff-Coste, K.-T. Sturm)
- 2021** BIRS *Stochastics and Geometry* workshop organizer (with Todd Kemp, Tai Melcher)
- 2020-2021** MSRI Postdoctoral Fellowship committee
- 2018-present** Editor, *Forum Mathematicum*
- 2018-2023** Associate Editor, *Electronic Communications in Probability*
- 2018-2023** Associate Editor, *Electronic Journal of Probability*.
- 2019** Scientific Committee member, *The 40th International Conference on Quantum Probability and Infinite Dimensional Analysis*, the Ohio State University, Columbus
- 2019** Oberwolfach workshop organizer (with Takashi Kumagai, Laurent Saloff-Coste, Karl-Theodor Sturm)
- 2016-2020** External Advisory Board member, research training group (RTG) *High-dimensional phenomena in probability-fluctuations and discontinuity*, UA Ruhr, Germany
- 2015-present** Member, the Association for Women in Mathematics  
*Michler Prize Selection Committee*, chair in 2018, chair in 2021
- 2018** an external reviewer for MIUR (the Italian Ministry for Education, University and Research), CINECA
- 2018** Organizer (with Fabrice Baudoin), Workshop *Functional inequalities in probability* (with financial support from the NSF and UConn Research Foundation), University of Connecticut
- 2017** Reviewer, Programma per Giovani Ricercatori *Rita Levi Montalcini*
- 2017** Panelist, NSF CAREER grant panel

- 2016** External reviewer, Lise Meitner Postdoctoral position proposal awarded by the Austrian Science Fund (FWF)
- 2016** Oberwolfach meeting organizer (with Takashi Kumagai, Laurent Saloff-Coste, Karl-Theodor Sturm)
- 2015** External reviewer, pre-proposals for the French National Research Agency (ANR) in 2016 project funding selection process
- 2014** External reviewer, research project proposal at the University of Luxembourg
- 2014** Organizer, Special session *Open problems in Stochastic Analysis* at the Spring Sectional AMS meeting, UMBC
- 2014, 2015** Reviewer, NSA research grants
- 2013** Reviewer, the EPSRC Fellowship (UK)
- 2012** External reviewer, MSc by Research thesis at Warwick University (UK)
- present** Reviewer, the Mathematical Reviews and Zentralblatt MATH
- 2012-present** evaluating mathematical articles for Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca (ANVUR), Italy
- 2011** Reviewer, *Futuro in Ricerca* projects (the Italian Ministry for University and Research)
- 2007, 2012** Reviewer, NSF grant proposals
- 2008, 2012** Panelist, NSF panel
- 2015**
- 2009, 2013** Reviewer, FONDECYT (Fondo Nacional de Desarrollo Científico y Tecnológico, Chile) proposals
- 2014**
- 2006, 2007** Reviewer, proposals to the Civilian Research and Development Foundation (CRDF) under their Basic Research and Higher Education program (BRHE)
- 2005** evaluating mathematical articles for the CIVR (the Italian National Committee for the evaluation of university research)

Reviewer, *the Annales de la Faculte des Sciences de Toulouse, Annales de l'Institut Henri Poincaré, Annals of Probability, Applied and Computational Harmonic Analysis, the Bulletin of the London Mathematical Society, Calc. Var. and PDEs, Electronic Communications in Probability, Electronic Journal of Probability, the Journal of the AMS, the Journal of Dynamical and Control Systems, the Journal of Evolution Equations, the Journal of Functional Analysis, the Journal of Geometric Analysis, the Journal of Lie Theory, the Journal of the London*

*Mathematical Society, International Mathematics Research Notices, IMA Journal of Mathematical Control and Information, the Journal of Mathematical analysis and applications, Letters in Mathematical Physics, Linear Algebra and its Applications, Markov Processes and Related Fields, Mathematical Proceedings of the Cambridge Philosophical Society, Mathematical Research Letters, Mathematics of Control, Signals, and Systems, Mathematische Annalen, Mathematische Zeitschrift, Memoirs of the AMS, Monatshefte für Mathematik, Potential Analysis, Probability Theory and Related Fields, the Proceedings of the AMS, the Proceedings of the EWM, Proceedings of the London Mathematical Society, the SIAM Journal on Mathematical Analysis, Statistics and Probability Letters, Stochastic Processes and its Applications, Stochastics, Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), System & Control Letters, the Tohoku Mathematical Journal, the Transactions of the AMS, Transformation Groups.*

- 2013** Organizer (with Takashi Kumagai, Laurent Saloff-Coste, Karl-Theodor Sturm), Oberwolfach meeting in 2013
- 2011** Organizer (with Bruce Driver and Todd Kemp), Special session at the Joint Mathematics meeting
- 2010** Organizer (with Bruce Driver) of a probability conference *in honor of Len Gross*, Cornell University, 2010
- 2009** Organizer (with Laurent Saloff-Coste), Special session *Heat kernel analysis*, the Sectional Meeting of the AMS, Penn State University.
- 2007** Organizer (with Shizan Fang), Special session on *Geometry and Probability*, the 32nd Conference on Stochastic Processes and their Applications, University of Illinois at Urbana-Champaign.
- 1992-present** Member of *the AMS, the AWM, the IMS, St.Petersburg Mathematical Society.*

## Publications and preprints

- (1) *Brownian and energy representation for path groups*, joint with S. Albeverio, B. Driver, and A.M. Vershik, a preprint, [58 pp.](#)
- (2) *Logarithmic Sobolev inequalities on non-isotropic Heisenberg groups*, joint with L. Luo, preprint, [20 pp.](#),
- (3) *Small deviations and Chung's law of iterated logarithm for a hypoelliptic Brownian motion on the Heisenberg group*, joint with M.Carfagnini, submitted, [24 pp.](#), available at <https://arxiv.org/abs/2012.14045>
- (4) *Gamma calculus beyond Villani and explicit convergence estimates for Langevin dynamics with singular potentials*, joint with F. Baudoin, D. Herzog, submitted, [37 pp.](#), available at <https://arxiv.org/abs/1907.03092>

- (5) *Singular perturbations of Ornstein-Uhlenbeck processes: integral estimates and Girsanov densities*, joint with M. Röckner, A. Teplyaev, **Probab. Theory Related Fields**, 2020, 178, pp. 861–891, [31 pp.](#),  
available at <https://arxiv.org/abs/1801.00761>
- (6) *Gradient bounds for Kolmogorov type diffusions*, joint with F. Baudoin, Ph. Mariano, **Annales de l'Institut Henri Poincaré, Probab. Statist.**, **56**, 2020, pp. 612–636, [28 pp.](#),  
available at <https://arxiv.org/pdf/1803.01436.pdf>
- (7) *Integration by parts and quasi-invariance for the horizontal Wiener measure on foliated compact manifolds*, joint with F. Baudoin, Q. Feng, **J. Func. Anal.**, **277**, 2019, pp. 1362 - 1422, [60 pp.](#),  
available at <https://arxiv.org/abs/1707.03135>
- (8) *On the Cheng-Yau gradient estimate for Carnot groups and sub-Riemannian manifolds*, joint with F. Baudoin, Ph. Mariano, **Proceedings of the AMS**, 2019, [9 pp.](#),  
available at <https://arxiv.org/pdf/1809.07433.pdf>
- (9) *Left-invariant geometries on  $SU(2)$  are uniformly doubling*, joint with N. Eldredge, L. Saloff-Coste, **Geometric and Functional Analysis (GAFA)**, 2018, **28**, pp. 1321–1367, [47 pp.](#),  
available at <https://arxiv.org/abs/1708.03021>
- (10) *Coupling in the Heisenberg group and its applications to gradient estimates*, joint with S. Banerjee, Ph. Mariano, **Annals of Probability**, 2018, **46**, pp. 3275–3312, [38 pp.](#),  
available at <https://arxiv.org/abs/1610.06430>
- (11) *An application of a functional inequality to quasi-invariance in infinite dimensions*, Convexity and Concentration, the **IMA Volumes in Mathematics and its Applications**, Springer, 2017, pp. 251–266, [16 pp.](#),  
available at <http://arxiv.org/abs/1602.01293>
- (12) *A convergence to Brownian Motion on sub-Riemannian manifolds*, joint with Thomas Laetsch, **Trans. Amer. Math. Soc.**, 2017, **369**, pp. 6263–6278, [16 pp.](#),  
available at <http://arxiv.org/abs/1403.0142>
- (13) *Equivalence of the Brownian and energy representations*, joint with S. Albeverio, B. Driver, and A. M. Vershik, **Zapiski Seminarov POMI** in memory of M. I. Gordin, **441**, 2015, Veroyatnost i Statistika. **22**, pp. 17–44, [20 pp.](#),  
available at <http://arxiv.org/abs/1511.07378>
- (14) *Hypoelliptic heat kernel on  $n$ -step nilpotent Lie groups*, joint with M. Asaad, **Potential Anal.**, **45**, 2016, pp. 355–386, [33 pp.](#),  
available at <http://arxiv.org/abs/1505.03928>
- (15) *Sub-Laplacians on sub-Riemannian manifolds*, joint with Thomas Laetsch, **Potential Anal.**, **44**, 2016, pp. 811–837, [27 pp.](#),  
available at <http://arxiv.org/abs/1412.0155>

- (16) *Lévy processes in a step 3 nilpotent Lie group*, joint with J. Haga, **Potential Anal.**, **41**, 2014, no. 2, pp. 367–382, [16 pp.](#),  
available at <http://arxiv.org/abs/1207.0304>
- (17) *Quasi-invariance for heat kernel measures on sub-Riemannian infinite-dimensional Heisenberg groups*, joint with F. Baudoin, T. Melcher, 2013, **Trans. Amer. Math. Soc.**, **8**, pp. 4313–4350, [38 pp.](#),  
available at <http://arxiv.org/abs/1108.1527>
- (18) *A subelliptic Taylor isomorphism on infinite-dimensional Heisenberg groups*, joint with T. Melcher, 2013, **Probab. Theory Related Fields**, **155**, pp. 379–426, [48 pp.](#),  
available at <http://arxiv.org/abs/1106.1970>
- (19) *Harnack inequalities in infinite dimensions*, joint with R. Bass, 2012, **J. Func. Anal.**, **263**, pp. 3707–3740, available at <http://arxiv.org/abs/1209.1573>, [34 pp.](#),  
available at <http://arxiv.org/abs/1209.1573>
- (20) *Dimension-independent Harnack inequalities for subordinated semigroups*, joint with Michael Röckner, Feng-Yu Wang, 2011, **Potential Analysis**, **34**, pp. 293–307, [15 pp.](#),  
available at <http://arxiv.org/abs/1004.3016>
- (21) *Square integrable holomorphic functions on infinite-dimensional Heisenberg type groups*, joint with B. Driver, 2010, **Probab. Theory Related Fields**, **147**, pp. 481–528, [48 pp.](#),  
available at <http://arxiv.org/abs/0809.4979>
- (22) *Integrated Harnack Inequalities on Lie Groups*, joint with B. Driver, **Journal of Differential Geometry**, **3**, 2009, pp.501–550, [50 pp.](#),  
available at <http://arxiv.org/abs/0711.4392>
- (23) *Heat kernel analysis on infinite-dimensional Heisenberg groups*, joint with B. Driver, 2008, **J. Func. Anal.**, **255**, pp.2395–2461, [67 pp.](#),  
available at <http://arxiv.org/abs/0805.1650>
- (24) *Diffeomorphisms of the circle and Brownian motions on an infinite-dimensional symplectic group*, joint with M. Wu, **Communications on Stochastic Analysis**, **2**, 2008, pp.71–95, [25 pp.](#),  
available at <https://arxiv.org/abs/0802.1955>
- (25) *Riemannian geometry of  $\text{Diff}(S^1)/S^1$  revisited*, Stochastic Analysis in Physics, **Proceedings of a Satellite Conference of ICM 2006 Lisbon**, Portugal 4 - 8 September 2006 (edited by Gerard Ben Arous, Ana Bela Cruzeiro, Yves Le Jan & Jean-Claude Zambrini), pp. 19–30, [12 pp.](#)
- (26) *A note on local controllability on Lie groups*, joint with F. Cardetti, **Systems & Control Letters**, 2008, [6 pp.](#)



- (27) *Lévy processes and their subordination in matrix Lie groups*, joint with S. Albeverio, **Bulletin des Sciences Mathématiques**, **131**, 2007, pp. 738–760, [23 pp.](#)
- (28) *Riemannian geometry of  $\text{Diff}(S^1)/S^1$* , joint with P. Lescot, 2006, **J. Func. Anal.**, **239**, pp. 611–630, [20 pp.](#), available at <https://arxiv.org/abs/math-ph/0510092>
- (29) *Infinite dimensional stochastic differential equations of Ornstein-Uhlenbeck type*, joint with S.R. Athreya, R.F. Bass, and E.A. Perkins, **Stochastic Process. Appl.** **116**, 2006, pp. 381–406, [26 pp.](#), available at <https://arxiv.org/abs/math/0503165>
- (30) *Hilbert-Schmidt groups as infinite-dimensional Lie groups and their Riemannian geometry*, **J. Func. Anal.**, **227**, 2005, pp. 245–272, [28 pp.](#), available at <https://arxiv.org/abs/math/0506276>
- (31) *Heat kernel analysis on infinite dimensional groups*, **Infinite dimensional harmonic analysis III**, World Scientific Publishing Co., 2005, pp. 71–81, [11 pp.](#)
- (32) *Stochastic differential equations on noncommutative  $L^2$* , **Contemp. Math.**, **317**, Amer. Math. Soc., Providence, RI, 2003, pp. 87–99, [13 pp.](#)
- (33) *Quasi-invariance for the pinned Brownian motion on a Lie group*, **Stochastic Process. Appl.**, **104**, 2003, pp. 243–257, [15 pp.](#)
- (34) *Taylor map on groups associated with a  $II_1$ -factor*, **Infinite Dimensional Analysis, Quantum Probability and Related Topics**, **5**, 2002, pp. 93–111, [19 pp.](#)
- (35) *Heat kernel analysis and Cameron-Martin subgroup for infinite dimensional groups*, **J. Func. Anal.**, **171**, 2000, pp. 192–232, [41 pp.](#)
- (36) *Holomorphic functions and the heat kernel measure on an infinite dimensional complex orthogonal group*, **Potential Analysis**, **12**, 2000, pp. 325–357, [33 pp.](#)
- (37) *The denseness of fractions in  $L_p$  for  $0 < p < 1$* , **Vestnik S-Peterburgskogo Universiteta, Matematika**, **25** (1992), no. 4, pp. 11–16; English translation: *Vestnik, St. Petersburg University, Mathematics*, vol. **25**(4), 1992, pp. 11–16, [6 pp.](#)

## Invited conference talks (partial list)

- 2021** *From Dirichlet forms to Wasserstein geometry* (postponed to 2022), • *Probabilistic and diffusion methods in analysis and geometry* AMS Spring Central sectional meeting, Cincinnati OH, • *Sub-Riemannian geometry and interactions* AMS-SMF-EMS Joint International Meeting, July 2021, Grenoble, France (postponed to 2022) • *10th International Conference on Stochastic Analysis and its Applications*, Kyoto, Japan.
- 2020** *Quantizations* workshop at MIT, ICSAA2020 Kyoto, Japan (postponed due to COVID19) • *Women in probability* workshop, München • Columbia-Princeton Probability Day (postponed due to COVID19) • *Stochastic differential geometry and mathematical physics*,

- Mathematical Physics semester, the Lebesgue Center, Rennes, France (postponed due to COVID19) • *Renormalization*, Simons Center, Stony Brook • Special Session on *Analysis and Probability in Sub-Riemannian Geometry*, Sectional Meeting of the AMS, Purdue University (cancelled due to COVID19, ZOOM talk) • Special Session on *Probabilistic methods in Analysis and Geometry*, Sectional Meeting of the AMS, University of Virginia (cancelled due to COVID19) • *Stochastic Partial Differential Equations*, the 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Atlanta, USA, June 2020 (declined)
- 2019** *Plenary talk, Mathematics Continued* • *The 40th International Conference on Quantum Probability and Infinite Dimensional Analysis*, the Ohio State University, Columbus (declined) • Special Session on *Sub-Riemannian and CR geometric analysis*, Spring Eastern Sectional Meeting of the AMS, University of Connecticut • *Women in Analysis and PDE Workshop*, University of Illinois at Chicago • Geometry/Topology conference, Lehigh University (declined this year)
- 2018** Special Session on *Coupling in probability and related fields*, Fall Western Sectional Meeting of the AMS, San Francisco State University • High-dimensional Phenomena in Probability- Fluctuations and Discontinuity, Ruhr University Bochum, Germany • Workshop *Theoretical and Applied Stochastic Analysis*, BIRS, Mexico (declined) • Special session on *Probability*, joint AMS-CMS meeting, Fudan University, Shanghai, China (declined).
- 2017** Workshop *Reflection positivity*, Oberwolfach, Germany • Intense Activity Period *Metric Measure Spaces and Ricci Curvature*, MPIM, September 2017, Bonn, Germany • Conference *GeoProb*, Luxembourg • Special Session on Probability, *the Mathematical Congress of the Americas*, Montreal, July 2017, Canada.
- 2016** Conference *Stochastic Partial Differential Equations and Related Fields* on the occasion of the 60th birthday of Michael Röckner, University of Bielefeld, Germany • Special Session on *Analysis and Geometry in Nonsmooth Metric Measure Spaces*, Joint Mathematics Meetings, Seattle, WA.
- 2015** Invited lecture, *the 37th Midwest Probability Colloquium*, Northwestern University • Invited lecture, *Bielefeld Stochastic Summer School*, Bielefeld University, Germany • Invited lecture, *Conference in stochastic analysis and related topics* in honor of Rodrigo Bañuelos, Purdue University • Workshop *Analytic Tools in Probability and Applications*, the IMA, the University of Minnesota • Invited lecture, *Seminar on Stochastic Processes 2015* (Permanent co-sponsored meeting of the Institute of Mathematical Statistics), University of Delaware
- 2014** Workshop *Reflection Positivity in Representation Theory, Stochastics and Physics*, Oberwolfach, Germany • Workshop *Dirichlet Form Theory and its Applications*, Oberwolfach, Germany • Invited address, Spring Eastern Sectional Meeting of the AMS, University of Maryland, Baltimore County.
- 2013** Workshop *Geometric perspectives in mathematical quantum field theory*, AIM, Palo Alto • Workshop *Representations of Lie groups and supergroups*, Oberwolfach, Germany.
- 2012** Workshop *Discrete Random Structures, Representation Theory and Interacting Particle Systems*, ZiF, Bielefeld, Germany.

- 2011** Workshop *Foundations of Stochastic Analysis*, the BIRS (Banff International Research Station), Banff, Canada • AWM celebration, Brown University • IGK workshop, Bielefeld, Germany • a Michler-Mentoring Minisymposium, the Joint Mathematics Meetings, New Orleans.
- 2010** Workshop *Infinite Dimensional Lie Theory*, Oberwolfach, Germany • Invited lecturer, the 6th Cornell Probability Summer School, Cornell University.
- 2009** Workshop *Fine properties of stochastic processes* Bielefeld University, Germany • Special session on *Stochastic Differential Equations and Geometry*, the 33rd Conference on *Stochastic Processes and their Applications (SPA)*, the Mathematics Institute of the Technische Universität, Berlin, Germany • Seminar Sophus Lie, University of Paderborn, Germany.
- 2008** the 2nd Workshop for *Women in Probability*, Cornell University • Special session on *Lie Groups and Holomorphic Function Spaces: Analysis, Geometry, and Mathematical Physics*, Spring Southeastern Meeting of the AMS, Baton Rouge.
- 2007** Conference *Infinite dimensional analysis and representation theory*, University of Bielefeld, Germany • Workshop *Stochastic calculus on manifolds, graphs, and random structures*, the Hausdorff Research Institute for Mathematics, Bonn, Germany • Special session on *Probability and Geometry*, the 32nd Conference on *Stochastic Processes and their Applications (SPA)*, the University of Illinois at Urbana-Champaign.
- 2006** Conference *Stochastic Analysis in Mathematical Physics*, Satellite conference of the International Congress of Mathematicians (ICM2006), Lisbon, Portugal • Special session on *Holomorphic Methods and Heat Kernels in Harmonic Analysis and Quantization Theory*, Spring Central Sectional Meeting of the AMS, University of Notre Dame • Workshop *Stochastic Partial Differential Equations*, De Giorgi Center, Pisa, Italy • Workshop *Random Dynamical Systems in Infinite Dimensions*, De Giorgi Center, Pisa, Italy.
- 2005** German-Japanese conference on *Dirichlet forms, Stochastic Analysis and Interacting Systems*, Germany.
- 2004** Conference *Infinite dimensional analysis and path integrals*, C.I.R.M. (Luminy), France • Workshop *Potential theoretical methods for infinite dimensional processes*, University of Bielefeld, Germany • Workshop *Geometric and Analytic Aspects of Stochastic Processes*, the BIRS (Banff International Research Station), Banff, Canada • Plenary speaker, *Conference in Honor of Edgar Feldman, Geometric Analysis and its Applications*, CUNY Graduate Center.
- 2003** Invited speaker, *the German-Japanese Symposium*, University of Tübingen, Germany • Special session, Fall Eastern Section Meeting of the AMS, Binghamton, NY • Invited speaker, workshop *Women of Applied Mathematics: Research and Leadership*, the University of Maryland at College Park • Special session, Spring Southeastern Section Meeting of the AMS, Baton Rouge, March 2003.
- 2002** Meeting on *Stochastic Analysis and Potential theory*, Saint Priest de Gimel, Correze, France.
- 2001** Special session on *Operator Spaces, Operator Algebras, and Applications*, the 2001 Fall Western Section Meeting of the AMS, Irvine, CA • Conference *Probability and Geometry*, University of Bourgogne with the participation of University of Paris VI, Dijon, France • Workshop *Stochastic Analysis and Related Fields*, the Euler Institute, St. Petersburg,

- Russia • Special session *in Honor of Leonard Gross*, Joint Mathematics Meetings, New Orleans.
- 2000** Workshop *Geometry and Analysis on Path Spaces and Related Fields*, University of Warwick, UK • Session on *Quantum Mechanics and Spectral Theory at XIII International Congress on Mathematical Physics*, London, UK • 28th Canadian Annual Symposium on *Operator Algebras at the Fields Institute*.
- 1999** Special session on *Mathematical Physics*, Spring Eastern Sectional Meeting of the AMS, Buffalo, NY.
- 1998** Special session on *Heat Kernel Analysis on Lie Groups*, Spring Eastern Sectional Meeting of the AMS, Philadelphia, PA • Special session, Joint Mathematics Meetings, Baltimore, MD.
- 1997** Workshop on *Infinite Dimensional Stochastic Analysis*, MSRI, Berkeley, CA • Special Session on *Recent Developments in  $C^*$ -Algebras and Operator Spaces*, Joint Mathematics Meetings, San Diego, CA.

## Colloquium and seminar talks (partial list)

- 2021** • UConn Math Club • UConn teaching seminar • MIT Probability seminar • University of Chicago • Hausdorff Trimester seminar
- 2020** • Probability seminar, Texas A&M University • *SAUCY20 (Stochastic analysis under Covid-YEAR 2020)* • AGA (Online Asymptotic Geometric Analysis Seminar) • UConn REU talk • *Simons Center* at Stony Brook • Analysis and Probability seminar, University of Connecticut • Colloquium, University of Delaware • Colloquium, Penn State University • Seminar, Tor Vergata, Rome, Italy • La Sapienza, Rome, Italy
- 2019** Colloquium, Purdue University • Analysis seminar, Georgia Tech • High Dimensional seminar, Georgia Tech.
- 2018** Colloquium, University of Virginia • Probability seminar, NYU.
- 2017** Probability seminar, University of Bochum, Germany • Oberseminar Stochastics, University of Bonn, Germany • Stochastic analysis seminar, University of Bonn, Germany • Analysis seminar, Cornell University • Probability seminar, UCSD.
- 2016** Mathematics colloquium, University of Erlangen-Nuremberg, Germany • Stochastic analysis seminar, University of Bonn, Germany.
- 2015** Random thoughts on Brownian motion, REU summer seminar, University of Connecticut.
- 2014** Analysis and probability seminar talk, University of Connecticut • Geometric analysis seminar talk, Bielefeld University, Germany • Probability seminar talk, Brown University.
- 2013** Seminar talk, University of Jena, Germany • Seminar talk, University of Bonn, Germany.
- 2012** Differential Geometry seminar, CUNY • Colloquium, Stony Brook University.
- 2011** Probability seminar, Purdue University • MATH Lunch Talk, Smith College.
- 2010** Probability seminar, University of Virginia • Lie groups seminar, Cornell University • Oliver club (colloquium), Michler fellow lecture, Cornell University • Probability seminar, Cornell University • Analysis seminar, Cornell University.
- 2009** Seminar Sophus Lie, TU Darmstadt, Germany.

- 2008** Probability seminar, MIT • Probability seminar, Duke University • joint Harmonic analysis and Probability seminar, Louisiana State University, Baton Rouge • Mathematics department Colloquium, University of Pittsburgh.
- 2007** Physics department, University of Rochester • Analysis seminar, Cornell University • Mathematics department colloquium, University of Western Ontario, Canada.
- 2006** University of Bonn, Germany, May 2006 • University of Bielefeld, Germany.
- 2005** Probability seminar, the Courant Institute of Mathematical Sciences, NYU • Analysis and Probability Seminar, University of Connecticut • Geometry Seminar, University of Connecticut • Probability seminar, North Carolina State University • Bonn University, Germany.
- 2004** Analysis seminar, Brown University.
- 2003** Uppsala University, Sweden • Bielefeld University, Germany • Bonn University, Germany.
- 2002** University of Texas at Austin • Texas A&M University • University of Connecticut • University of Illinois at Urbana-Champaign.
- 2001** University of Lisbon, Portugal • University of Illinois at Urbana-Champaign • Indiana University at Bloomington • Kansas State University.
- 2000** Probability Seminar, University of California at San Diego • Department of Mathematics Colloquium, Purdue University • Analysis Seminar, McMaster University.
- 1999** Analysis Seminar, McMaster University • Probability Seminar, the Fields Institute.
- 1998** Analysis Seminar, McMaster University • Colloquium, Wayne State University.
- 1997** Analysis Seminar, Cornell University • Probability Seminar, Cornell University.

## Service at the University of Connecticut in 2010-present

- Senate Enrollment Committee of the University Senate, 2020-present (elected)
- University Senate, 2020-present (elected)
- Mathematics department Graduate program committee member, 2019-2020
- a reviewer for the University of Connecticut *2018 Research Excellence Program*
- Associate Department Head, 2015-2016, 2017-2018
- Faculty mentoring: Guojun Gan, 2014-2015
- Faculty mentoring: Ovidiu Munteanu, 2014-2017
- Faculty mentoring: Matthew Badger, Vasileios Chousionis, Sean Li, Zhongyang Li 2014-2020
- Merit committee of the mathematics department, 2013-2016
- Five-Year Review committee of CLAS's Dean Jeremy Teitelbaum, 2014-2015
- Academic Advisory Board for the CLAS, 2011-December 2014 (elected twice)
- Senate Growth and Development Committee of the University Senate, 2014-2016 (elected)
- University Senate, 2014-2016 (elected)
- The Advisory Board meeting for the Advancement of Women in STEM at UConn, 2010
- Advisory board to the committee on diversity in the department of physics, 2010-present
- Area coordinator for geomtry/topology, 2010-2014
- Mathematics department graduate committee, 2011-2016
- Mathematics department advisory committee - 2018 (elected, appointed)
- Mathematics department hiring committee, 2010-2012, 2013-2014
- A coordinator of Women in Math group -present

- High energy (physics department) hiring committee, 2010-2011

## Graduate students at the University of Connecticut

Robert Wooster (graduated in 2009, postdoc at the West Point Academy, then an Assistant Professor at the College of Wooster)

Mang Wu (graduated in 2010, postdoc at the University of California, Riverside)

John Haga (graduated in 2012, Associate Professor at the Wentworth Institute of Technology)

Alex Baldenko (graduated in 2013, Visiting Assistant Professor at Trinity College, Hartford, CT, now at Aethna)

Malva Asaad (graduated in 2016, Postdoctoral fellow, Univeristy of Georgia)

Fanny Shum (graduated in 2016, Clinical Assistant Professor at NYU)

Phanuel Mariano (graduated in 2018, Golomb postdoc at Purdue University)

Liangbing Luo 2018-present

Marco Carfagnini 2017-present

Associate advisor: Hugo Panzo, 2015-2018, Dan Martin 2016-2018, Qi Feng 2017-2018, Mengxia Dong 2017-2018, Guang Yang 2018-present, Gamal Mograby 2019-2020, Gianmarco Molino 2018-2020

## Honors senior thesis supervised at the University of Connecticut

Rajeshwari Majumdar (2017-2018), graduate student at the NYU.

Edward Novikov (2016-2017), graduate student at Harvard University.

Aaron Nelson (2011-2012), graduate student at UCSD.

## Postdoctoral fellow mentoring at the University of Connecticut

Matthew Cecil (2006-2009, later held positions at University of Notre Dame, Purdue University)

Chen-Yun Lin (2010-2013, joint with Changfeng Gui, moved to the National Taiwan University)

Thomas Laetsch (2012-January 2016, postdoctoral fellow at NYU)

Bumsik Kim (2015-2018)

## REU at the University of Connecticut <https://mathreu.uconn.edu/>

**2017** *Multiplicative LLN and CLT and their applications* (faculty mentor)

Graduate mentor: Phanuel Mariano

- 2015** *Stabilization by noise* (faculty mentor) Graduate mentor: Fanny Shum  
**2012** *Multiplicative stochastic processes* (faculty mentor) Graduate mentor: Alex Baldenko

## Outreach activities

- 2021** *Julia Robinson extravaganza*: a series of public events organized by UConn's AWM student chapter and UConn's Logic group: movie screening, public lecture by Carol Wood, virtual tea with two former AWM Presidents, Carol Wood and Lenore Blum
- 2019** 2019 *Math Club talk, Isoperimetric inequalities*, University of Connecticut.
- 2019** 2019 *Eastern Chapter MathCounts competition* organizer, more than 350 attendees, University of Connecticut
- 2018-present** AWM student Chapter faculty mentor (together with Katie Hall)
- 2016** A lecture *Brownian motion* at the E. O. Smith high school.
- 2016** *Women in STEM* Panel at UConn Open House.
- 2016** A panelist at the 2016 SSP, University of Maryland, College Park.
- 2010-present** *MathCounts instructor* at the Mansfield Middle School.
- 2014** Invited panelist, *Inspiring women in Applied Maths*, Brown University.
- 2012** Invited panelist, Workshop for *Women in Probability*, Duke University.
- 2011** *MATH Lunch* Talk, Smith College.
- 2010** Speaker at the UConn Physics Club as a part of the *Women in Physics celebration*.

## Associate Department Head tasks 2017-2018

- Department by-laws: preparing drafts to comply with the AAUP contract and the university by-laws.
- NSF RTG (Research Training Group) preparation (PI), not submitted.
- Grant applications' support: multiple NSF grants, Simons collaboration grants, Simons fellowship proposal.
- Announcements about grants (NSF, Simons), conference/workshops (AIM, BIRS, ICERM, MSRI, NSF, NSA, AMS Centennial).