Vlad C. Vicol

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Princeton University
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Education

Ph.D. in Mathematics — Aug 2010
University of Southern California, Los Angeles, CA

B.Sc. in Mathematics — May 2005
Jacobs University, Bremen, Germany

Appointments

Assistant Professor — Sep 2012–Aug 2018
Princeton University, Princeton, NJ

L.E. Dickson Instructor — Sep 2010–Aug 2012
The University of Chicago, Chicago, IL

Awards and Honors

- MCA Prize, 2nd Mathematical Congress of the Americas, Montreal, Canada — Jul 2017
- Junior Faculty Teaching Award, Mathematics Department, Princeton University — Oct 2016
- Alfred P. Sloan Research Fellowship in Mathematics — 2015–2018
- Plenary talk at SIAM conference on Analysis of PDEs, Scottsdale, AZ — Dec 2015
- Center for Applied Math. Sciences, Graduate Student Prize, University of Southern California — 2010
- Dennis Ray Estes Graduate Research Prize, University of Southern California — 2009
- Theodore Edward Harris Graduate Teaching Prize, University of Southern California — 2009
- College of Letters, Arts, and Sciences, Merit Fellowship, University of Southern California — 2008
- Merit-based Full Scholarship, Jacobs University Bremen — 2002–2005

Funding

- NSF CAREER Grant DMS-1652134 — 2017–2022
- NSF Research grant DMS-1514771 — 2015–2018
- NSF Research Grant DMS-1211828, DMS-1348193 — 2012–2015
- Institut Henri Poincaré Research in Paris Fellowship — Jun 2013
- AMS-Simons Travel Grant — 2011–2012

Publications

56. D. Gerard-Varet, N. Masmoudi, and V. Vicol, *Well-posedness of the hydrostatic Navier-Stokes equations*. arXiv:1804.04489 [math.AP]. Submitted, 2018.
55. G. Camliyurt, I. Kukavica, and V. Vicol, *Gevrey regularity of the Navier-Stokes equations in a half-space*. J. Differential Equations, Accepted, 2018.
54. I. Kukavica and V. Vicol, *A direct approach to Gevrey regularity on the half-space*. Partial Differential Equations in Fluid Mechanics. (2018) C.L. Fefferman, J.C. Robinson, and J.L. Rodrigo, eds., 1–21.

53. J. Bedrossian, M. Coti Zelati, and V. Vicol, *Vortex axisymmetrization, inviscid damping, and vorticity depletion in the linearized 2D Euler equations*. arXiv:1711.03668 [math.AP]. Submitted, 2017.
52. T. Buckmaster and V. Vicol, *Nonuniqueness of weak solutions to the Navier-Stokes equation*. arXiv:1709.10033 [math.AP]. Submitted, 2017.
51. P. Constantin, T. Elgindi, H. Nguyen, and V. Vicol, *On singularity formation in a Hele-Shaw model*. arXiv:1708.08490 [math.AP]. Submitted, 2017.
50. P. Constantin and V. Vicol, *Remarks on high Reynolds numbers hydrodynamics and the inviscid limit*. J. Nonlinear Sci. **28** (2018), no. 2, 711–724.
49. T. Buckmaster, C. De Lellis, L. Szekélihidi Jr., and V. Vicol, *Onsager's conjecture for admissible weak solutions*. arXiv:1701.08678 [math.AP]. Comm. Pure Appl. Math., Accepted, 2017.
48. T. Buckmaster, S. Shkoller, and V. Vicol, *Nonuniqueness of weak solutions to the SQG equation*. arXiv:1610.00676 [math.AP]. Comm. Pure Appl. Math., Accepted, 2018.
47. J. Bedrossian, V. Vicol, and F. Wang, *The Sobolev stability threshold for 2D shear flows near Couette*. J. Nonlinear Sci., DOI: 10.1007/s00332-016-9330-9, 2016.
46. I. Kukavica, A. Tuffaha, V. Vicol, and F. Wang, *On the Existence for the Free Interface 2D Euler Equation with a Localized Vorticity Condition*. Appl. Math. Optim. **73** (2016), no. 3, 523–544. To the memory of Professor A.V. Balakrishnan.
45. I. Kukavica, V. Vicol, and F. Wang, *The van Dommelen and Shen singularity in the Prandtl equations*. Adv. Math. **307** (2017), 288–311.
44. P. Constantin, T. Elgindi, M. Ignatova, and V. Vicol, *Remarks on the inviscid limit for the Navier-Stokes equations for uniformly bounded velocity fields*. SIAM J. Math. Anal. **49** (2017), no. 3, 1932–1946.
43. P. Constantin, T. Elgindi, M. Ignatova, and V. Vicol, *On some electroconvection models*. J. Nonlinear Sci. **27** (2017), no. 1, 197–211.
42. I. Kukavica, V. Vicol, and F. Wang, *On the ill-posedness of active scalar equations with odd singular kernels*. New Trends in Differential Equations, Control Theory and Optimization: Proceedings of the Eighth Congress of Romanian Mathematicians (2016), 185–200.
41. P. Constantin, F. Gancedo, R. Shvydkoy, and V. Vicol, *Global regularity for 2D Muskat equations with finite slope*. Ann. Inst. H. Poincaré Anal. Non Linéaire **34** (2017), no. 4, 1041–1074.
40. P. Constantin, M. Coti Zelati, and V. Vicol, *Uniformly attracting limit sets for the critically dissipative SQG equation*. Nonlinearity **29** (2016), no. 2, 298–318.
39. P. Constantin, I. Kukavica, and V. Vicol, *Contrast between Lagrangian and Eulerian analytic regularity properties of Euler equations*. Ann. Inst. H. Poincaré Anal. Non Linéaire **33** (2016), no. 6, 1569–1588.
38. I. Kukavica, A. Tuffaha, and V. Vicol, *On the local existence for the 3D Euler equation with a free interface*. Appl. Math. Optim. **76** (2017), no. 3, 535–563.
37. M. Ignatova and V. Vicol, *Almost global existence for the Prandtl boundary layer equations*. Arch. Rational Mech. Anal. **220** (2016), no. 2, 809–848.
36. M. Coti Zelati and V. Vicol, *On the global regularity for the supercritical SQG equation*. Indiana Univ. Math. J. **65** (2016), no. 2, 535–552.
35. J. Bedrossian, N. Masmoudi, and V. Vicol, *Enhanced dissipation and inviscid damping in the inviscid limit of the Navier-Stokes equations near the 2D Couette flow*. Arch. Rational Mech. Anal. **219** (2016), no. 3, 1087–1159.
34. L. Silvestre and V. Vicol, *On a transport equation with nonlocal drift*. Trans. Amer. Math. Soc. **368** (2016), no. 9, 6159–6188.
33. P. Isett and V. Vicol, *Hölder continuous solutions of active scalar equations*. Annals of PDE **1** (2015), no. 1, 1–77.
32. S. Friedlander, N. Glatt-Holtz, and V. Vicol, *Inviscid limits for a stochastically forced shell model of turbulent flow*. Ann. Inst. Henri Poincaré Probab. Stat. **52** (2016), no. 3, 1217–1237.
31. P. Constantin, V. Vicol, and J. Wu, *Analyticity of Lagrangian trajectories for well-posed inviscid incompressible fluid models*. Adv. Math. **285** (2015), 352–393.
30. P. Constantin, I. Kukavica, and V. Vicol, *On the inviscid limit of the Navier-Stokes equations*. Proc. Amer. Math. Soc. **143** (2015), no. 7, 3075–3090.

29. I. Kukavica, N. Masmoudi, V. Vicol, T.K. Wong, *On the local well-posedness of the Prandtl and the hydrostatic Euler equations with multiple monotonicity regions*. SIAM J. Math. Anal. **46** (2014), no. 6, 3865–3890.
28. N. Glatt-Holtz, I. Kukavica, V. Vicol, and M. Ziane, *Existence and regularity of invariant measures for the three dimensional stochastic primitive equations*. J. Math. Phys. **55** (2014), 051504.
27. N. Glatt-Holtz, V. Šverák, and V. Vicol, *On inviscid limits for the stochastic Navier-Stokes equations and related models*. Arch. Rational Mech. Anal. **217** (2015), no. 2, 619–649.
26. P. Constantin, A. Tarfulea, and V. Vicol, *Long time dynamics of forced critical SQG*. Comm. Math. Phys. **335** (2015), no. 1, 93–141.
25. P. Constantin, A. Tarfulea, and V. Vicol, *Absence of anomalous dissipation of energy in forced two dimensional fluid equations*. Arch. Rational Mech. Anal. **212** (2014), no. 3, 875–903.
24. P. Constantin, N. Glatt-Holtz, and V. Vicol, *Unique ergodicity for fractionally dissipated, stochastically forced 2D Euler equations*. Comm. Math. Phys. **330** (2014), no. 2, 819–857.
23. S. Friedlander, W. Rusin, and V. Vicol, *The magneto-geostrophic equations: a survey*. Proceedings of the St. Petersburg Mathematical Society, Volume XV: Advances in Mathematical Analysis of Partial Differential Equations. (2014) D. Apushkinskaya and A.I. Nazarov, eds., 53–78.
22. I. Kukavica and V. Vicol, *Moments for strong solutions of the 2D stochastic Navier-Stokes equations in a bounded domain*. Asymptotic Analysis **90** (2014), no. 3–4, 189–206.
21. M. Dabkowski, A. Kiselev, L. Silvestre, and V. Vicol, *Global well-posedness of slightly supercritical active scalar equations*. Analysis and PDE **7** (2014), no. 1, 43–72.
20. N. Glatt-Holtz and V. Vicol, *Local and global existence of smooth solutions for the stochastic Euler equations on a bounded domain*. Ann. Probab. **42** (2014), no. 1, 80–145.
19. L. Silvestre, V. Vicol, and A. Zlatoš, *On the loss of continuity for super-critical drift-diffusion equations*. Arch. Rational Mech. Anal. **27** (2013), no. 3, 845–877.
18. I. Kukavica and V. Vicol, *On the local existence of analytic solutions to the Prandtl boundary layer equations*. Communications in Mathematical Sciences **11** (2013), no. 1, 267–290.
17. S. Friedlander, F. Gancedo, W. Sun and V. Vicol, *On a singular incompressible porous media equation*. J. Math. Phys. **53** (2012), no. 11, 115602, 1–20. Special Issue "Incompressible Fluids, Turbulence and Mixing" in honor of Peter Constantin.
16. S. Friedlander, W. Rusin and V. Vicol, *On the fractionally diffusive magneto-geostrophic equations*. Nonlinearity **25** (2012) 3071–3097.
15. P. Constantin and V. Vicol, *Nonlinear maximum principles for dissipative linear nonlocal operators and applications*. Geom. Funct. Anal. **22** (2012), no. 5, 1289–1321.
14. M. Dabkowski, A. Kiselev and V. Vicol, *Global well-posedness for a slightly supercritical surface quasi-geostrophic equation*. Nonlinearity **25** (2012), no. 5, 1525–1535.
13. L. Silvestre and V. Vicol, *Hölder continuity for a drift-diffusion equation with pressure*. Ann. Inst. H. Poincaré Anal. Non Linéaire **29** (2012), no. 4, 637–652.
12. S. Friedlander and V. Vicol, *On the ill/well-posedness and nonlinear instability of the magneto-geostrophic equations*. Nonlinearity **24** (2011), no. 11, 3019–3042.
11. S. Friedlander and V. Vicol, *Higher regularity of Holder continuous solutions of parabolic equations with singular drift velocities*. J. Math. Fluid Mech **14** (2012), no. 2, 255–266.
10. S. Friedlander and V. Vicol, *Global well-posedness for an advection-diffusion equation arising in magneto-geostrophic dynamics*. Ann. Inst. H. Poincaré Anal. Non Linéaire **28** (2011), 283–301.
9. I. Kukavica, R. Temam, V. Vicol, and M. Ziane, *Local existence and uniqueness for the hydrostatic Euler equations on a bounded domain*. J. Differential Equations **250** (2011), no. 3, 1719–1746.
8. I. Kukavica and V. Vicol, *On the analyticity and Gevrey-class regularity up to the boundary for the Euler Equations*. Nonlinearity **24** (2011), no. 3, 765–796.
7. M. Paicu and V. Vicol, *Analyticity and Gevrey-class regularity for the second-grade fluid equations*. J. Math. Fluid Mech. **13** (2011), no. 4, 533–555.
6. I. Kukavica and V. Vicol, *The domain of analyticity of solutions to the three-dimensional Euler equations in a half space*. Discrete Contin. Dyn. Syst. **29** (2011), no. 1, 285–303.

5. I. Kukavica, R. Temam, V. Vicol, and M. Ziane, *Existence and uniqueness of solutions for the hydrostatic Euler equations on a bounded domain with analytic data*. C.R. Acad. Sci. Paris **348** (2010), no. 11–12, 639–645.
4. S. Friedlander, N. Pavlović, and V. Vicol, *Nonlinear instability for the critically dissipative quasi-geostrophic equation*. Comm. Math. Phys. **292** (2009), no. 3, 97–810.
3. I. Kukavica and V. Vicol, *On the radius of analyticity of solutions to the three-dimensional Euler equations*. Proc. Amer. Math. Soc. **137** (2009), no. 2, 669–677.
2. I. Kukavica and V. Vicol, *On local uniqueness of weak solutions to the Navier-Stokes system with BMO^{-1} initial datum*. J. Dynam. Differential Equations **20** (2008), no. 3, 719–732.
1. B. Laubner, D. Schleicher, and V. Vicol, *A combinatorial classification of postsingularly finite complex exponential maps*. Discrete Contin. Dyn. Syst. **22** (2008), no. 3, 663–682.

Short Term Visits

- Peking University, Beijing, China (1 week) Jul 2016
- Institut des Hautes Études Scientifiques, Bures-sur-Yvette, France (1 month) Jun 2016
- École Normale Supérieure, Paris, France (1 month) Jun 2014
- University of Chicago, Chicago, IL (2 weeks) Feb 2014
- Université Denis Diderot, Paris, France (2 weeks) Aug 2013
- Institut Henri Poincaré, Paris, France (2 weeks) Jun 2013

Talks at University Colloquia and Seminars

73. Colloquium, University of Toronto, Toronto, Canada Mar 2018
72. Applied PDEs Seminar, Imperial College London, London, UK Mar 2018
71. Nonlinear Analysis Seminar, Rutgers University Feb 2018
70. Analysis Seminar, Princeton University Feb 2018
69. Colloquium, Courant Institute, New York University Nov 2017
68. Colloquium, Tulane University Mar 2017
67. Analysis Seminar, University of Pittsburgh Feb 2017
66. Colloquium, University of Pennsylvania Feb 2017
65. Analysis Seminar, University of Texas at Austin Feb 2017
64. Colloquium, University of Minnesota Jan 2017
63. PDE-Applied Math Seminar, University of Maryland Jan 2017
62. Analysis and PDE Seminar, University of California Los Angeles Jan 2017
61. Colloquium, University of Southern California Jan 2017
60. Colloquium, PACM and Mathematics, Princeton University Dec 2016
59. Colloquium, Rice University Nov 2016
58. Colloquium, University of California San Diego Nov 2016
57. Applied Math Seminar, Stanford University Nov 2016
56. Geometric PDE Seminar, Columbia University Sep 2016
55. Analysis Seminar, University of North Carolina Chapel Hill Aug 2016
54. PDE Seminar, Peking University, Beijing, China Jul 2016
53. PDE Seminar, Capital Normal University, Beijing, China Jul 2016
52. Séminaires de l'équipe PM-EDP, Université Paris 13, France Jun 2016
51. Séminaire EDP-Analyse, l'Institut Camille Jordan, Université Claude Bernard Lyon 1, France Jun 2016
50. Applied Mathematics and Analysis Seminar, Duke University Mar 2016
49. PDE/Applied Math Seminar, Drexel University Feb 2016
48. Analysis Seminar, University of Texas at Austin Jan 2016
47. PDE Seminar, Brown University Nov 2015

46. CAMS Colloquium, University of Southern California — Nov 2015
45. Applied Math Seminar, Stanford University — Apr 2015
44. Analysis Seminar, University of California Berkeley — Apr 2015
43. Analysis Seminar, Northwestern University — Mar 2015
42. PDE seminar, University of California Davis — Oct 2014
41. Colloquium, Rice University — Oct 2014
40. Analyse non-linèaire et EDP, École Normale Supérieure, Paris, France — Jun 2014
39. Colloquium, University of California Los Angeles — May 2014
38. Analysis and PDE Seminar, University of California Los Angeles — May 2014
37. Fluids and Waves Seminar, New Jersey Institute of Technology — May 2014
36. Analysis Seminar, University of California San Diego — May 2014
35. Colloquium, University of Southern California — Apr 2014
34. Math Finance, Probability, PDE Seminar, Rutgers University — Apr 2014
33. Nonlinear Analysis Seminar, Rutgers University — Apr 2014
32. Seminar in PDE and Mathematical Physics, Universität Zurich, Switzerland — Mar 2014
31. PDE-Applied Math Seminar, University of Maryland — Mar 2014
30. Colloquium, Virginia Tech University — Mar 2014
29. CAM Colloquium, Penn State University — Mar 2014
28. PDE/Analysis Seminar, Massachusetts Institute for Technology — Feb 2014
27. CAMP Seminar, The University of Chicago — Feb 2014
26. Applied Math Seminar, Stanford University — Jan 2014
25. Special Colloquium, ETH Zurich, Switzerland — Jan 2014
24. Analysis Seminar, University of Pennsylvania — Oct 2013
23. Applied Math Seminar, CUNY — Oct 2013
22. Geometric Analysis and PDE Seminar, Cambridge University, UK — Apr 2013
21. Analysis of Fluids and Related Topics Seminar, Princeton University — Mar 2013
20. Courant Institute Analysis Seminar, New York University — Feb 2013
19. Geometry and Analysis seminar, Columbia University — Feb 2013
18. Caltech/UCLA joint Analysis Seminar, California Institute of Technology — Jan 2013
17. CAMS Seminar, University of Southern California — Jan 2013
16. Analysis Seminar, Princeton University — Sep 2012
15. PDE Seminar, Brown University — Apr 2012
14. Analysis Seminar, Loyola University Chicago — Apr 2012
13. PDE and Geometric Analysis seminar, University of Wisconsin Madison — Mar 2012
12. PDE Seminar, University of Minnesota — Mar 2012
11. Applied Math Seminar, Stanford University — Jan 2012
10. PDE Seminar, University of Texas at Austin — Dec 2011
9. PDE Seminar, Indiana University Bloomington — Oct 2011
8. CAMS Seminar, University of Southern California — Sep 2011
7. Analysis Seminar, University of Wisconsin at Madison — Dec 2010
6. Analysis Seminar, University of Illinois at Chicago — Nov 2010
5. CAMP Seminar, University of Chicago — Nov 2010
4. Harmonic Analysis and PDE Seminar, University of Illinois at Urbana-Champagne — Sep 2010
3. Nonlinear PDEs Seminar, University of California Irvine — Nov 2009
2. PDE/Applied Math Seminar, Indiana University Bloomington — Jan 2009
1. Analysis Seminar, University of Southern California — Mar 2008

Talks at Conferences and Workshops

58. Nonlinear Science Seminar: Effects of Singularities, Tokyo University, Tokyo, Japan — Feb 2017
57. SIAM Conference on Analysis of PDEs, Baltimore, MD — Dec 2017
56. Simons Foundation discussion group on nonlinear PDEs, New York, NY — Dec 2017
55. Workshop on PDEs in Fluid Dynamics, University of Pittsburgh — Nov 2017
54. FRG PDE Conference, Princeton University — Oct 2017
53. AMS Eastern Sectional Meeting, State University of New York, Buffalo, NY — Sep 2017
52. 2nd Mathematical Congress of the Americas, *Prize lecture*, Montreal, Canada — Jul 2017
51. Workshop *Irregular transport: analysis and applications*, University of Basel, Switzerland — Jun 2017
50. Workshop and Summer School *Mathematical Aspects of Water Waves and Related Models*, UC Davis Bodega Marine Laboratory, Bodega Bay, CA — Jun 2017
49. SIAM Conference on Applications of Dynamical Systems, *Waves, Scales, and Balances in Geophysical Fluid Flow*, Snowbird, UT — May 2017
48. IPAM Workshop on *Turbulent Dissipation, Mixing and Predictability*, Los Angeles, CA — Jan 2017
47. 78th Midwest PDE Seminar, Loyola University Chicago — Oct 2016
46. Warwick EPSRC Symposium: *PDEs in Fluid Mechanics*, Warwick University, Coventry, England — Sep 2016
45. Gene Golub SIAM Summer School, Drexel University — Jul 2016
44. SIAM Annual Meeting, *Recent Progress on Inviscid Fluid Dynamics*, Boston, MA — Jul 2016
43. *Nonlinear Waves*, June Conference, IHES, Bures-sur-Yvette, France — Jun 2016
42. *Mixing and Mixtures in Geo- and Biophysical Flows*, University of Maryland — May 2016
41. *International Conference on Evolution Equations in conjunction with the Shanks memorial lecture*, Vanderbilt University — May 2016
40. *Analysis of PDEs of Fluid Mechanics*, Rice University — May 2016
39. *Boundary Layers and Fluid-Structure interactions*, l'Institut de mathématiques de Bordeaux, France — Jan 2016
38. *Euler & Navier-Stokes Equations and Connected Topics*, Wolfgang Pauli Institut Vienna, Austria — Dec 2015
37. Plenary talk at the SIAM conference on *Analysis of PDEs*, Phoenix, AZ — Dec 2015
36. *Mathematical Aspects of Hydrodynamics*, Math. Forschungsinstitut Oberwolfach, Germany — Aug 2015
35. EquaDiff 2015, Lyon, France — Jul 2015
34. 8th Congress of Romanian Mathematicians, Iasi, Romania — Jun 2015
33. AMS Western Sectional Meeting, University of Nevada Las Vegas — Apr 2015
32. AMS Eastern Sectional Meeting, Georgetown University, DC — Mar 2015
31. Workshop on *Multiscale phenomena: modeling, analysis and computation*, Center for Scientific Computation And Mathematical Modeling University of Maryland, MD — Oct 2014
30. IPAM Workshop on *Mathematics of Turbulence*, Los Angeles, CA — Sep 2014
29. 10th AIMS Conference on Dynamical Systems, Diff. Equations and Applications, Madrid, Spain — Jul 2014
28. Journées d'Analyse Non Linéaire, Laboratoire de Mathématiques de Besançon, France — Jun 2014
27. 4th Workshop on Fluids and PDE, IMPA, Rio de Janeiro, Brazil — May 2014
26. AMS 2014 Joint Mathematics Meeting, Baltimore, MD — Jan 2014
25. AMS Central Sectional Meeting, Washington University in St. Louis — Oct 2013
24. Clay Institute Workshop *The Navier-Stokes and Related Topics*, University of Oxford, UK — Sep 2013
23. *Recent Trends in Classical and Complex Fluids*, University of Sussex, Falmer, UK — Sep 2013
22. Summer School and Workshop *Recent Advances in PDEs and Fluids*, Stanford University — Aug 2013
21. 1st Mathematical Congress of the Americas, Guanajuato, Mexico — Aug 2013
20. *Modern Mathematics*, International Summer School, Jacobs University, Bremen, Germany — Jul 2013
19. Joint International Mathematics Meeting AMS-Romania, Alba Iulia, Romania — Jun 2013
18. Summer School on *Analysis of Incompressible Fluids*, ICMAT, Madrid, Spain — Jun 2013
17. Workshop on *Fluid Mechanics and Singular Integrals*, University of Seville, Spain — Jun 2013

16. AMS Western Sectional Meeting, University of Arizona — Oct 2012
15. *Mathematical Aspects of Hydrodynamics*, Math. Forschungsinstitut Oberwolfach, Germany — Aug 2012
14. *Geometry and Dynamics of Fluid*, Centre de Recherches Mathematiques, Montreal, Canada — May 2012
13. *Evolution Equations*, workshop in honor of Terence Tao, Northwestern University — May 2012
12. AMS Western Sectional Meeting, University of Hawaii Honolulu — Mar 2012
11. SIAM conference on Analysis of PDEs, San Diego, CA — Nov 2011
10. 3rd Oklahoma PDE Workshop, Oklahoma State University — Nov 2011
9. *Incompressible Fluids, Turbulence and Mixing*, in honor of Peter Constantin's 60th birthday, Carnegie Mellon University — Oct 2011
8. *PDEs Modeling Fluids and Complex Fluids*, celebrating Peter Constantin's 60th, Xi'an, China — Jun 2011
7. AMS Western Sectional Meeting, University of Nevada Las Vegas — Apr 2011
6. AMS Western Sectional Meeting, University of California at Los Angeles — Oct 2010
5. AMS Western Sectional Meeting, University of California Riverside — Nov 2009
4. AMS Central Sectional Meeting, Baylor University — Oct 2009
3. AMS Sectional Meeting, University of Illinois at Urbana-Champaign — Mar 2009
2. 6th IMACS International Conference on *Nonlinear Evolution Equations and Wave Phenomena*, University of Georgia — Mar 2009
1. AMS Central Sectional Meeting, Indiana University Bloomington — Apr 2008

Service

- Editorial Board of *SIAM Journal on Mathematical Analysis* (SIMA) — 2018–
- Editorial Board of *Evolution Equations and Control Theory* (EECT) — 2013–
- Co-organizer of the Princeton University *Analysis of Fluids and Related Topics Seminar* — 2012–2018
- Co-organizer of the Princeton University *Analysis Seminar* — 2015–2017
- Undergraduate Placement Officer for the Mathematics Department, Princeton University — 2013–2018
- Co-organizer of the Princeton-Tokyo Mathematical Fluid Mechanics Workshop, Princeton — Nov 2017
- Co-organizer of the special session *Incompressible Fluid Dynamics*, Mathematical Congress of the Americas, Montreal, Canada — Jul 2017
- Co-organizer of the special session *Hydrodynamic and Wave Turbulence*, AMS Spring Eastern Sectional Meeting, Hunter College, City University of New York, NY — May 2017
- Co-organizer of the ICERM Topical Workshop *Current Developments in Mathematical Fluid Dynamics: Regularity, Instabilities, and Turbulence*, celebrating the work of Susan Friedlander, Providence, RI — Jan 2017
- Co-organizer of the symposium *Analysis of fluid flow*, International Conference on Evolution equations, Vanderbilt University, Nashville, TN — May 2016
- Co-organizer of the symposium *Recent developments for Navier-Stokes, Euler, and related models*, SIAM conference Analysis of Partial Differential Equations, Scottsdale, AZ — Dec 2015
- Co-organizer of the MSRI Summer Graduate School *Incompressible Fluid Flows at High Reynolds Number*, Berkeley, CA — Jul 2015
- Co-organizer of the special session *Evolution Problems at the Interface of Waves and Fluids*, AMS Spring Western Sectional Meeting, Las Vegas, NV — Apr 2015
- Co-organizer of the special session *Nonlinear Partial Differential Equations*, AMS Fall Western Sectional Meeting, San Francisco, CA — Oct 2014
- Co-organizer of the special session *Fluid Mechanics: from Turbulence to Free Boundaries*, Mathematical Congress of the Americas, Guanajuato, Mexico — Aug 2013
- Co-organizer of the special session *Nonlinear Partial Differential Equations at the Common Interface of Waves and Fluids*, AMS Spring Western Sectional Meeting, Honolulu, HI — Mar 2012
- Co-organizer of the symposium *Analysis of Partial Differential Equations Arising in Fluid Dynamics*, SIAM conference Analysis of Partial Differential Equations, San Diego, CA — Nov 2011

- Co-organizer of the special session *Interdisciplinary Deterministic and Stochastic Partial Differential Equations*, AMS Fall Central Sectional Meeting, Notre Dame, IN Nov 2010
- Referee for several journals.

Teaching at Princeton University

- Math 218, Accelerated Honors Analysis II Spring 2018
- Math 216, Accelerated Honors Analysis I Fall 2017
- Math 103, Calculus I Spring 2017
- Math 215, Honors Analysis in a Single Variable Fall 2016
- Math 427, Ordinary Differential Equations Spring 2016
- Math 320, Introduction to Real Analysis Fall 2015
- Math 984, Junior Seminar: Singular Integrals and Applications Spring 2015
- Math 429, Topics in Analysis: Introduction to Incompressible Fluid Dynamics Fall 2014
- Math 103, Calculus I, Course Head Fall 2013
- Math 330, Complex Analysis with Applications Spring 2013
- Math 103, Calculus I Fall 2012

Teaching at the University of Chicago

- Math 20300, Analysis in $\mathbb{R}^n$ Winter 2012
- Math 27000, Basic Complex Analysis Autumn 2011
- Math 20300, Analysis in $\mathbb{R}^n$ Spring 2011
- Math 27300, Basic Theory of Ordinary Differential Equations Winter 2011