

# Matthew Kahle

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**Contact** Department of Mathematics *Voice:* (available on request)  
The Ohio State University *Fax:* (614) 292-0167  
231 W. 18th Ave. *Email:* mkahle@math.osu.edu  
Columbus, OH 43210

**Positions** Professor, Ohio State University, 2018–present  
Associate Professor, Ohio State University, 2015–2018  
Assistant Professor, Ohio State University, 2011–2015  
Member, Institute for Advanced Study, Princeton, 2010–2011  
Samelson Postdoctoral Fellow, Stanford University, 2007–2010

**Visiting positions** Technischen Universität, Berlin, Germany, 2019–2020  
ICERM, Providence, Rhode Island, Autumn 2016  
CIMAT, Guanajuato, Mexico, Summer 2016  
IMA, Minneapolis, Minnesota, Spring 2014  
MRSI, Berkeley, California, Autumn 2006  
IAS-PCMI, Park City, Utah, Summer 2004

**Education** University of Washington, Seattle, Washington USA  
Ph.D., Mathematics, 2007  
  
Colorado State University, Fort Collins, Colorado USA  
M.S., Mathematics, 2001  
B.S., Mathematics, 1999

**Fellowships and awards** Mercator Fellow, 2019–2020  
Simons Fellow in Mathematics, 2019–2020  
Fellow of the American Mathematical Society, Class of 2019  
NSF-CAREER, 2014–19  
Alfred P. Sloan Research Fellow, 2012  
Samelson Postdoctoral Fellowship, Stanford, 2007–2010  
NSF-VIGRE Fellowship, 2001–2004, 2005–2006  
Andrew Gavin Gaudette ARCS Foundation Fellowship 2001–2004

**Grants** NSF #DMS-2208855: Conference: Algebraic topology: Methods, computation, and science 2022 (PI)  
NSF #DMS-2005630: Stochastic topology and topological statistical mechanics, 2020–2023, \$239,403 (PI)  
NSF-TRIPODS+X:RES #CCF-1839358, 2018–2021, \$300,000 (PI)  
NSF-TRIPODS+X:EDU #CCF-1839356, 2018–2021, \$200,000 (Senior Personnel)  
NSF-TRIPODS #CCF-1740761, 2017–2020, \$1.5 million (Senior Personnel)  
NSF #DMS-1613094: Conference TGDA@OSU, 2016, \$43,000 (PI)  
NSF-RTG #DMS-1547357: Algebraic topology and its applications, 2016–21, \$1.88 million (PI)  
NSF-CAREER #DMS-1352386: Random spaces and groups, 2014–19, \$450,000 (PI)  
NSF #CCF-1017182: Higher-dimensional spanning trees, 2013–14 (PI)  
DARPA #N66001-12-1-4226: Topology and geometry of random simplicial complexes, 2012–14 (PI)  
NSA #H98230-10-1-0227: Random simplicial complexes, 2009–2011 (PI)

## Research papers and preprints

1. A. Ababneh, M. Kahle. Maximal persistence in random clique complexes. *submitted*, 2022. (arXiv:2209.05713)
2. H. Alpert, M. Kahle, R. MacPherson. Asymptotic Betti numbers for hard squares in the homological liquid regime. *submitted*. (arXiv:2207.13139).
3. B. Braun, K. Bruegge, M. Kahle. Facets of Random Symmetric Edge Polytopes, Degree Sequences, and Clustering. *submitted*. (arXiv:2204.07239).
4. P. Duncan, M. Kahle, and B. Schweinhart. Homological percolation on a torus: plaquettes and permutohedra. *submitted*. (arXiv:2011.11903).
5. S. Fadnavis, M. Kahle, and F. Martinez Figueroa. Warmth and mobility of random graphs. *revised in 2021 and submitted*. (arXiv:1009.0792).
6. M. Kahle, M. Tian, Y. Wang. On the clique number of noisy random geometric graphs. *to appear in Random Structures & Algorithms*, 2022. (arXiv:2208.10558)
7. H. Alpert, U. Bauer, M. Kahle, R. MacPherson, and K. Spendlove. Homology of configuration spaces of hard squares in a rectangle. *to appear in Algebraic & Geometric Topology*. (arXiv:2010.14480).
8. M. Kahle and A. Newman. Topology and geometry of random 2-dimensional hypertrees. *Discrete Comput. Geom.* 67 (2022), no. 4, 1229–1244. (arXiv:2004.13572)
9. M. Kahle, E. Paquette, and É. Roldán. Topology of random 2-dimensional cubical complexes. *Forum Math. Sigma* 9 (2021), Paper No. e76, 24 pp.
10. H. Alpert, M. Kahle, and R. MacPherson (with appendix by Ulrich Bauer and Kyle Parsons). Configuration spaces of disks in an infinite strip. *Journal of Applied & Computational Topology* 5 (2021), 357–390.
11. C. Hoffman, M. Kahle, and E. Paquette. Spectral gaps of random graphs and applications. *Int. Math. Res. Notices* (2021), 8353–8404.
12. M. Kahle, F. Martinez Figueroa, and A. Soifer. A square-grid coloring problem. *Geombinatorics* 29 (2020), no. 4, 167–184.
13. M. Kahle and F. Martinez Figueroa. The chromatic number of random Borsuk graphs. *Random Structures & Algorithms* (2020), Vol 56. Issue 3. 838–850.
14. M. Kahle, F. Lutz, A. Newman, K. Parsons. Cohen–Lenstra heuristics for torsion in homology of random complexes. *Experimental Mathematics*, 29:3, 347–359, (2020).
15. M. Kahle and E. Roldán. Polyominoes with maximally many holes. *Geombinatorics* 29 (2019), no. 1, 5–20.
16. M. Kahle, M. Tian, and Y. Wang. Local cliques in ER-perturbed random geometric graphs. *30th International Symposium on Algorithms and Computation*, Art. No. 29, 22 pp., LIPIcs. Leibniz Int. Proc. Inform., 149, Schloss Dagstuhl. Leibniz-Zent. Inform., Wadern, 2019.
17. D. Dotterrer, L. Guth, M. Kahle. 2-Complexes with Large 2-Girth. *Discrete Comput. Geom.* 59 (2018), no. 2, 383–412.
18. O. Bobrowski, M. Kahle, and P. Skraba. Maximally persistent cycles in random geometric complexes. *Ann. Appl. Probab.* 27 (2017), no. 4, 2032–2060.
19. C. Hoffman, M. Kahle, and E. Paquette. The threshold for integer homology in random d-complexes. *Discrete Comput. Geom.* 57 (2017), no. 4, 810–823.
20. M. Kahle and B. Pittel. Inside the critical window for cohomology of random k-complexes. *Random Structures & Algorithms* 48 (2016), no. 1, 102–124.
21. M. Kahle and B. Taha. New lower bounds on  $\chi(\mathbb{R}^d)$  for  $d = 8, \dots, 12$ . *Geombinatorics* 24 (2015), 109–116.
22. M. Davis and M. Kahle. Random graph products of finite groups are rational duality groups. *J. Topol.*, 7 (2014), 589–606.

23. Y. Baryshnikov, P. Bubenik, and M. Kahle. Min-type Morse theory for configuration spaces of hard spheres. *Int. Math. Res. Notices* 9 (2014), 2577–2592.
24. M. Kahle. Sharp vanishing thresholds for cohomology of random flag complexes. *Ann. of Math.* 179 (2014), 1085–1107.
25. M. Kahle and E. Meckes. Limit theorems for Betti numbers of random simplicial complexes. *Homology, Homotopy Appl.* 15(2) (2013), 343–374.  
M. Kahle and E. Meckes. Erratum to “Limit theorems for Betti numbers of random simplicial complexes”. *Homology Homotopy Appl.* 18 (2016), no. 1, 129–142.
26. G. Carlsson, J. Gorham, M. Kahle, and J. Mason. Computational topology for configuration spaces of hard disks. *Phys. Rev. E*, 85 (2012).
27. D. Dotterrer and M. Kahle. Coboundary expanders. *J. Topol. Anal.* 4 (2012), no. 4, 499–514.
28. M. Kahle. Sparse locally-jammed disk packings. *Ann. Comb.* 16(4) (2012), 773–780.
29. M. Kahle. Random geometric complexes. *Discrete Comput. Geom.*, 45 (2011), no. 3, 553–573.
30. E. Babson, C. Hoffman, and M. Kahle. The fundamental group of random 2-complexes. *J. Amer. Math. Soc.* 24 (2011), no. 1, 1–28.
31. M. Kahle. Topology of random clique complexes. *Discrete Math.*, 309 (2009), no. 6, 1658–1671.
32. M. Kahle. Points in a triangle forcing small triangles *Geombinatorics* 18 (2009), no. 3, 114–128.
33. M. Kahle. The neighborhood complex of a random graph. *J. Combin. Theory Ser. A* 114 (2007), no. 2, 380–387.
34. M. Kahle. Scatters, unavoidable shapes, and crystallization. *Geombinatorics* 15 (2006), no. 3, 138–149.
35. M. Kahle. A generalization of the chromatic number of the plane. *Geombinatorics* 10 (2000), no. 2, 69–74.

**Expository writings,  
technical reports,  
miscellanea**

1. M. Kahle. Configuration spaces of disks in an infinite strip. *Oberwolfach Report* No. 39/2019, p. 2421–2424, DOI: 10.4171/OWR/2019/39.
2. M. Kahle. Branko Grünbaum in many dimensions. *Geombinatorics* 28 (2019), no. 3, 140–146.
3. O. Bobrowski and M. Kahle. Topology of random geometric complexes: a survey. *Journal of Applied & Computational Topology*, 331–364 (2018).
4. M. Kahle. Book chapter on “Random Simplicial Complexes” in *Handbook of Discrete & Computational Geometry, 3rd Edition* (2017), CRC Press (25 pages).
5. M. Kahle. Configuration spaces of disks. *Oberwolfach Report* No. 45/2015, p. 2652, DOI: 10.4171/OWR/2015/45.
6. M. Kahle. Permutation puzzles from Archimedes to the Rubik’s Cube. Institute for Advanced Study (IAS), Princeton, NJ. *Institute Summer Letter*. Summer 2015.
7. M. Kahle. Topology of random simplicial complexes: a survey. *AMS Contemp. Math.*, 620 (2014), 201–221.
8. M. Kahle. Expansion properties of random simplicial complexes. *Oberwolfach Report* No. 24/2012, p. 1442–1445, DOI: 10.4171/OWR/2012/24.
9. M. Kahle. The geometry of random spaces. Institute for Advanced Study (IAS), Princeton, NJ. *Institute Summer Letter*. Summer 2011.
10. M. Kahle. On Branko Grünbaum’s 80th birthday. *Geombinatorics* 19 (2009), no. 2, 42–45.
11. M. Kahle. Geometric random complexes. *Oberwolfach Report* No. 29/2008, p. 1626–1628.

**Public talks**

Science Sundays, Ohio State University, February 2018  
Inaugural CSU Math Day Lecture, November 2017  
Collaborative STEAM Factory talk on Kepler's Harmonices Mundi, Franklinton, 2016-02-12  
National Math Festival, Washington D.C., 2015-04-18 (two talks)  
Panel: Colorado Math Olympiad, 30th Anniversary award ceremony, Colorado Springs, 2013-05-03  
Demonstrations, Shift studio, Seattle, 2007-06-02

**Invited talks**

ATMCS, Oxford, 2022-06-23  
Topology Seminar, Northeastern University (online), 2022-04-26  
Colloquium, Michigan State University (online), 2022-03-17  
KTH Applied Combinatorics, Algebra, Topology & Statistics Seminar (online), Stockholm, Sweden, 2022-03-01  
GEOTOP-A Seminar (Web-seminar series on Applications of Geometry and Topology), 2021-12-10  
Colloquium, University of Delaware (online), 2021-12-02  
2021 MPS Conference on High-Dimensional Expanders. Simons Foundation, NY, 2021-10-27  
Thematic mini-conference on stochastic topology (online), Berlin, Germany, 2021-09-22  
Australian Geometric Topology Seminar (online), Canberra, Australia, 2021-08-18  
Geometric Structures Research Seminar (online), SISSA, Italy, 2021-06-08  
Guth geometry seminar, MIT (online), 2021-05-21  
2021 Southeastern Probability Conference (online), 2021-05-18  
AARTN Topological Complexity Seminar (online), 2021-03-11  
Topology and geometry: extremal and typical (online), 2021-03-08  
Applied and computational topology seminar, TU Munich, 2020-02-12  
Applied Topology Seminar, EPFL, Lausanne, 2020-02-18  
Colloquium, University of Osnabrück, 2019-12-04  
TDA Seminar, Oxford, 2019-11-22  
Facets of Complexity seminar, Berlin Mathematical School, 2019-05-20  
STAR Workshop on Random Graphs, Groningen, 2019-04-10  
Workshop on Applied Topology 2019, Kyoto, week of 2019-01-07 (two lectures)  
CombinaTexas, Texas A&M University, 2018-02-12  
Mathematical Conference of the Americas 2017, Montreal, 2017-07-26  
FoCM 2017, Workshop on Computational Geometry and Topology, Barcelona, 2017-07-12  
Combinatorics seminar, Ohio State, 2017-01-12  
Special session in Computational Topology, Joint Mathematics Meetings, Atlanta, 2017-01-04  
Future directions in Network Mathematics, Royal Society, London, 2016-11-22  
Topology seminar, Oxford, 2016-11-21  
Probabilistic methods in topology, CRM, Montreal, week of 2016-11-14 (three lectures)  
Colloquium, University of South Carolina, 2016-11-03  
Topology seminar, Brown, 2016-09-28  
Stochastic topology seminar, ICERM, Providence, 2016-09-21  
Topology and geometry seminar, UNAM, Mexico City, 2016-08-18  
Stochastic topology and topological statistical mechanics, CIMAT, week of 2016-08-08 (four lectures)  
Cornell topology festival, weekend of 2016-5-12 (two lectures)  
Colloquium, UT Austin, 2016-04-18  
Algorithms, Combinatorics and Optimization seminar, Carnegie Mellon, 2016-04-07  
Topology seminar, Florida, 2016-03-08  
Colloquium, Florida, 2016-03-07  
AIMR, Sendai, Japan, 2016-02-22  
Random and statistical topology, Sendai, Japan, week of 2016-02-15 (two lectures)  
Kempner colloquium, CU Boulder, 2015-12-11  
Colloquium, Georgia Tech, 2015-11-12  
Computational algebraic and geometric topology, Oberwolfach, 2015-10-12  
Geometry and physics of spatial random systems, Bad Herrenalb, 2015-09-09

Topology seminar, Ohio State, 2015-09-01  
Dynamics, topology, and computations, Bedlewo, 2015-06-15  
Special session in applied algebraic topology, AMS / EMS / SPM International Meeting, Porto, 2015-06-11  
Workshop: Random graphs, simplicial complexes, and their applications, Northeastern, 2015-05-19  
Colloquium, University Southern California, 2015-03-25  
Joint Colloquium, Brandeis-Harvard-MIT-Northeastern, 2015-02-19  
School on TDA and Stochastic Topology (four lectures), CIMAT, Guanajuato, week of 2015-01-19  
FoCM, Workshop on Computational Topology and Geometry, Montevideo, 2014-12-15  
Discrete, Computational and Algebraic Topology, Copenhagen, 2014-11-11  
AMS Invited address, Central Autumn Sectional Meeting, Eau Claire, 2014-09-20  
Colloquium, Yale, 2014-08-01  
SUMRY colloquium, Yale, 2014-07-31  
Research cluster on random groups, Tufts, 2014-07-20  
Combinatorics, geometry, and physics, ESI, Vienna, Austria, 2014-07-18  
Applied topology seminar, IST, Klosterneuburg, Austria, 2014-07-10  
Applied algebraic topology, Castro Urdiales, Spain, 2014-07-04  
Toponets14: Topology and networks, Berkeley, 2014-06-02  
IMA workshop: Topology and Geometry of Networks and Discrete Metric Spaces, 2014-04-29  
Colloquium, University of Wisconsin, 2014-04-04  
IMA Annual Program Seminar, 2014-03-12 and 2014-04-02  
AMS Short Course on Geometry and Topology in Statistical Inference, Baltimore, 2014-01-14  
Colloquium, Western Ontario University, 2013-11-07  
IMA workshop: Topological data analysis, 2013-10-09  
Applied and interdisciplinary mathematics seminar, Northeastern, 2013-10-01  
Research seminar in mathematics, Northeastern, 2013-10-01  
Combinatorics seminar, Ohio State, 2013-09-18  
Topology, geometry, and data seminar, Ohio State, 2013-09-13 and 2013-09-20  
Metric Geometry, Geometric Topology and Groups, BIRS, Banff, Canada, 2013-08-04  
Applied and Computational Algebraic Topology, ALTA, Bremen, Germany, 2013-07-18  
Dynamics and Applied Topology, (three lectures), Kyoto, Japan, week of 2013-06-09  
Colloquium, Indiana University, 2013-03-22  
Triangle lectures in combinatorics, Wake Forest University, 2013-02-09  
Data seminar, Duke, 2013-02-07  
MacPherson seminar, IAS, 2013-01-24 & 2013-01-31  
Workshop: Topological data analysis and machine learning theory, Banff, 2012-10-15  
Colloquium, University of Washington, 2012-10-05  
Stanford symposium on Algebraic topology: applications and new directions, 2012-07-25  
ATMCS 5, Edinburgh, 2012-07-04  
Dynamics, topology, and computation, Bedlewo, Poland, 2012-06-27  
Workshop: Triangulations, Oberwolfach, 2012-05-03  
CATS (Combinatorics, Algebra, Topology, and Statistics) seminar, Kentucky, 2012-04-23  
Colloquium, Colorado State, 2012-04-13  
Topology seminar, Ohio State, 2012-04-10  
Applications of Combinatorial Topology to Computer Science, Dagstuhl, Germany, 2012-03-20  
AMS Meeting, Tampa, FL, special session in algebraic & geometric combinatorics, 2012-03-10  
Topology seminar, Rice, 2012-02-27  
Invitation to Mathematics, Ohio State, 2012-01-18 & 2012-01-25  
Workshop: Computational topology, Fields Institute, 2011-11-07  
Topology and geometry of data seminar, Ohio State, October 21, 2011  
SIAM Conference on Applied Algebraic Geometry, NC State, October 6, 2011  
Topological Methods in Complex Systems, U Penn, August 9, 2011  
Applied Algebraic Topology, ETH-Zurich, July 6, 2011  
Geometric group theory conference, Ohio State, June 2, 2011  
Combinatorics seminar, Washington, May 18, 2011

Colloquium, Alcatel-Lucent, Murray Hill, May 12, 2011  
 Distinguished interdisciplinary speaker series, NC State, April 29, 2011  
 Geometry/topology seminar, Chicago, March 10, 2011  
 Geometry seminar, Yale, February 21, 2011  
 Colloquium, Colorado State, February 3, 2011  
 Colloquium, Ohio State, January 18, 2011  
 Soft matter seminar, U Penn, November 29, 2010  
 Members seminar, IAS, Princeton, November 15, 2010  
 Geometry seminar, Courant Institute, NYU, November 2, 2010  
 Topology: identifying order in complex systems, Rutgers, October 6, 2010  
 Geometry & cell complexes seminar, IAS, Princeton, October 5, 2010  
 Algebra and Topology: Methods, Computation, and Science IV, Münster, Germany, June 24, 2010  
 2010 Barrett Memorial Lectures in Discrete Differential Geometry and Applications, May 17, 2010  
 Workshop in algebraic and random topology I, Chicago, April 18, 2010  
 Applied topology seminar, University of Zürich, March 26, 2010  
 Colloquium, Case Western Reserve, March 19, 2010  
 Geometry seminar, Toronto, March 8, 2010  
 Theory seminar, Dartmouth, March 2, 2010  
 Combinatorics seminar, Dartmouth, March 1, 2010  
 Colloquium, Cleveland State, February 26, 2010  
 Combinatorics seminar, UC Berkeley, February 22, 2010  
 Colloquium, Oregon, January 25, 2010  
 Joint seminar in probability and topology, Oregon, November 20, 2009  
 Probability seminar, Stanford, November 9, 2009  
 Applied topology, Chicago, November 5, 2009  
 Topological complexity of random sets, American Institute of Mathematics, August 12, 2009  
 Topological Methods in Scientific Computing seminar, Stanford, May 18, 2009  
 Data analysis using computational topology and geometric statistics, Banff, March 11, 2009  
 Probability seminar, Washington, February 9, 2009  
 Discrete math seminar, Berkeley, February 4, 2009  
 Probability seminar, Duke, October 30, 2008  
 Computational algebraic topology, Oberwolfach, June 29–July 5, 2008  
 Topology seminar, Oregon, April 22, 2008  
 Colloquium, Cal. State East Bay, February 22, 2008  
 Bay Area Discrete Math Day, Google, October 20, 2007  
 Geometry/topology seminar, Davis, October 18, 2006  
 Computational applications of algebraic topology, MSRI, October 2, 2006

## Courses taught

*Ohio State (2011–)*: Introductory combinatorics (undergraduate), Graph Theory and Combinatorics I & II (graduate), Linear algebra and differential equations for engineers (undergraduate), Graduate topics courses: Random graphs and percolation theory, Random spaces and groups, Random metric spaces  
*Stanford (2007–2010)*: Mathematics of the Rubik's Cube, Modern Algebra, Applied Number Theory and Cryptography, Polya Problem Solving Seminar, Ordinary Differential Equations and Linear Algebra, Introduction to Combinatorics, Set Theory, Linear Algebra and Multivariable Calculus  
*Canada/USA Mathcamp (Summers 2003, 2005–2007)* Zoology of Polytopes, Moore Method Topology, Topological and Geometric Graph Theory, The Probabilistic Method, Combinatorial Homotopy Theory, Linear algebra, Symmetric Functions, Enumeration Celebration  
*University of Washington (2001–2007)*: Ordinary Differential Equations, Linear algebra, Calculus, Grader for Topology and Geometry of Manifolds  
*Colorado State University (1999–2001)*: Modern Algebra, Linear algebra, Calculus, Trigonometry; Assistant director of the Individualized Mathematics Program

**Organizing**

Algebraic Topology and Topological Data Analysis: A conference in honor of Gunnar Carlsson, IMA, Minneapolis, August 2022  
Workshop on Topological Data Analysis, IMSI, Chicago, April 2021  
ATMCS 2020, scheduled for June 2020 but cancelled due to COVID  
Block Course on Stochastic Topology, TU Berlin, scheduled for March 2020 but cancelled due to COVID  
AMS Central Sectional Meeting, March 2018  
ICERM Semester Program on “Topology in Motion”, Autumn 2016  
Probabilistic Methods in Topology, CRM, November 14–18, 2016  
TGDA@OSU 2016, May 2016  
Special session “Random spaces”, AMS Central Autumn Sectional Meeting, Eau Claire, WI, 2014  
Executive committee, ATMCS 6, Vancouver, Canada, summer 2014  
Scientific committee, Applied Topology, Bedlewo, Poland, summer 2013.  
TGDA seminar, Ohio State, 2013–  
Special session “Applied topology”, AMS sectional meeting, Akron, OH, October 20–21, 2012  
Combinatorics seminar, Ohio State, 2011–  
IAS seminar in “Geometry and cell complexes”, 2010–2011  
Seminar in “Graph homomorphisms”, Stanford, Autumn 2009  
Bay Area Discrete Math Day, 2007–2010  
Combinatorics and geometry seminar, Stanford, 2007–2008  
Graduate Student Conference in Combinatorics, UW, Spring 2007.

**Graduate advising**

Chloe Ireland (current)  
Christopher Donnay (current)  
Shreeya Behera (current)  
Andrew Vander Werf (current)  
Ayat Ababneh (PhD 2022)  
Paul Duncan (PhD 2022)  
Francisco Martinez Figueroa (PhD OSU 2022)  
Jimin Kim (PhD OSU, 2022)  
Katherine Ritchey (PhD OSU, 2019)  
Érika Roldán Roa (PhD CIMAT, 2018)  
Andrew Newman (PhD OSU, 2018)  
Kyle Parsons (PhD OSU, Summer 2017)  
Greg Malen (PhD OSU, Spring 2016)

**Other students mentored**

Kenneth Berglund, M.S., Summer 2021  
Kaelyn Willingham, B.S., Spring 2021  
Jessica Zehel, M.S., Ohio State, Spring 2018  
Joseph Bedich, M.S., Ohio State, Spring 2018 (PhD program in mathematics education, Ohio State)  
Peter Kosek, M.S., Ohio State, Autumn 2014 (faculty, Sterling College)  
Birra Taha, B.S., Ohio State, 2013 (Medical school, Cornell)  
Dominic Dotterrer, Ph.D., Toronto, 2013 (Dickson Assistant Professor, Chicago)  
Ted Dokos, B.S., Ohio State, 2012 (PhD program in mathematics, UCLA)  
Sukhada Fadnavis, Ph.D., Stanford, 2012 (Benjamin Peirce Fellow, Harvard)  
Jackson Gorham, B.S., Stanford 2010 (PhD program in statistics, Stanford)  
Heather M. Lee, B.S., Washington 2007 (PhD program in mathematics, UC Berkeley)

**Postdocs mentored**

Ranthonny Edmonds  
Hannah Alpert  
Fedor Manin

Benjamin Schweinhart  
Jeremy Mason  
Matthew Wright  
Izhar Oppenheim

**Editor** Associate Editor, ALEA (Latin American Journal of Probability and Mathematical Statistics), 2016–18

**Refereeing** Algebraic & Geometric Topology  
Annals of Applied Probability  
Annals of Probability  
Annals of Mathematics  
Discrete & Computational Geometry  
Discrete Mathematics  
Experimental Mathematics  
European Journal of Combinatorics  
Journal of Applied & Computational Topology  
Journal of Topology & Analysis  
Pacific Journal of Mathematics  
Probability Theory and Related Fields  
Proceedings of the American Mathematical Society  
Proceedings of the National Academy of Sciences  
Random Structures & Algorithms  
Rose-Hulman Undergraduate Journal  
Symposium on Computational Geometry

**Other service** AMS Centennial Committee (2018–20)  
AMS Central Section Committee (2016–18)  
Grant review for various funding agencies: NSF, NSA, ISF, ESF, etc.