



DREXEL UNIVERSITY
College of
Arts and Sciences

Department of Mathematics



Annual Report
2025-2026

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Content collected by:

Anatolii Grinshpan

Sobha Philip

Hugo Woerdeman

Assisted by:

Vivina Dong

Tenure Stream Faculty

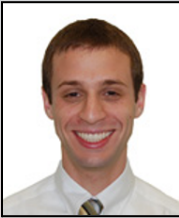
	David Ambrose <i>Professor</i> PhD – Duke University
	Jonah Blasiak <i>Associate Professor</i> PhD – University of California, Berkeley
	B. Cooper Boniece <i>Assistant Professor</i> PhD – Tulane University
	Darij Grinberg <i>Associate Professor</i> PhD – Massachusetts Institute of Technology
	Pavel Grinfeld <i>Associate Professor</i> PhD – Massachusetts Institute of Technology
	Yixin Guo <i>Associate Professor</i> PhD – University of Pittsburgh

	R. Andrew Hicks <i>Professor</i> PhD – University of Pennsylvania
	Pawel Hitczenko <i>Professor</i> PhD – Warsaw University
	Georgi Medvedev <i>Professor</i> PhD – Boston University
	Cecilia Mondaini <i>Associate Professor</i> PhD – Federal University of Rio de Janeiro
	Shari Moskow <i>Professor, Undergraduate Advisor</i> PhD – Rutgers University
	James E. Pascoe <i>Assistant Professor</i> PhD – University of California, San Diego

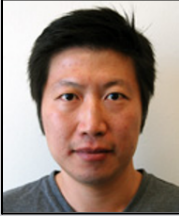
	Ronald Perline <i>Associate Professor</i> PhD – University of California, Berkeley
	Li Sheng <i>Associate Professor</i> PhD – Rutgers University
	Gideon Simpson <i>Professor,</i> <i>Associate Department Head, Graduate Advisor</i> PhD – Columbia University
	Xiaoming Song <i>Associate Professor</i> PhD – University of Kansas
	Hugo J. Woerdeman <i>Professor</i> PhD – Vrije University, Amsterdam
	J. Douglas Wright <i>Professor, Department Head</i> PhD – Boston University

	Jingni Xiao <i>Assistant Professor</i> PhD – Hong Kong Baptist University
	Thomas Pok-Yin Yu <i>Professor</i> PhD – Stanford University

Teaching Faculty

	Jason Aran <i>Teaching Professor,</i> <i>Associate Department Head</i> MS – Drexel University
	Patricia D. Bobo <i>Assistant Teaching Professor</i> MA, Actuarial Science – Temple University
	Fernando Carreon <i>Teaching Professor</i> PhD – University of Texas, Austin
	Daryl Falco <i>Associate Teaching Professor</i> MS – Drexel University

	Raymond Favocci <i>Associate Teaching Professor</i> MS – Drexel University
	Ramesh Garimella <i>Associate Teaching Professor</i> PhD – University of Toledo
	Anatolii Grinshpan <i>Associate Teaching Professor</i> PhD – University of California, Berkeley
	Andrew Klimas <i>Assistant Teaching Professor</i> DA – Idaho State University
	Caitlin Klimas <i>Assistant Teaching Professor</i> DA – Idaho State University
	Jeffrey LaComb <i>Associate Teaching Professor</i> PhD – Duke University

	Oksana Odintsova <i>Teaching Professor</i> PhD – Omsk State University
	Dimitrios Papadopoulos <i>Associate Teaching Professor</i> EdD – Drexel University
	Adam Rickert <i>Associate Teaching Professor</i> MS – Drexel University
	K. Shwetketu Virbhadra <i>Assistant Teaching Professor</i> PhD – Physical Research Laboratory, India
	Richard White <i>Assistant Teaching Professor</i> MS – St. Joseph's University
	Dennis Yang <i>Associate Teaching Professor</i> PhD – Cornell University



Matthew Ziemke
Associate Teaching Professor
PhD – University of South Carolina

Adjunct Faculty



Paul Caruso
Adjunct Instructor
M. Ed – Temple University



Anthony J. D'Alesandro
Adjunct Instructor
MS – Rutgers University



June Gordon
Adjunct Instructor
MS – Drexel University



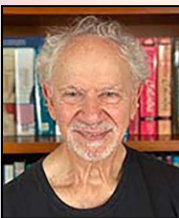
Boris Kheyfets
Adjunct Instructor
PhD – Drexel University



Susanne Kriete
Adjunct Instructor
MS – University of Stuttgart, Germany

	Rolando Placeres Jimenez <i>Adjunct Instructor</i> PhD in Physics – Federal University of São Carlos
	Patrick R. Shields <i>Adjunct Instructor</i> PhD – Drexel University
	Jeanne Steuber <i>Adjunct Instructor</i> MS – Boston University
	Olga Trubina <i>Adjunct Instructor</i> PhD – Moscow State Pedagogical University

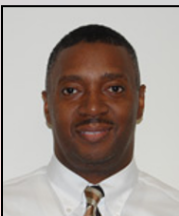
Emeriti Faculty

	Howard Anton <i>Professor Emeritus</i> PhD – Polytechnic Institute of Brooklyn
	Robert Boyer <i>Professor Emeritus</i> PhD – University of Pennsylvania

	Robert Busby <i>Professor Emeritus</i> PhD – University of Pennsylvania
	William Goh <i>Associate Professor Emeritus</i> PhD – Ohio State University
	Marci Perlstadt <i>Associate Professor Emeritus</i> PhD – University of California, Berkeley
	Chris Rorres <i>Professor Emeritus</i> PhD – Courant Institute, New York University
	Patricia Russell <i>Teaching Professor Emerita</i> MS – Drexel University
	Eric Schmutz <i>Professor</i> PhD – University of Pennsylvania

	Justin Smith <i>Professor Emeritus</i> PhD – Courant Institute, New York University
	Jet Foncannon <i>Professor Emeritus</i> PhD – University of Edinburgh

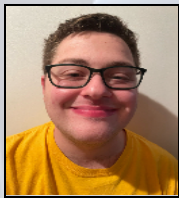
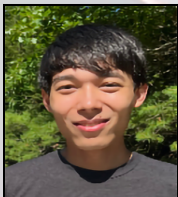
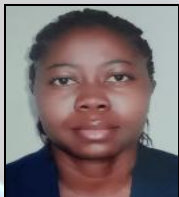
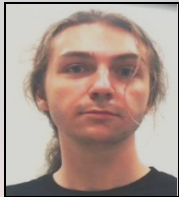
Staff

	Paige Chmielewski <i>Academic Advisor</i>
	Kenneth Hemphill <i>Department Administrator</i>
	Sobha Philip <i>Director of the Math Resource Center</i>

Departure

	Kenneth Hemphill left the department mid August 2026 to become Associate Director of Finance in the Fox School of Business at Temple University. Kenn started working in our department in 2010 as Financial Administrator and became Department Administrator in 2021. He worked under three department heads who all relied very much on his administrative expertise. We wish Kenn all the best in his new position.
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Teaching & Research Assistants

				
Sultan Aitzhan	Michael Becht	Julian Bushelli	Molly Chapman	Juliane Dalben
				
Liam Doherty ¹	Elizabeth Ehme	Sarah Gold	Abdellah Islam	Benjamin Liber
				
Peter Mao	Ross McNeill	Lorenzo Noé	Ibukun Ogunjimi	Kayode Oluwasegun
				
Anya Pant	Nicholas Radley	Hayden Ruff	Navtej Singh	AJ Tortoriello
				
Jasper Ty	Aiden Van Horn	Hunter Wages	Tingyu Zhou	

¹ Part time PhD student

Publications

Publications from the calendar year 2025. Names in bold are associated with Drexel's Mathematics Department.

Benjamin F. Akers and **David M. Ambrose**. Internal capillary-gravity Wilton ripples. *Water Waves*, 7(2):201–223, 2025.

Udoh Akpan and **J. Douglas Wright**. Coherent structures in long-range FPUT lattices, Part I: Solitary waves. *Stud. Appl. Math.*, 155(4):Paper No. e70119, 18, 2025.

David M. Ambrose. The velocity field and Birkhoff–Rott integral for nondecaying, nonperiodic vortex sheets. *SIAM J. Appl. Math.*, 85(2):456–476, 2025.

David M. Ambrose, Megan Griffin–Pickering, and Alpár R. Mészáros. Kinetic-type mean field games with non-separable local Hamiltonians. *J. Lond. Math. Soc. (2)*, 111(6):Paper No. e70202, 36, 2025.

David M. Ambrose, Fazel Hadadifard, and James P. Kelliher. Horizontally periodic generalised surface quasigeostrophic patches and layers. *Nonlinearity*, 38(9):Paper No. 095032, 52, 2025.

David M. Ambrose, Milton C. Lopes Filho, and Helena J. Nussenzveig Lopes. Improved regularity and analyticity of Cannone–Karch solutions of the three-dimensional Navier–Stokes equations on the torus. *Monatsh. Math.*, 206(4):781–795, 2025.

J. Baker, E. Cherkaev, V. Druskin, **S. Moskow**, and M. Zaslavsky. Regularized reduced order Lippmann–Schwinger–Lanczos method for inverse scattering problems in the frequency domain. *J. Comput. Phys.*, 525:Paper No. 113725, 16, 2025.

Justin Baker, Elena Cherkaev, Vladimir Druskin, **Shari Moskow**, and Mikhail Zaslavsky. Reduced order Lippmann–Schwinger–Lanczos inverse scattering method. In *Inverse problems: modelling and simulation*, Trends Math., pages 257–263. Birkhäuser/Springer, Cham, 2025.

Nils Berglund, **Georgi S. Medvedev**, and **Gideon Simpson**. Metastability in the stochastic nearestneighbour Kuramoto model of coupled phase oscillators. *Nonlinearity*, 38(9):Paper No. 095031, 42, 2025.

Kelly Bickel, Greg Knese, **James Eldred Pascoe**, and Alan Sola. Stable polynomials and admissible numerators in product domains. *Bull. Lond. Math. Soc.*, 57(2):377–394, 2025.

- J. Blasiak**, H. Eriksson, P. Pylyavskyy, and I. Siegl. Noncommutative Schur functions for posets. *Selecta Math. (N.S.)*, 31(1):Paper No. 21, 56, 2025.
- J. Blasiak**, M. Haiman, J. Morse, A. Pun, and G. H. Seelinger. Dens, nests and the Loehr–Warrington conjecture. *J. Amer. Math. Soc.*, 38(4):1049–1106, 2025.
- J. Blasiak**, M. Haiman, J. Morse, A. Pun, and G. H. Seelinger. A raising operator formula for Macdonald polynomials. *Forum Math. Sigma*, 13:Paper No. e47, 18, 2025.
- Jonah Blasiak**, Henry Cohn, Joshua A. Grochow, Kevin Pratt, and Chris Umans. Finite matrix multiplication algorithms from infinite groups. In *16th Innovations in Theoretical Computer Science Conference, volume 325 of LIPIcs. Leibniz Int. Proc. Inform.*, pages Art. No. 18, 23. Schloss Dagstuhl. Leibniz-Zent. Inform., Wadern, 2025.
- B. Cooper Boniece**, Lajos Horváth, and Lorenzo Trapani. On changepoint detection in functional data using empirical energy distance. *J. Econometrics*, 250:Paper No. 106023, 19, 2025.
- Thomas Britz, Xin Hu, **Abdellah Islam**, and Hopein C. Tang. Bounds on the closeness centrality of a graph. *Bull. Malays. Math. Sci. Soc.*, 48(4):Paper No. 135, 15, 2025.
- Anne Bronzi, Ricardo Guimarães, and **Cecilia Mondaini**. On the locally self-similar blowup for the generalized SQG equation. *J. Differential Equations*, 415:266–302, 2025.
- Luke C. Brown** and **David M. Ambrose**. Equilibria in the large-scale competition for market share in a commodity with resource-buying. *Dyn. Games Appl.*, 15(1):48–73, 2025.
- Charles Burnette**. Involution factorizations of Ewens random permutations. *Discrete Math. Theor. Comput. Sci.*, 27(2):Paper No. 11, 26, 2025.
- Dechang Chen, Alvin J. Liu, **Li Sheng**, Zhenqiu Liu, and Irina Elcheva. A five-gene signature for the prediction of event-free survival of both pediatric and adult acute myeloid leukemia. *Diagnostics*, 15(11), 2025.
- Lucas Chesnel, Houssein Haddar, Hongjie Li, and **Jingni Xiao**. Examples of non-scattering inhomogeneities. *Inverse Probl. Imaging*, 19(5):940–964, 2025.

- V. Druskin, **S. Moskow**, and M. Zaslavsky. On optimality and bounds for internal solutions generated from boundary data-driven Gramians. *Inverse Problems*, 41(10):Paper No. 105008, 25, 2025.
- Alexander Furia** and **Shari Moskow**. First order corrections to the homogenized scattering resonances for periodic scatterers. *J. Math. Phys.*, 66(4):Paper No. 043502, 16, 2025.
- Mahya Ghandehari and **Georgi S. Medvedev**. The large deviation principle for W-random spectral measures. *Appl. Comput. Harmon. Anal.*, 77:Paper No. 101756, 12, 2025.
- Sarah Gift** and **Hugo J. Woerdeman**. Construction of a solution to the rank 2 Horn problem. *Electron. J. Linear Algebra*, 41:304–337, 2025.
- Sarah Gift** and **Hugo J. Woerdeman**. The interplay between two kinds of Hermitian determinantal representations. *SIAM J. Matrix Anal. Appl.*, 46(2):1346–1377, 2025.
- Sarah Gift** and **Hugo J. Woerdeman**. Matrices with rotation and/or reflection invariant higher rank numerical ranges. *Linear Multilinear Algebra*, 73(16):3696–3719, 2025.
- Nathan E. Glatt-Holtz and **Cecilia F. Mondaini**. Long-term accuracy of numerical approximations of SPDEs with the stochastic Navier-Stokes equations as a paradigm. *IMA J. Numer. Anal.*, 45(3):1648–1742, 2025.
- Darij Grinberg** and Ekaterina A. Vassilieva. A permutation based approach to the q -deformation of the Dynkin operator. *Sém. Lothar. Combin.*, 93B:Art. 61, 12, 2025.
- Gilbert J. Groenewald, Sanne ter Horst, and **Hugo J. Woerdeman**. Indefinite determinantal representations versus nonsingularities on the noncommutative d -torus. *Linear Algebra Appl.*, 720:245–255, 2025.
- Gilbert J. Groenewald, Sanne ter Horst, and **Hugo J. Woerdeman**. Optimal interpolation in Hardy and Bergman spaces: a reproducing kernel Banach space approach. *Trans. Amer. Math. Soc.*, 378(6):4303–4333, 2025.
- R. Andrew Hicks**. Imaging Properties of freeform quadric reflectors via the theory of eigenmirrors. *Journal of the Optical Society of America A* 42(12):1936–1945, 2025.
- Paweł Hitzenko** and Jacek Wołowski. Expected number of jumps and the number of active particles in TASEP. *J. Stat. Phys.*, 192(8):Paper No. 99, 15, 2025.

- Leslie Hogben, Mark Hunnell, Kevin Liu, Houston Schuerger, Ben Small, and **Yaqi Zhang**. New structures and their applications to variants of zero forcing and propagation time. *Electron. J. Combin.*, 32(2):Paper No. 2.19, 32, 2025.
- Martin Kolodziejczyk, Michela Ottobre, and **Gideon Simpson**. Counting the number of stationary solutions of partial differential equations via infinite dimensional sampling. *Philos. Trans. Roy. Soc. A*, 383(2298):Paper No. 20240239, 16, 2025.
- Shunlian Liu and **David M. Ambrose**. Asymptotics of two-dimensional hydroelastic waves: the zero mass, zero bending limit. *J. Differential Equations*, 424:381–420, 2025.
- Kayode Oluwasegun**, Samuel Ajibola, **Udoh Akpan**, Lanre Akinyemi, and Mehmet Şenol. Investigation of oceanic wave solutions to a modified (2+1)-dimensional coupled nonlinear Schrödinger system. *Modern Phys. Lett. B*, 39(19):Paper No. 2550036, 24, 2025.
- Jonathan Parlett**. Fixed point homing shuffles. *Discrete Math. Theor. Comput. Sci.*, 27(1):Paper No. 9, 15, 2025.
- James E. Pascoe**. The sequential compactness theorem in the strong operator topology modulo unitary conjugation. In *"Operator Theory"* (Editors: Daniel Alpay, Irene Sabadini, Fabrizio Colombo), Springer, Basel, 2025.
- Eric Schmutz** and Michael Tait. Cardinalities of g -difference sets. *Integers*, 25:Paper No. A77, 17, 2025.
- Denis A. Silantyev, Pavel M. Lushnikov, Michael Siegel, and **David M. Ambrose**. Exact periodic solutions of the generalized Constantin-Lax-Majda equation with dissipation. *Stud. Appl. Math.*, 155(3):Paper No. e70115, 38, 2025.
- Michael S. Vogelius and **Jingni Xiao**. Finiteness results for nonscattering Herglotz waves: the case of inhomogeneities obtained by very general perturbations of disks. *SIAM J. Math. Anal.*, 57(5):5135–5160, 2025.
- Thomas Yu**. The essential best and average rate of convergence of the exact line search gradient descent method. *Numerical Algorithms*, 18 November 2025.

Presentations

Sultan Aitzhan, “*Well-posedness and stability of the Benjamin-Ono equation with quasiperiodic initial data*”, 2025 SIAM New York-New Jersey-Pennsylvania Section Conference, Pennsylvania State University, October 31–November 2, 2025.

Sultan Aitzhan, “*Existence theory for the Benjamin-Ono equation with quasiperiodic initial data*,” AMS Spring Eastern Sectional, Boston College, Chestnut Hill, MA, March 28–29, 2026.

David Ambrose, “*The Birkhoff–Rott Integral for Non-Decaying, Non-Periodic Vortex Sheets and Water Waves*,” Minisymposium "Nonlinear Waves and Interfacial Dynamics", SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

David Ambrose, “*Nonseparable, Nonlocal Mean Field Games with Initial Distributions in Negative-index Sobolev Spaces*,” Minisymposium "Mean Field Games and Control", SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

David Ambrose, “*A unified and extended Hilbert transform and Birkhoff–Rott integral*,” Applied Math and Computational Sciences Seminar, University of Pennsylvania, Philadelphia, PA, December 8, 2025.

David Ambrose, “*Some non-decaying, non-periodic existence theory for fluid equations*,” Hyperbolic & Dispersive PDE Seminar, Rutgers University, New Brunswick, NJ, February 19, 2026.

David Ambrose, “*Some non-decaying, non-periodic existence theory for fluid equations*,” PDE Seminar, Brown University, Providence, RI, April 10, 2026.

David Ambrose, “*Analysis of Models of the Motion of Flame Fronts*,” Minisymposium on Interfaces in Partial Differential Equations, SIAM Conference on Nonlinear Waves and Coherent Structures, Montréal, Québec, Canada, May 27, 2026.

David Ambrose, “*Nonlocal mean field games with pseudomeasure or negative Sobolev initial distributions*,” Special Session on Mean-Field Games: From Partial Differential Equations to Numerical Methods, The 15th AIMS Conference, Athens, Greece, July 6–10, 2026.

David Ambrose, “*Analytical frameworks for spatially quasiperiodic or uniformly local free-surface flows*,” Special Session on Models of Fluid Motion, The 15th AIMS Conference, Athens, Greece, July 6–10, 2026.

Juliane C. Baiochi Dalben, “*On the study of exponential mixing properties of the stochastically forced Boussinesq system for Rayleigh–Bénard convection*,” 2025 New-York—New Jersey—Pennsylvania SIAM Section Conference, The Pennsylvania State University, State College, PA, October 31–November 2, 2025.

Juliane C. Baiochi Dalben, “*On the Study of the Long-Time Statistics of the Stochastically Forced Boussinesq System for Rayleigh–Bénard Convection*,” SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

Juliane C. Baiochi Dalben, “*Long-time stability of some stochastic geophysical systems with respect to model parameters*,” Special Session “Recent Progress on the Mathematical Theory of Fluid Equations,” AMS Spring Western Sectional Meeting Boise State University, Boise, ID, March 7–8, 2026

Juliane C. Baiochi Dalben, “*Long-time stability of some stochastic geophysical systems with respect to model parameters*,” Special Session “Fluid dynamics and nonlinear partial differential equations,” AMS Spring Southeastern Sectional Meeting, Georgia Southern University–Armstrong Campus, Savannah, GA, March 28–29, 2026

Juliane C. Baiochi Dalben, “*From Contraction to Continuity: Stability of Long-Time Statistics of Some Stochastic Fluid Models*,” ISCAM Seminar, Indiana University, Bloomington, IN, April 15, 2026.

Juliane C. Baiochi Dalben, “*Long-time Stability of Stochastic Fluid Models*,” Workshop for Research and Workforce Development in Fluid Mechanics II, University of Nebraska, Lincoln, NE, April 24–26, 2026.

Jonah Blasiak, “*Modified nonsymmetric Macdonald polynomials*,” Computation in Representation Theory, Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, RI, November 10–14, 2025.

Jonah Blasiak, Mini course “*k-Schur and Catalan functions*” consisting of lectures “*k-Schur functions, Catalan functions, and the k-Schur branching rule*,” “*K-k-Schur functions and K-theoretic Catalan functions*,” and “*Schur positivity of Catalan functions via affine Demazure crystals*,” Affine Combinatorics and Quantum K-Theory, Ohio State Research Tutorial Group (RTG) Workshop and Retreat, Columbus, OH, USA, May 26–29, 2026

- B. Cooper Boniece**, *“Online monitoring for distributional changes with energy distances,”* 19th International Joint Conference CFE-CMStatistics, London, December 13-15, 2025
- B. Cooper Boniece**, *“Truncation methods and recent developments in jump-robust inference of volatility,”* Joint Mathematics Meetings, Washington, DC, January 2026
- B. Cooper Boniece**, *“Changepoint detection with kernel methods,”* Denison University, Denison, OH, March 2026
- B. Cooper Boniece**, *“Online monitoring with degenerate U-statistics,”* 3rd International Conference on Change-Point, Le Havre, France, May 2026
- B. Cooper Boniece**, *“Online monitoring with maximum mean discrepancy,”* 7th International Symposia on Nonparametric Statistics, Thessaloniki, Greece, June 2026
- B. Cooper Boniece**, *“Sequential monitoring for distributional changepoints in time series,”* 9th International Conference on Econometrics and Statistics, Kyoto, Japan. August 8-10, 2026
- Julian Bushelli**, *“The Free Functional Calculus in General,”* Joint Mathematics Meetings, Washington, DC, January 4-7, 2026
- Julian Bushelli**, *“The free functional calculus in general,”* Great Plains Operator Theory Symposium (GPOTS), University of Iowa, Iowa City, IA, May 26-30, 2026
- Julian Bushelli**, *“Free Functional Calculus in General,”* International Workshop Operator Theory and its Applications (IWOTA), Quebec City, Canada, August 2-7, 2026
- Darij Grinberg**, *“Shuffles in the symmetric group algebra,”* Combinatorics Seminar, Dartmouth College, Hanover, NH, October 14, 2025
- Darij Grinberg**, *“Shuffles in the symmetric group algebra,”* Combinatorics Seminar, MIT, Cambridge, MA, October 15, 2025
- Darij Grinberg**, *“Shuffles in the symmetric group algebra,”* Mathematics Colloquium, Bar-Ilan University, Ramat Gan, Israel, January 25, 2026
- Darij Grinberg**, *“Tales of the descent algebra,”* Combinatorics Seminar, MIT, Cambridge, MA, March 20, 2026
- Darij Grinberg**, *“Tales of the descent algebra,”* Ruhr-Universität, Bochum, Germany, April 20, 2026

Darij Grinberg, *"Tales of the descent algebra,"*

Combinatorics Seminar, Stockholm University, Stockholm, Sweden, May 6, 2026

Darij Grinberg, *"A quotient of the ring of symmetric functions generalizing quantum cohomology,"* Commutative Algebra Seminar, KTH Royal Institute of Technology, Stockholm, Sweden, May 26, 2026

Darij Grinberg, *"Tales of the descent algebra,"* Seminar, Computer Science Laboratory (LIX), École Polytechnique, Paris, France, June 1, 2026

Darij Grinberg, *"Shuffles in the symmetric group algebra,"* Séminaire Philippe Flajolet, Institut Henri Poincaré (IHP), Paris, France, June 4, 2026

Pawel Hitczenko, *"Limiting distribution of some of the Graham–Knuth–Patashnik recurrences,"* AMS Fall Southeastern Sectional Meeting, Tulane University, New Orleans, LA, October 3–5, 2025

Pawel Hitczenko, *"Expected Number of Moves and the Number of Active Particles in TASEP,"* The Kardar–Parisi–Zhang Universality Class and Related Topics, Brin Center, University of Maryland, College Park, MD, April 20–24, 2026

Abdellah Islam, *"Positivity of hereditary quadratic nc polynomials and x^*x -convex domains,"* Joint Mathematics Meetings, Washington, DC, January 4–7, 2026



Julian Bushelli, Molly Chapman, Abdellah Islam, Lorenzo Noé, Nicholas Radley and Jasper Ty at the Joint Mathematics Meetings in Washington, DC, January 4–7, 2026.

Abdellah Islam, “*Positivity of hereditary quadratic NC polynomials*,” South Eastern Analysis Meeting (SEAM), University of Richmond, Richmond, VA, March 13–15, 2026

Abdellah Islam, “*Positivity of hereditary quadratic nc polynomials and x^*x -convex domains*,” Great Plains Operator Theory Symposium (GPOTS), University of Iowa, Iowa City, IA, May 26–30, 2026

Abdellah Islam, “*Positivity of hereditary quadratic nc polynomials*,” International Workshop Operator Theory and its Applications (IWOTA), Quebec City, Canada, August 2–7, 2026

Benjamin Liber, “*An equality for balanced digraphs*,” Graduate Student Combinatorics Conference (GSCC 2026), University of Illinois Chicago, Chicago, IL, March 27–29, 2026

Benjamin Liber, “*An equality for balanced digraphs*,” Center for Mathematics at the University of Notre Dame (CMND) 2026 Thematic Program: Algebraic Combinatorics and Applications, International Conference Week, University of Notre Dame, South Bend, IN, July 6–10, 2026.

Georgi Medvedev, “*Interacting dynamical systems on self-similar networks*,” The 15th AIMS Conference, National and Kapodistrian University of Athens, Athens, Greece, July 6–10, 2026

Cecilia Mondaini, “*Multiproposal MCMC algorithms and their large proposal limits*,” Workshop: Data Assimilation and Inverse Problems for Digital Twins, IMSI, Chicago, IL, October 6–10, 2025.

Cecilia Mondaini, “*A General Framework for Convergence of Statistical Solutions and Applications*,” Minisymposium “Recent Advances in Mathematical and Computational Fluid Dynamics,” SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

Cecilia Mondaini, “*Multiproposal MCMC strategies under the large proposal limit perspective*,” Workshop: “Bayesian Inverse Problems and UQ”, ICERM, Providence, RI, March 2–6, 2026.

Cecilia Mondaini, “*A General framework for convergence of statistical solutions and applications*,” Minisymposium “Uncertainty Quantification and Propagation in Transport Dominated PDEs,” SIAM Conference on Uncertainty Quantification, Minneapolis, MN, March 22–25, 2026.

Shari Moskow, “*Scattering by Periodic Structures and Related Spectral Problems*,” Minisymposium “Inverse Problems for PDEs: Inverse Scattering and Non-scattering,” SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

Shari Moskow, “*On Optimality and Bounds for Internal Solutions Generated from Impedance Data Driven Gramians*,” Minisymposium “Forward and Inverse Problems for Kinetic and Wave Models,” SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025

Shari Moskow, “*On optimality and bounds for internal solutions generated from impedance data driven Gramians*,” Zoom seminar, Korea Advanced Institute of Science & Technology (KAIST) Inverse Problems Group, Republic of Korea, March 2026

Shari Moskow, “*On optimality and bounds for internal solutions generated from impedance data driven Gramians*,” Inverse Problems: Modeling and Simulation (IPMS), Malta, May 31–June 5, 2026

Shari Moskow, “*On optimality and bounds for internal solutions generated from impedance data driven Gramians*,” Workshop “Inverse Problems in PDEs and Geometry” in Cortona, Italy, May 24–29, 2026

Shari Moskow, “*The Inverse Born series for nonlinear Helmholtz equations*,” Workshop and Summer school on Inverse Problems and Nonlinear PDEs, University Ismail Qemali Vlorë, Vlorë, Albania, June 29–July 1, 2026



« **Kayode Oluwasegun**, “*Investigation of oceanic wave solutions to a modified $(2+1)$ -dimensional coupled nonlinear Schrödinger system*,” Rising Stars in Computational and Data Sciences Workshop, Santa Fe Institute, Santa Fe, NM, April 7–8, 2026

James E. Pascoe, “*Kernel embeddings and Herglotz duality*,” University of Delhi, South Campus, New Delhi, India, September 9, 2025.

James E. Pascoe, “*Dilation theory and applications*,” Indian Statistical Institute, New Delhi, India, September, 10, 2025.

James E. Pascoe, “*Universality of the Schur Complement*,” Ashoka University, Haryana, India, September 11, 2025.



James E. Pascoe, “*Constrained sphere packing and the interpolation problem for positive definite functions*,” Northeastern Analysis Meeting (NEAM), University of Delaware, Newark, DE, November 1–2, 2025.

« *James Pascoe and Rajendra Bhatia in New Delhi, India, September 12, 2025.*

James E. Pascoe, “*The free functional calculus*,” Revisiting Fundamental Problems Workshop: Infinite-Dimensional Division Algebras – Algebraicity and Freeness, Simons Laufer Mathematical Sciences Institute (SLMath),

Berkeley, CA, December 1–5, 2025.

James E. Pascoe, “*Constrained sphere packing and the interpolation problem for positive definite functions*,” Midrash, Weizmann Institute, Rehovot, Israel, December 24, 2025.

James E. Pascoe, “*Constrained sphere packing and the interpolation problem for positive definite functions*,” Tsinghua Mathematical Forum, Sanya, China, December 2025.

James E. Pascoe, “*Constrained sphere packing and the interpolation problem for positive definite functions*,” Israel Noncommutative Analysis Seminar, Technion, Haifa, Israel, December 2025.

James E. Pascoe, “*Constrained sphere packing and the interpolation problem for positive definite functions*,” Ben Gurion University seminar, Be'er Sheva, Israel, December 2025.

James E. Pascoe, “(What is) *The tracial fundamental group and free universal monodromy?*,” Question and Answer Seminar, Center of Mathematical Sciences and Applications, Harvard University, Cambridge, MA, February 11, 2026

James E. Pascoe, “*Constrained sphere packing and the interpolation problem for positive definite functions*,” Great Plains Operator Theory Symposium (GPOTS), University of Iowa, Iowa City, IA, May 26–30, 2026

James E. Pascoe, "*A celebration of Agler, Foiaş and the future*," 30th International Conference in Operator Theory, Timisoara, Romania, June 29–July 3, 2026

James E. Pascoe, "*Thresholding of correlation matrices*," International Workshop Operator Theory and its Applications (IWOTA), Quebec City, Canada, August 2–7, 2026

James E. Pascoe, "*Quantum annuli and spectral constants*," International Workshop Operator Theory and its Applications (IWOTA), Quebec City, Canada, August 2–7, 2026

James E. Pascoe, "*The rational hereditary noncommutative Positivstellensatz and inner functions*," International Workshop Operator Theory and its Applications (IWOTA), Quebec City, Canada, August 2–7, 2026

Gideon Simpson, "*Metastability in a Stochastic Kuramoto System*," 2025 AMS Fall Southeastern Sectional Meeting, Tulane University, New Orleans, LA, October 3–5, 2025

Gideon Simpson, "*Continuum Limits and Metastability in Stochastic Kuramoto*," Analysis and Probability Seminar, Iowa State University, Ames, IA, January 21, 2026

Gideon Simpson, "*Continuum Limits and Metastability in Stochastic Kuramoto*," Applied Mathematics and Computational Science (AMCS) Seminar, University of Pennsylvania, Philadelphia, PA, March 30, 2026

Gideon Simpson, "*Numerical Methods for Stochastic McKean–Vlasov Equations*," The 15th AIMS Conference, National and Kapodistrian University of Athens, Athens, Greece, July 6–10, 2026

Hugo J. Woerdeman, "*Optimal interpolation in multivariable Hardy, Bergman and ℓ^p_A spaces: a reproducing kernel Banach space approach*," Joint Mathematics Meetings, Washington, DC, January 4–7, 2026

Hugo J. Woerdeman, "*Optimal interpolation in Hardy, Bergman and ℓ^p_A spaces: a reproducing kernel Banach space approach*," International Linear Algebra Society Meeting (ILAS), Blacksburg, VA, May 2026

Hugo J. Woerdeman, "*A Fourier analysis approach to disprove the weak Shanks conjecture*," International Workshop Operator Theory and its Applications (IWOTA), Quebec City, Canada, August 2–7, 2026

J. Douglas Wright, “*Random FPUT Lattices*,” Minisymposium “Nonlinear Waves and Interfacial Dynamics,” SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

J. Douglas Wright, “*Traveling Waves in Long Range FPUT Lattices*,” Workshop on Nonlinear Lattice Dynamics, Leiden University, Leiden, The Netherlands, July 13–17, 2026.

J. Douglas Wright, “*Radiating Solitary Waves*,” Conference on order and function in complex systems: coherent structures, selection and stability, University of Minnesota Twin Cities, Minneapolis, MN, August 10–14, 2026.

Jingni Xiao, “*Non-Scattering, Always-Scattering, and Inverse Scattering*,” Minisymposium “Inverse Problems for PDEs: Inverse Scattering and Non-scattering,” SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17–20, 2025.

Jingni Xiao, “*Corner scattering and inverse scattering revisited*,” INdAM Meeting “Inverse problems for PDE and geometry”, Cortona, Italy, May 24–29, 2026

Jingni Xiao, “*Non-Scattering Phenomena for Inhomogeneous Media*,” Analysis of Partial Differential Equations arising in Physics – A satellite conference of the 2026 ICM, Rutgers University, New Brunswick, NJ, July 13–16, 2026

Juliane Baiochi Dalben, Cecilia Mondaini, David Ambrose, Doug Wright, Jingni Xiao, Shari Moskow, Emily Kelting and Tim Faver at the SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November, 2025



Grants

- David M. Ambrose**, PI, National Science Foundation, DMS 2307638,
Well-Posedness and Singularity Formation in Applied Free Boundary Problems,
2023–2026, \$300,000
- Jonah Blasiak**, PI, National Science Foundation, DMS 2154282,
Collaborative Research: Special Functions for Diagonal Harmonics and Schubert Calculus, 2022–2027, \$259,999
- Jonah Blasiak**, PI, National Science Foundation, DMS 2452209,
Collaborative Research: Nonsymmetric Plethysm and Atom Positivity, 2025–2027,
\$180,000
- B. Cooper Boniece**, Co-PI, National Science Foundation, DMS 2309570,
Moment Invariant Data Aggregation for Signal Processing and Distribution Learning,
2023–2026, \$360,000
- B. Cooper Boniece**, PI, National Science Foundation, DMS 2413558,
Collaborative Research: Systemic Shock Inference for High-Frequency Data, 2024–2027,
\$100,000
- Georgi Medvedev**, PI, National Science Foundation, DMS 2406941,
Collaborative Research: Emerging Applications of Self-Similarity in Dynamical Networks, 2024–2027, \$170,814 (co-PI: Matthew Mizuhara, The College of New Jersey)
- Cecilia Mondaini**, PI, National Science Foundation, DMS 2239325,
CAREER: Analysis of uncertainty, long-time statistics and singularity formation in fluid flow models, 2023–2028, \$481,439
- Cecilia Mondaini**, Co-PI, Grimes Family Faculty Award, COE-Drexel University,
Bayesian Inference for Dynamic Transport Control in Electrochemical Separations,
2026–2027, \$10,000 (PI: Wesley Chang, Drexel University)
- Shari L. Moskow**, PI, National Science Foundation, DMS 2308200,
Data driven inversion methods and image reconstruction for nonlinear media,
2023–2026, \$270,000
- James E. Pascoe**, Co-PI, United States – Israel Binational Science Foundation, 2022235,
Local and algebraic phenomena in noncommutative function theory, 2025–2027,
\$146,400

Hugo J. Woerdeman, PI, National Science Foundation, DMS 2348720,

Advances in rational operations in free analysis, 2024–2027, \$113,127

J. Douglas Wright, Simons Foundation, Collaborations in Mathematics and the

Physical Sciences, MPS-TSM-00007725, *Nonlinear waves in noisy and other complex environments*, 2024–2029, \$42,000

Jingni Xiao, PI, National Science Foundation, DMS 2307737,

Nonscattering Phenomena and Inverse Scattering, 2023–2027, \$270,000

Appointments

David Ambrose, Co-organizer (with Justin T. Webster) of the Special Session “*Stability and Periodicity in PDE Systems*” at the SIAM Conference on Analysis of Partial Differential Equations (SIAM PD25), Pittsburgh, PA, November 17–20, 2025.

David Ambrose, Organizer of the Special Session, “*Progress in Nonlinear Waves*,” at the spring Eastern Sectional Meeting of the AMS, Boston College, Boston, MA, March 28–29, 2026.

Juliane Baiochi Dalben, Participant, 2025 SIAM New York–New Jersey–Pennsylvania Section Conference, Pennsylvania State University, October 31–November 2, 2025

Juliane C. Baiochi Dalben, Visiting Research Fellow, Hosted by Professor Nathan Glatt-Holtz and Dr. Giulia Carigi, Indiana University, Bloomington, IN, April 12–May 16, 2026

Jonah Blasiak, Member,

Scientific Committee for the Mid-Atlantic Algebraic Geometry and Combinatorics Workshop

Jonah Blasiak, Member, Program Committee of the 38th international conference on Formal Power Series and Algebraic Combinatorics (FPSAC), University of Washington, Seattle, WA, July 13–17, 2026

Robert Boyer, Molly Chapman, Juliane C. Baiochi Dalben, Jonah Blasiak, Sarah Gold, Darij Grinberg, Abdellah Islam, Benjamin Liber, Shari Moskow, Ibukun Ogunjimi, Nicholas Radley, Danko Ramirez, Navtej Singh, Jasper Ty, Hugo J. Woerdeman, J. Douglas Wright, Participants, International Congress of Mathematics (ICM), Philadelphia, Pennsylvania, July 23–30, 2026



Benjamin Liber, Danko Ramirez and Hugo J. Woerdeman at ICM 2026

Molly Chapman, Lorenzo Noé, Nicholas Radley, Navtej Singh, and Jasper Ty,
Participants, Joint Mathematics Meetings, Washington, DC, January 4–7, 2026.

B. Cooper Boniece, Organizer of the Invited Session “*Nonparametric methods for dependence and structural change*,” 19th International Joint Conference CFE-CMStatistics, London, December 13–15, 2025

Julian Bushelli and Abdellah Islam, Participants, Revisiting Fundamental Problems Workshop: Infinite-Dimensional Division Algebras – Algebraicity and Freeness, Simons Laufer Mathematical Sciences Institute (SLMath), Berkeley, CA, December 1–5, 2025.

Julian Bushelli, Abdellah Islam, and Jasper Ty, Participants, Binghamton University Graduate Combinatorics, Algebra, and Topology Conference (BUGCAT), Binghamton, NY, November 15–16, 2025.

Brennan Finn, Abdellah Islam, Nicholas Radley, and Danko Ramirez, Participants, Northeastern Analysis Meeting (NEAM), University of Delaware, Newark, DE, November 1–2, 2025.

Darij Grinberg, Participant, Computation in Representation Theory, Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, RI, November 10–14, 2025.

Benjamin Liber, Participant, Center for Mathematics at the University of Notre Dame (CMND) 2026 Thematic Program: Algebraic Combinatorics and Applications, Mini-Course Week, University of Notre Dame, South Bend, IN, June 29–July 3, 2026.

Benjamin Liber, Participant, 38th International Conference on Formal Power Series and Combinatorics (FPSAC), University of Washington, Seattle, Washington, July 12–17, 2026.

Benjamin Liber, Participant, Combinatorics at the Confluence, Carnegie Mellon University, Pittsburgh, Pennsylvania, July 20–22, 2026.

Georgi Medvedev, Co-organizer (with Nils Berglund and Matthew Mizuhara) of the Special Session “*Collective Dynamics in Large Networks: From Kuramoto to Spin Models*,” The 15th AIMS Conference, National and Kapodistrian University of Athens, Athens, Greece, July 6–10, 2026.

Cecilia Mondaini, Co-organizer (with Giulia Carigi and Nathan Glatt-Holtz) of the Special Session “*Statistical Approaches to PDE Inverse Problems*” at the SIAM Conference on Analysis of Partial Differential Equations (SIAM PD25), Pittsburgh, PA, November 17–20, 2025.

Cecilia Mondaini, Local organizer, 2026 Mathematical Problems in Industry Workshop, hosted by SIAM, Drexel University, Philadelphia, PA, June 14–18, 2026.

Shari Moskow, Participant, Program “Geometric spectral theory and applications,” Isaac Newton Institute for Mathematical Sciences, UK, January 7– June 26, 2026.

Shari Moskow and J. Douglas Wright, Members, Social Events Committee, International Congress of Mathematics (ICM) 2026.

Shari Moskow and Jingni Xiao, Participant, Workshop “Interactions of geometric spectral theory with numerical methods and applications,” Isaac Newton Institute for Mathematical Sciences, UK, April 13–17, 2026.

Shari Moskow, Organizer, 2028 Women in Inverse Problems (WIP) Research Network Special Session, Association for Women in Mathematics (AWM).

James E. Pascoe, PhD advisor of Austin Jacobs, Department of Mathematics, University of Florida, Gainesville, FL. PhD defense took place October 24, 2025

James E. Pascoe and **Hugo J. Woerdeman**, Organizers, Special Session "*Matrix Analysis and Applications*," Joint Mathematics Meetings, Washington, DC, January 4-7, 2026

Navtej Singh, Participant, Graduate Student Combinatorics Conference (GSCC 2026), University of Illinois Chicago, Chicago, IL, March 27-29, 2026

Hugo J. Woerdeman, Member, International Programme Committee for 27th International Symposium on Mathematical Theory of Networks and Systems (MTNS), University of Waterloo, Canada, August 17-21, 2026

Hugo J. Woerdeman, Steering Committee Liaison, International Workshop on Operator Theory and its Applications (IWOTA), Stockholm, Sweden, 2027

Hugo J. Woerdeman, Board Member of the International Research Center for Tensor and Matrix Theory of Shanghai University

Hugo J. Woerdeman, Vice President, International Workshop Operator Theory and Analysis (IWOTA) Steering Committee

J. Douglas Wright, Member of the Scientific Committee, 2025 SIAM New York-New Jersey-Pennsylvania Section Conference, Pennsylvania State University, October 31-November 2, 2025

J. Douglas Wright, Co-organizer (with Wolf-Patrick Düll) of the Special Session "*Asymptotic Models for Nonlinear Waves in Fluids and Solids*" at the SIAM Conference on Analysis of Partial Differential Equations (SIAM PD25), Pittsburgh, PA, November 17-20, 2025.

Jingni Xiao, Co-organizer (with Fioralba Cakoni) of the Special Session "*Inverse Problems for PDEs: Inverse Scattering and Non-scattering*" at the SIAM Conference on Analysis of Partial Differential Equations (SIAM PD25), Pittsburgh, PA, November 17-20, 2025.

Several faculty members also serve as reviewers for funding agencies (such as the National Science Foundation and the Simons Foundation) and as referees for professional journals. However we do not provide specifics as these assignments are confidential.

Editorial Positions

David Ambrose, Associate Editor,
SIAM Review

David Ambrose, Division Editor,
Journal of Mathematical Analysis and Applications

Pawel Hitczenko, Editorial Board Member,
Open Journal of Discrete Mathematics

Georgi S. Medvedev, Associate Editor,
Discrete and Continuous Dynamical Systems - B

Georgi S. Medvedev, Associate Editor,
Networks and Heterogeneous Media

Shari Moskow, Associate Editor,
Inverse Problems

Shari Moskow, Associate Editor,
Inverse Problems and Imaging

Shari Moskow, Associate Editor,
SIAM Journal on Applied Mathematics

James E. Pascoe, Associate Editor,
Complex Analysis and Operator Theory

K. Shwetketu Virbhadra, Editorial Board Member,
Time and Space

K. Shwetketu Virbhadra, Section Board Member, Mathematical Physics
Axioms

Hugo J. Woerdeman, Associate Editor,
Annals of Functional Analysis

Hugo J. Woerdeman, Editor-in-Chief,
Operators and Matrices

Hugo J. Woerdeman, Guest Editor,
Integral Equations and Operator Theory

Hugo J. Woerdeman, Guest Editor,
Linear Algebra and its Applications

J. Douglas Wright, Associate Editor,
Communications in Analysis and Mechanics

Undergraduate Course Enrollment

Class	Fall	Winter	Spring	Summer	Total
MATH 100 Fundamentals of Mathematics	240	86	47	29	402
MATH 101 Introduction to Analysis I	599	260	98	67	1024
MATH 102 Introduction to Analysis II	84	187	105	39	415
MATH 105 Algebra Functions Trigonometry	60				60
MATH 107 Prob & Stat for Lib Arts	18		25		43
MATH 110 Precalculus	8	17	24		49
MATH 111 Practicum for Math 116	50				50
MATH 116 Calculus and Functions I	139	48			187
MATH 117 Calculus and Functions II		76	44		120
MATH 119 Mathematics For Design			93		93
MATH 121 Calculus I	401	114	66	16	597
MATH 122 Calculus II	208	341	206	17	772
MATH 123 Calculus III	48	83	76	12	219
MATH 171 Introduction to Analysis A	90	51	51	33	225
MATH 172 Introduction to Analysis B	33	51	50	25	159
MATH 173 Introduction to Analysis C	26	26	34	32	118
MATH 180 Discrete Computat Struct		52	93		145
MATH 200 Multivariate Calculus	186	159	285	85	715
MATH 201 Linear Algebra	214	222	223	107	766
MATH 210 Differential Equations	69	150	126	128	473
MATH 220 Intro to Math Reasoning	32	9	19		60
MATH 221 Discrete Mathematics	109	120	80	72	381
MATH 222 Combinatorics	15				15
MATH 235 Problem Solving Seminar	6				6
MATH 239 Math for the Life Sciences	25	17	55		97
MATH 250 Math Investment and Credit	25				25
MATH 285 Differential Equations II	18				18
MATH 291 Complex & Vector Analy for Eng	57	43	49	59	208
MATH 300 Numerical Analysis I	31				31
MATH 301 Numerical Analysis II		16			16
MATH 304 Numerical Linear Algebra		9			9
MATH 305 Intro Optimization Theory	18		17		35
MATH 311 Probability and Statistics I	114	95	98		307
MATH 312 Probability and Statistics II		28	30	32	90
MATH 313 Probability and Statistics III			24		24
MATH 318 Math App of Stat Software		15			15
MATH 320 Actuarial Mathematics		14			14
MATH 321 Vector Calculus		23			23
MATH 322 Complex Variables	16				16
MATH 323 Partial Differential Equations		28	20		48
MATH 331 Abstract Algebra I	24				24
MATH 332 Abstract Algebra II		11			11
MATH 387 Linear Algebra II		22			22
MATH 401 Elements of Modern Analysis I	31				31
MATH 402 Elements of Modern Analysis II		14			14
MATH 410 Scientific Data Analysis I	128		87		215
MATH 411 Scientific Data Analysis II		125		59	184
MATH 422 Introduction to Topology	14				14
MATH 449 Mathematical Finance		16			16
MATH 475 Cryptography		25			25
MATH 483 Intro to Monte Carlo Methods			8		8
MATH T180 Number Theory				15	15

Special Topics Courses

Spring Term:

MATH T880 – *Topics in Operator Theory*
– James Pascoe

Summer Term:

MATH T180 – *Dragons Prep: Elementary Number Theory* – Raymond Favocci

Undergraduate Research Projects

David Ambrose (supervisor), **Shari Moskow** (supervisor), and **Aiza Nygman** (Math),
“Computing perturbation problems for transmission eigenvalues”

Furkan Erbilgin (Math), **Anatolii Grinshpan** (supervisor),
“A Minimum–Area Problem for Coordinate Simplices ”

Edom Kiros (Carleton College), Phone Kyaw (CS), Jianhao Lin (CE), **Danko Rusan Ramirez Shareyeva** (Math), **Jingni Xiao** (supervisor), and **Henry Zhang** (Math),
“Machine Learning for Inverse Source Scattering and Non-Radiating Sources”

Rose Lancaster (Math), **Shari Moskow** (supervisor)
“Reduced order models for a nonlinear heat equation”

Independent Studies

Winter Term:

MATH I699 – *Applied Functional Analysis* –
J. Douglas Wright

Spring Term:

MATH I399 – *Spatial Data Analysis* –
Jeffrey LaComb
MATH I499 – *Analysis* – J. Douglas Wright

Departmental Service Assignments

Department Head: J. Douglas Wright

Associate Head & Scheduling: Jason Aran

Associate Head & Graduate Advisor:

Gideon Simpson

Undergraduate Advisor: Shari Moskow

Graduate Program

Graduate Admissions

Chair: Gideon Simpson

Chair: Jonah Blasiak

Deputy: Cecilia Mondaini

Members: Cooper Boniece, Yixin Guo,

Members: Jingni Xiao, Hugo

Georgi Medvedev, Thomas Pok-Yin Yu

Woerdeman, Xiaoming Song, James E.

Pascoe, Yixin Guo, Jonah Blasiak

Undergraduate Program: Service

Chair: Jason Aran

Deputy: Fernando Carreon

Members: Li Sheng, Georgi Medvedev, Caitlin Klimas, Oksana Odintsova, Adam Rickert, Richard White, Andrew Klimas, K. Shwetketu Virbhadra, Ray Favocci, Pavel Grinfeld, Dimitrios Papadopoulos, Ron Perline

Undergraduate Program: Recruitment

Chair: Ron Perline

Members: James E. Pascoe, Andrew Klimas

Undergraduate Program: Math

Majors/Minors

Chair: Shari Moskow

Deputy: David Ambrose

Members: Ramesh Garimella, Dennis Yang, Anatolii Grinshpan, Matthew Ziemke, R. Andrew Hicks, Thomas Pok-Yin Yu

Undergraduate Program: MAST

Majors, Actuarial Science Minors

Chair: Gideon Simpson

Deputy: Jeff LaComb

Members: Pawel Hitczenko, Cooper Boniece, Xiaoming Song, Li Sheng, Daryl Falco, Patricia Bobo, Cecilia Mondaini

Transfer/Study Abroad Credit

Coordinator: Xiaoming Song

Colloquium Coordinator: Ron Perline

Library Liaison: R. Andrew Hicks

Math Competition Coordinator:

James E. Pascoe

Math Student Organization Faculty**Advisor:** Caitlin Klimas**Actuarial Society Faculty Advisor:**

Daryl Falco

Coffee Break Committee

R. Andrew Hicks, Li Sheng

Pi Day Planning CommitteeAdam Rickert, Anatolii Grinshpan,
Andrew Klimas, Caitlin Klimas**Placement Exam Coordinator:**

Ray Favocci

Bulletin Board Wrangler:

K. Shwetketu Virbhadra

Award Committee**Chairs:** Yixin Guo and Oksana
Odintsova**Members:** Pavel Grinfeld**Annual Report**

Anatolii Grinshpan, Hugo Woerdeman

Department Photographer:

R. Andrew Hicks

Tenure and Promotion Committee**Chair:** Pawel Hitczenko**Members:** All tenured faculty at
appropriate rank**Teaching Faculty Promotion
Committee****Chairs:** Fernando Carreon, Oksana
Odintsova, Jason Aran**Members:** All teaching faculty at
appropriate rank**Analysis Seminar**

Anatolii Grinshpan, Hugo Woerdeman

CAGE Seminar**Organizer:** Jonah Blasiak**PDE/Applied Math Seminar**

Cecilia Mondaini, Jingni Xiao

Probability and Statistics Seminar

Cooper Boniece, Cecilia Mondaini

Course Coordinators:**Fall**100: Li Sheng
101: Oksana Odintsova and
Fernando Carreon
102: Adam Rickert
105: Jason Aran
116: Caitlin Klimas and Ray
Favocci
121: Dimitrios Papadopoulos
200: Andrew Klimas**Winter**100: Li Sheng
101: Oksana Odintsova
102: Adam Rickert
116: Caitlin Klimas
121: Ray Favocci
122: Dennis Yang
200: Andrew Klimas**Spring**101: Oksana Odintsova
102: Susanne Kriete
117 Caitlin Klimas
119: Adam Rickert
122: Dennis Yang
123: Daryl Falco
200: Dimitrios
Papadopoulos

University Service Assignments

Jason Aran, Senator, *Faculty Senate*

Jason Aran, Member, *Distinguished Professor Selection Committee*

Jason Aran, Member, *Retention Partners Committee*

B. Cooper Boniece, Member, *Department Head Review Committee*

Fernando Carreon, Member, *CoAS Undergraduate Curriculum Committee*

Caitlin Klimas, Member, *Department Head Review Committee*

Cecilia Mondaini, Member, *Department Head Review Committee*

Oksana Odintsova, Member, *Teaching Assistant Excellence Committee*

Kayode Oluwasegun, President, *Graduate Student Association (GSA)*

*Kayode Oluwasegun, Graduate Student Speaker, at the Investiture Ceremony of President Antonio Merlo,
April 16, 2026.*





Kayode Oluwasegun and President Merlo at the DEGS Conference, April 14, 2026

Kayode Oluwasegun, GSA Representative, *Senate Committee for Student Life*

Kayode Oluwasegun, Presenter, Drexel Academic Council, Drexel Emerging Graduate Scholars (DEGS) 2026 Conference Initiative

Kayode Oluwasegun, Co-organizer, Drexel Emerging Graduate Scholars (DEGS) 2026 Research Showcase

Dimitrios Papadopoulos, Member, *CoAS NTT Faculty Promotion Committee*

Gideon Simpson, Member, *Budget, Planning, and Development Committee, Senate*

Gideon Simpson, Member, *Department Head Review Committee*

Gideon Simpson, Masters Student Marshal, *CoAS Commencement*

Xiaoming Song, Faculty Marshal, *CoAS Commencement*

K. Shwetketu Virbhadra, Alternate Senator, *Faculty Senate*

Hugo J. Woerdeman, Member, *CoAS NTT Faculty Promotion Committee*

Hugo J. Woerdeman, Reviewer, *Provost Awards Committee*

Hugo J. Woerdeman, Chair, *Department Head Review Committee*

Promotions



Anatolii Grinshpan
Promotion to
Teaching Professor



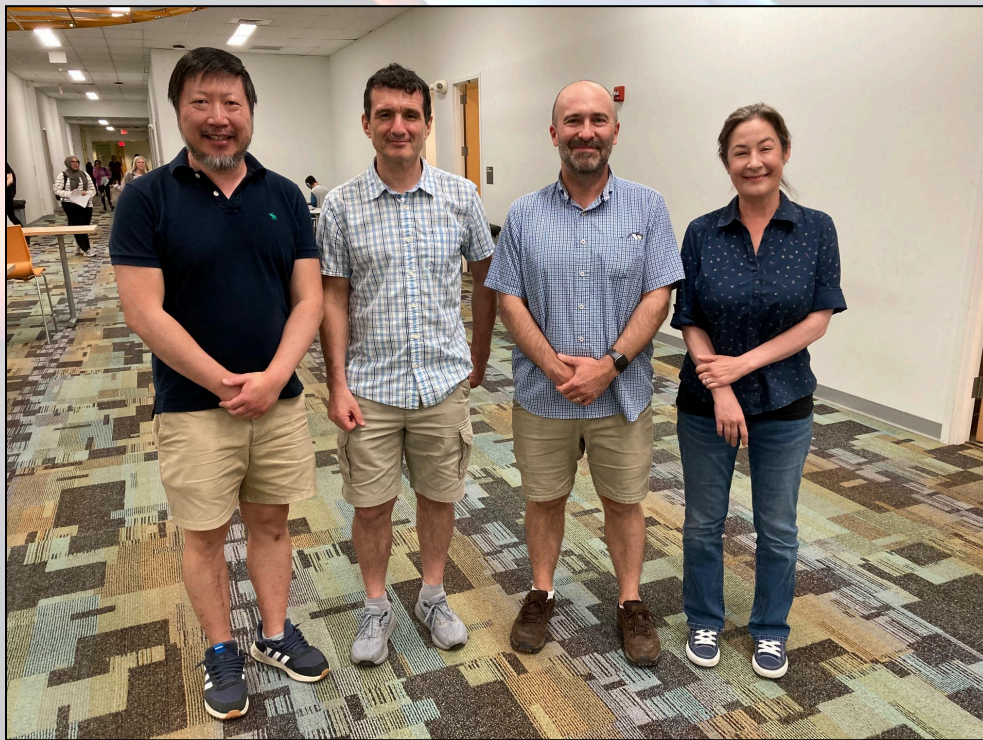
Dennis Yang
Promotion to
Teaching Professor



Caitlin Klimas
Promotion to
Associate Teaching Professor

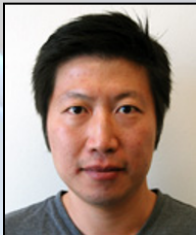


Andrew Klimas
Promotion to
Associate Teaching Professor



The promotion recipients in Garden Level, June 3, 2026.

Service Recognition

40 Years  Ronald Perline	35 Years  Adam Rickert	20 Years  Raymond Favocci
20 Years  Pavel Grinfeld	20 Years  Oksana Odintsova	20 Years  Thomas Pok-Yin Yu
15 Years  Kenneth Hemphill	15 Years  Dimitri Papadopoulos	15 Years  Dennis Yang

Departure



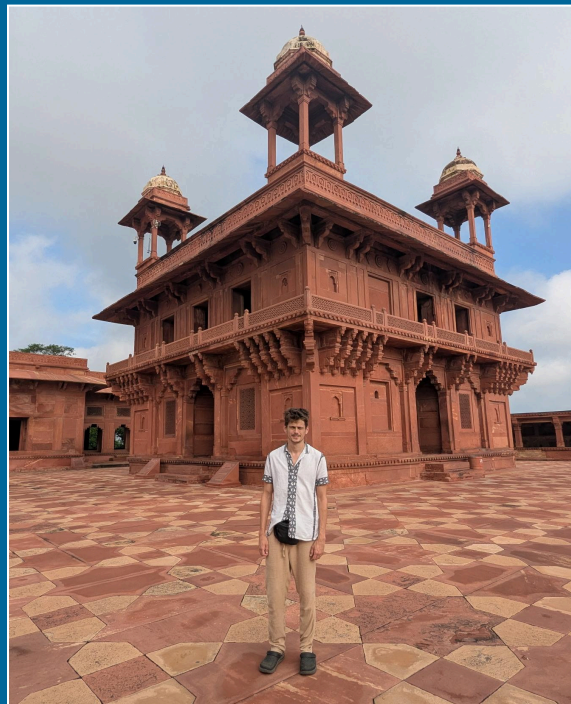
Matthew Ziemke will be leaving Drexel, as he has accepted a faculty position at Iowa State University beginning in the fall of 2026. Dr. Ziemke started at Drexel in the fall of 2016 and has been a terrific team member. He has taught just about everything, has always pitched in when folks needed help, and has done great work outside the classroom as well (e.g., serving on the University's AI Committee). In addition, he has been an active participant in the Analysis Seminar. We wish Matt all the best in his new position.

Faculty Awards

Fulbright Scholarship Award

James Pascoe has been selected as a Fulbright–Nehru Academic and Professional Excellence Scholar for 2026–2027 for India, one of the most prestigious international academic exchange honors sponsored by the U.S. Department of State and the Government of India. India became a full partner in the Fulbright program in 2008; a significant commitment reflected in the program's formal Fulbright–Nehru designation. The award supports leading scholars whose work advances research, teaching, and international collaboration, while strengthening long-term ties between the United States and India. Home to at least one-sixth of the world's population, India is the world's largest democracy, and academic partnerships between the two countries play an important role in fostering shared values, scholarly exchange, and enduring people-to-people connections in an increasingly uncertain global landscape.

Dr. Pascoe's research is in the areas of Operator Theory and Complex Analysis, with a major focus on functions in several non-commuting variables. Reflecting on the opportunity, Pascoe said, "My goal in academia has been to contribute to the creative fabric of mathematics, and by exposing junior people to new ideas, as well as developing ties with senior mathematicians, my research program would be significantly enhanced." In announcing the award, the Institute of International Education congratulated both Pascoe and Drexel University on his selection, noting that Fulbright Scholar Awards offer transformative opportunities for scholars to teach and conduct research abroad while fostering sustained international collaboration. Fulbright alumni include 63 Nobel Prize recipients, 98 Pulitzer Prize winners, and 83 MacArthur Fellows, and studies have shown that Fulbright experiences significantly increase international co-publication and long-term scholarly exchange, positioning recipients as contributors on the global stage.



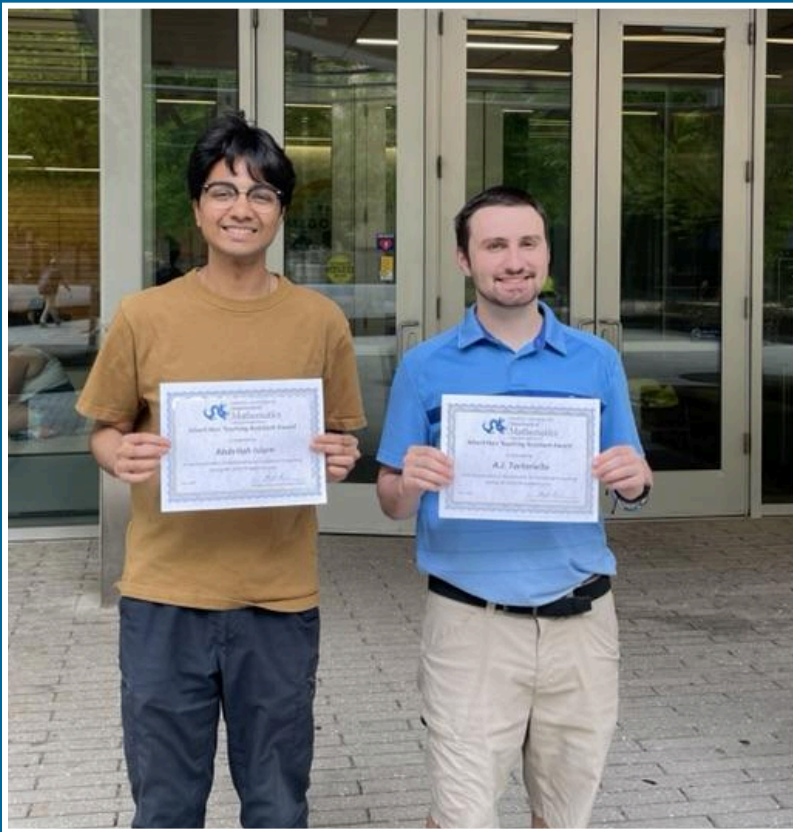
James Pascoe in Fatehpur Sikri, India, Summer 2025

Graduate Student Awards

Albert Herr Teaching Award

The Albert Herr Teaching Assistant Award is given annually to teaching assistants who have excelled in the classroom. The award was established in memory of Al Herr, a distinguished and much-admired faculty member of the Department of Mathematics, who retired in 1993 after 36 years of service in the department. The award was established after his death in 1995 and the first award was presented in the spring of 1997.

The 2026 awardees are: **Abdellah Islam** and **AJ Tortoriello**



Teck-Kah Lim Award

The Teck-Kah Lim Graduate Student Excellence Award, established in 2018, is presented to graduate and professional students (master's and/or doctoral level) who show promise of future meaningful contributions to local, national or global communities as can be gleaned from present academic excellence and achievements in research and/or teaching, as well as outstanding selfless service to peers, and the local community.

The 2026 awardee is: **Kayode Oluwasegun**



Kayode Oluwasegun at the Graduate Student Excellence Awards Ceremony on May 19

Anthony T. Caneris Award for Outstanding Leadership

This award is presented to a distinguished leader of Drexel's Student Government who has made significant contributions to the University community and continues to inspire representatives through exemplary dedication.

The 2026 awardee is: Kayode Oluwasegun



Kayode Oluwasegun receiving his award at the USGA & GSA annual transition dinner held at the Academy of Natural Sciences on May 30. Katie Zamulinsky, Ed.D., Associate Vice President for Enrollment Management and Student Success and Dean of Student Life is on the right.

Undergraduate Student Awards

The Robert J. Bickel Endowed Scholarship

Presented in honor of Robert J. Bickel, who was a member of the Mathematics Department
from 1946 to 1987.

Recipients denoted below:



Ryan Widjaja

Major: Mathematics, Computer Science
Class of 2028

Ryan is a junior majoring in Computer Science and Mathematics, with concentrations in AI & Machine Learning and Algorithms & Theory. He is currently working as a Trade Compliance Co-op at Johnson & Johnson.



An Hoang

Major: Mathematics, Computer Science
Class of 2028

An is a junior majoring in Computer Science and Mathematics. He is currently working as a Security Operations Analyst at the National Board of Medical Exam.



Mason Bondi

Major: Mathematics
Class of 2027

Mason is a junior majoring in Mathematics.



Teju Olateju

Major: Mathematics, Computer Science
Class of 2027

Teju is a junior majoring in Computer Science and Mathematics with a minor in Data Science. He is in the Honors Program. His interests include artificial intelligence, machine learning, and software development, and he enjoys building projects that combine creativity with technology.



Danko Ramirez Shareyeva

Major: Mathematics
Class of 2027

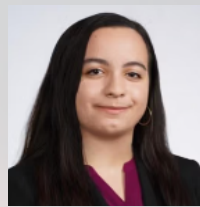
Danko is a junior majoring in Mathematics. He is a tutor at the Math Resource Center and has worked as an undergraduate TA for Multivariable Calculus. He was an actuarial co-op at Venerable. Currently, he is conducting research on machine learning for inverse scattering under the supervision of Dr. Jingni Xiao.



Marc DeCarlo

Major: Mathematics, Computer Engineering
Class of 2026

Marc is a senior preparing to graduate at the end of the spring term. He is majoring in Computer Engineering and Mathematics. He is a popular math tutor at the Math Resource Center and an undergraduate TA for Math 200 and 311. During his co-op experiences, he worked as a Data Integration Analyst at Rajant Corporation, a Business Intelligence Developer at JPMorgan, and a researcher at Drexel University.



Olivia Forman

Major: Mathematics, Computer Science
Class of 2027

Olivia is a junior majoring in Computer Science and Mathematics, with concentrations in AI & Machine Learning and Algorithms & Theory. She worked at Comcast as a Software Engineer Co-op and a Software Developer – HRIS at Susquehanna.



Henry Zhang

Major: Mathematics
Class of 2028

Henry is a second-year mathematics major at Drexel University. He is currently a co-op at the Math Resource Center, where he supports student learning and engagement. He is also involved in undergraduate research focused on inverse source scattering and is interested in pursuing further study in applied mathematics.



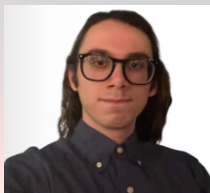
Calvin Zhou

Major: Mathematics, Computer Science
Class of 2028

Calvin is a sophomore majoring in Mathematics and Computer Science. He is a STAR Scholar, in the Honors Program and is currently working as a co-op Software Engineer at Comcast Corporation.

The Dr. Robert C. Busby Endowed Award

Presented to a high-achieving Mathematics student who volunteers as a mentor or tutor.



Michael Gribbin

Major: Mathematics, Class of 2027

Michael is a senior majoring in Mathematics. He is in the Honors Program and works as a math tutor at the Math Resource Center. He previously completed a Mathematics Research co-op in the Math Department and a Physics/Engineering co-op at Nova Photonics, Inc.

The Frank H.M. Williams Endowed Prize

Presented annually in recognition of academic achievement in mathematics.



Rose Lancaster

Major: Mathematics, Class of 2026

Rose is a senior BS-MS student majoring in Mathematics. She works as a math tutor at the Math Resource Center and is currently serving as a Research Assistant co-op in the Mathematics Department at Drexel University.

Graduating Class of 2025-2026

Undergraduate Majors

Mathematics Bachelor of Arts

Yaa Adu-Gyamfi, *Magna Cum Laude*

Zach DePaul, *Magna Cum Laude*

Abigail Hatcher, *Magna Cum Laude*

Joelyne Jacob, *Cum Laude*

Rachelle Pena, *Summa Cum Laude*

Caleb Perline

Chan Nancy Un, *Magna Cum Laude*

Shehryar Usman, *Magna Cum Laude*

Mathematics Bachelor of Science

Marc DeCarlo, *Summa Cum Laude*

Joe Foster

Emilee Huynh, *Magna Cum Laude*

Aiza Nygman, *Summa Cum Laude*

Math & Statistics Bachelor of Science

Kevin Wu, *Summa Cum Laude*

Nick Delena Cardoso de Mello

Sameen Rouf, *Magna Cum Laude*



Dean Brown & Aiza Nygman



Dean Brown & Marc DeCarlo



Emilee Huynh at graduation

Minor in Mathematics

Danial Bakyt
Nick Barbi
Kenneth Blake
Cara Capsambelis
Jason Chen
Hitanshi Chhabria
Quinn Cooney
Jake Curran
Hezekiah Dombach
Daniel Epstein
Dylan Ferareza
Evan Gallagher
Elizabeth Gladden
Tyler Grover
Jolin Guo
Rachel Hanes
Noor E Hira
Jay Kannan
Jai Kashyap
Eugene Kimelman
Anyaa Lee
Scott Lee
Maya Levitt

Juhi Maheshwari
Eva Mankos
Jake Marchese
Michael Moldavchuk
Sami Nabil
My Nguyen
Mahi Nuthanapati
Thomas O'Keeffe
Srushti Patel
McKayla Procopio,
Seth Richards
Piya Saha
Teiji Schoyen
Ariela Sinani
Peter Spychalsky
Vu Tran
Greg Warren
Dorothea West
Brandon Wong
Johnson Wu
Ziwen Zhen
Steven Zheng

Minor in Actuarial Science

Madhu Karuppiah
David Kravchenko

Caleb Perline

Master of Science

Elizabeth Ehme
Benjamin Liber
Ibukun Ogunjimi
AJ Tortoriello
Jasper Ty
Tingyu Zhou

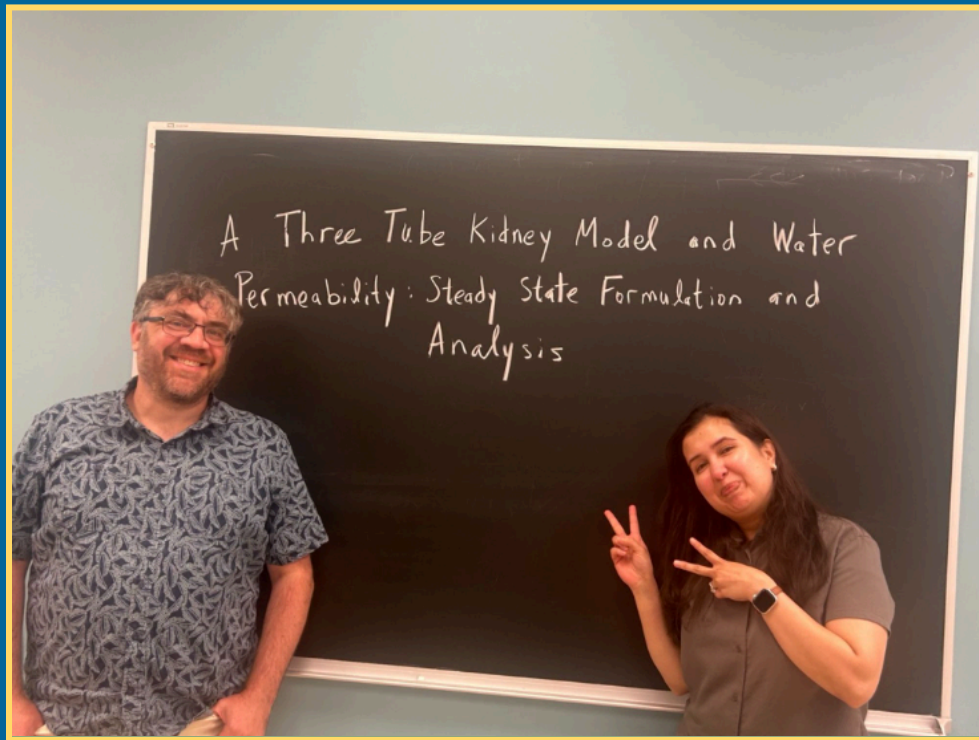
PhD Graduates



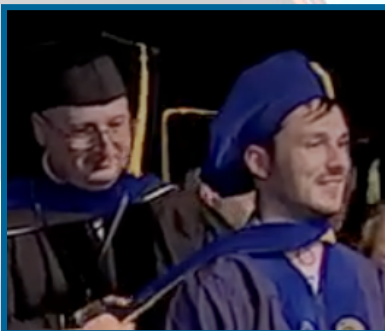
On June 5, **Hunter Wages** successfully defended his thesis "*A finite-sample, finite-feature error bound and optimized adaptive sampling method for learning trajectories*" written under the supervision of **Professor Gideon Simpson**.



On June 9, **Sultan Aitzhan** successfully defended his thesis "*Problems in Applied Dispersive and Parabolic Partial Differential Equations*" written under the supervision of **Professor David Ambrose**.



On September 8, **Anya Pant** successfully defended her thesis "*A Three Tube Kidney Model and Water Permeability: Steady State Formulation and Analysis*" written under the supervision of **Professor David Ambrose**.



The three PhD graduates being hooded by their advisor at commencement on June 11, 2026

Co-op Employers

Best Egg (formerly Marlette Funding)

BlackRock

C. & J. Nyheim Plasma Institute

Comcast Corporation

College Ave Student Loans LLC

Drexel University

Greater Philadelphia Health Action

GreenCircle Certified

Mama May i

Monitoring Analytics

Nova Photonics, Inc.

Phila Delphia 7 Inc

Philadelphia Water Department

Philly Office Retail

Quench USA, Inc.

Sylvan Learning Center

University of Penn School of Medicine

Urban Outfitters

Venerable

Drexel Mathematics Colloquium

1/14

Djordje Milićević (Bryn Mawr College)

"On drums shaped by number theory, hidden symmetries, and loud notes"

3/8

Alex Kontorovich (Rutgers University)

"The Case for Formalization in Research Mathematics"

5/20

R. Andrew Hicks (Drexel University)

"Eigenmirrors"



Alex Kontorovich is presenting

Analysis Seminar

Fall 2025

9/18

Nick Radley (Drexel University)

“Reproducing kernel Banach spaces”

9/26

Stephan Weis (Czech Technical University in Prague)

“Semidefinite approximations of polynomially convex envelopes”

10/3

James Pascoe (Drexel University)

“Constrained sphere packing and the interpolation problem for positive definite functions”

10/10

Radomił Baran (Jagiellonian University)

“Contractive realization theory for the annulus and other intersections of discs on the Riemann sphere”

10/17

Jasper Ty (Drexel University)

“The Lascoux kernel and Demazure atom positivity”

10/24

Constanze Liaw (University of Delaware)

“Aleksandrov-Clark theory on the polydisc”

10/31

Prateek Vishwakarma (Laval University, Quebec)

“Cholesky decomposition for almost all symmetric matrices”

11/7

Hugo Woerdeman (Drexel University)

“A Fourier analysis approach to disprove the weak Shanks conjecture”

11/14

Petr Blaschke (Silesian University in Opava)

A description of the boundary of a numerical range and the secondary values of a matrix

11/21

Cooper Boniece (Drexel University)

“High-dimensional inference of scale invariance in time series via eigenanalysis”

Winter 2026

1/16

Piotr Pikul (Jagiellonian University, Poland)

Matrix versions of Szász inequality

1/23

Abdellah Islam (Drexel University)

Reading Seminar: “Unbounded Self-adjoint Operators on Hilbert Space,” by K. Schmüdgen

General notions; closed and closable operators (Section 1.1)

1/30

Nick Radley (Drexel University)

Reading Seminar: Adjoint operators (Section 1.2)

2/6

Benjamin Liber (Drexel University)

Reading Seminar: Differential operators on intervals (Section 1.3.1)

2/13

Matt Ziemke (Drexel University)

Reading Seminar: Regular points and defect numbers of operators (Section 2.1)

2/20

James Pascoe (Drexel University)

Reading Seminar: Spectrum and resolvent of a closed operator (Section 2.2)

2/27

Ross McNeill (Drexel University)

Reading Seminar: Symmetric operators (Section 3.1)

3/6

Hugo Woerdeman (Drexel University)

Reading Seminar: The one-dimensional Hamburger moment problem (part of Sections 16.1–3)

Combinatorics, Algebra & Geometry (CAGE) Seminar

Fall 2025

9/11

Mitsuki Hanada (University of California, Berkeley)

“Representation Theoretic Bases for $R_{n,\lambda,s}$ ”

9/19

Colin Defant (Harvard University)

“Random Combinatorial Billiards and Stoned Exclusion Processes”

10/23

Amanda Burcroff (Massachusetts Institute of Technology)

“Combinatorial aspects of cluster scattering diagrams”

11/6

Mark Skandera and Ben Spahiu (Lehigh University)

“On the impossibility of parabolic factorization of certain Kazhdan–Lusztig basis elements”

11/20

Shihong Pan (Lehigh University)

“Permanental inequalities and unit interval orders”

12/4

Jasper Ty (Drexel University)

“Cauchy identities for products under Dyck paths”

Winter 2026

3/5

Ben Adenbaum (Villanova)

“Enumerating Pattern Avoiding Parking Functions”

3/19

Takayuki Hibi (Osaka University)

“Elimination ideals of Plücker ideals and algebras with straightening laws”

Spring 2026

4/16

Nathan Lesnevich (Oklahoma State University)

GKM Theory and Reflection Groups

4/30

Jennifer Wang (Florida State University)

Polynomiality of the Bigraded Subdimensions of Diagonal Harmonics

Partial Differential Equation (PDE) and Applied Mathematics Seminar

Fall 2025

09/26

Georgi Medvedev (Drexel University)

“Metastability in the stochastic Kuramoto model of coupled oscillators”

10/10

Yury Grabovsky (Temple University)

“The generalized Clapeyron Theorem and its applications”

10/24

Javier Gómez-Serrano (Brown University)

“Discovery of unstable singularities”

11/7

Fei Lu (Johns Hopkins University)

“Self-test loss functions for learning weak-form operators and gradient flows”

12/5

Narek Hovsepyan (Rutgers University)

“Scattering of waves”

Winter 2026

1/23

Farhan Abedin (Lafayette College)

“Regularity of two-phase free boundary minimizers in periodic media”

2/13

Joshua McGinnis, University of Pennsylvania

“Convergence Results & Conservation Laws for Physical Learning Methods”

Spring 2026

4/17 (joint with Prob/Stat seminar)

Jacek Wołowski (Warsaw University of Technology)

Coincidence or rule – toward a better understanding of the Yang-Baxter independence preserving models

5/8

Amir Sagiv (New Jersey Institute of Technology)

Dispersive estimates beyond the potential well

5/15

Sidney Holden (Flatiron Institute)

A continuum limit for dense spatial networks

5/29

Joseph Tindall (Flatiron Institute)

Belief propagation for tensor network contraction and quantum simulation

6/5

Guillermina Senn (Indiana University & Norwegian University of Science and Technology)

Multiproposal Elliptical Slice Sampling



Joseph Tindall speaking on May 29.

2026 SIAM Mathematical Problems in Industry Workshop

Held at Drexel University, June 14 – 18, 2026.
Local Organizer: Cecilia Mondaini, Drexel University

The 2026 SIAM Mathematical Problems in Industry (MPI) Workshop is a five-day collaborative program that brings together researchers from academia, graduate students, postdoctoral scholars, and industry professionals to solve real-world industrial challenges using mathematical modeling, analysis, computation, and data science. Held at Drexel University from June 14–18, 2026, the workshop begins with industry partners presenting open research problems, after which participants work in interdisciplinary teams to develop mathematical approaches and practical solutions. The week concludes with team presentations and the preparation of written reports that are shared with the sponsoring companies.

The workshop is designed to foster collaboration between academia and industry while giving participants hands-on experience tackling authentic research and development problems. It is open to mathematicians, scientists, and engineers from both academia and industry, and features a mix of collaborative work sessions, preliminary and final presentations, networking opportunities, and a career panel. Confirmed industry participants for 2026 include organizations such as RTX Corporation, Vironix Health, ABB Inc., and W.L. Gore & Associates, with projects spanning areas from signal processing and control theory to biomedical modeling, structural mechanics, and materials science.



Fourier Jawsns

Fourier Jawsns is a graduate student seminar covering various topics in harmonic analysis. Formed mid-winter quarter by Sultan Aitzhan, the seminar met once a week and discussed topics including: The Riesz-Thorin and Marcinkiewicz interpolation theorems, Poisson Kernels and Hilbert transforms, L^p boundedness of singular integrals, Littlewood-Paley theory, commutative Banach algebras, fractional integration, Sobolev embedding theorems, and the H^1 BMO duality. Fueled by weekly chai and sweet treats, the Fourier Jawsns learned some harmonic analysis and sharpened their skills at the blackboard too! We look forward to continuing the seminar into the 2026-2027 academic year, this time led by Ross McNeill!



Math Student Organization

Board Members



Lois Divoll
Co-President



Cole Andrefski
Co-President



Danko Ramirez
Shareyeva
Treasurer



Allison Sperling
Event Coordinator

In 2025-2026, MSO and its members had several events, including:

- Study nights
- Game nights
- General body meetings
- Study picnics titled as "sunny squad"
- Math problem solving
- Trivia Night



SIAM Chapter

(Society for Industrial and Applied Mathematics)

Board Members



AJ Tortoriello
President



Abdellah Islam
Vice President



Benjamin Liber
Treasurer



Michael Becht
Secretary

10/6 Candidacy Talk

Nick Radley

10/13 Board Games

10/20 An Equality for Balanced Digraphs

Benjamin Liber

10/27 Halloween Party

11/3 From Volumes to Witten's Conjecture

Abdellah Islam

11/10 Integer Compositions

Jasper Ty

11/17 Permanental Inequalities

Shihong Pan (Guest)

11/24 Thanksgiving Break

12/1 Board Games

1/12 Rational Points on Curves

Abdellah Islam

1/19 Integer Sequences of Five Stranded Spiral Knot Determinants

Molly Chapman

1/26 Topological Music Theory

Benjamin Liber

2/2 Fourier Series and Quasiperiodic Problem for Benjamin-Ono Equation

Sultan Aitzhan



Halloween Party

2/9 Non-typical mathematical model

Ibukun Ogunjimi

2/16 Dynamical Systems on Networks and Fractals

Georgi Medvedev

2/23 Dynamical Systems on Networks and Fractals Part 2

Georgi Medvedev

3/2 Laplace and Z-Transforms

Jasper Ty

3/9 Pi Day Celebration

4/6 Throwing Darts at the Real Line

Jasper Ty

4/13 Limit Theorems for Inference of Stochastic Processes

Cooper Boniece

4/20 Epsilon Talk: Mathematical Swimming

Aiden Van Horn

4/20 Epsilon Talk: Geometric Motivation for the Uncertainty Principle & Kingfishers Catching Fire

Ross McNeill

4/27 Epsilon Talk: The K-Total Bondage Number of a Graph

JP Appel

4/27 Epsilon Talk: Crystal Chute Moves on Pipe Dreams

Sarah Gold

5/4 The Jacobi-Trudi Formula and the LGV Lemma

Lorenzo Noè

5/11 Foatic Homomesy

Peter Mao

5/18 The Prime Number Theorem

Jasper Ty

5/25 Conway Games

Navtej Singh

6/5 End of Year Party



Epsilon Talk: Geometric Motivation for the Uncertainty Principle & Kingfishers Catching Fire



The Prime Number Theorem



Conway Games

MathBytes

MathBytes is a graduate student-led club that focuses on building relationships outside of the classroom/academic setting. During the 2025-2026 academic year, we continued our pub trivia team that competes every Wednesday night at New Deck Tavern, a local Penn/Drexel pub. Trivia is taken very seriously at New Deck Tavern; sometimes there as many as 40 teams competing. We are now one of the “Mount Rushmore Squads” at New Deck Tavern, as we have accumulated 21 wins and 16 second-place finishes since the team's founding in 2022. That equates to a total of \$1450 of gift card winnings.

In the upcoming academic year, we will continue to develop new social events for MathBytes as we search to enjoy both our academic and social lives during our time in the program!

Report by Hunter Wages



Pi Day

Pi Day was held on Friday, March 13, 2026, and included three fun competitions: Math Taboo, Jeopardy, and Integration Bee. The event was hosted by Andrew and Caitlin Klimas, Adam Rickert, and Anatolii Grinshpan. The crowd was a bit smaller than last year, but still very enthusiastic and engaged. There was plenty of pizza and pie to go around – and lots of happy smiles to match.



Math Taboo started as a warm-up—but it quickly heated up, and we ended up switching rooms.





The Jeopardy competition included five teams and turned into a real emotional battle. Adam Rickert put new buzzers into action. There were questions about octo-pi and questions about pi-rates! Some teams lost all their hard-earned points, while others went from beggars to kings. Hugo Woerdeman knew some of the answers, but he did not compete.



Chloe Trellopoulos and Catherine Kalita were the winners. Congratulations to the team!



Seven teams took part in the Integration Bee.



After three regular rounds, the team “AG fan club” (Greg Warren, Nico Ghiron, Luke Weinstein, and Michael Grinshpan) was in the lead. Three teams successfully completed the tiemaker round: “AG fan club”, “Mereen” (Vereen Sheka and Matthew Firley), and “Macking Michael” (Mac Gribbin and Michael Yau).



“Macking Michael” was the fastest team to win the tiebreaker round – congratulations to the champs!

Math Resource Center

Overview

The Math Resource Center (MRC), located in Room 207 of the Korman Center at Drexel University, serves as a vital academic support resource for undergraduate students enrolled in mathematics courses. As part of the McGonigal Academic Resource Center (ARC), the MRC provides free walk-in tutoring, exam preparation support, and a collaborative learning environment designed to enhance student success in mathematics and related disciplines.

Mission & Services

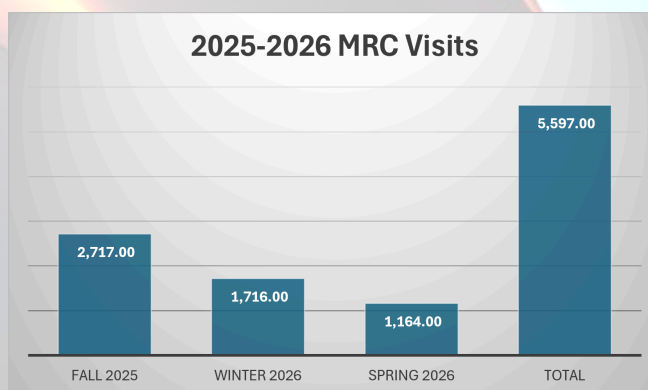
The mission of the MRC is to provide accessible, high-quality tutoring support for all undergraduate mathematics courses offered by the Department of Mathematics.

Services include:

- ❖ **Walk-In Tutoring:**
 - Available throughout the academic year with no appointment required.
- ❖ **Study Booster Sessions:**
 - Structured review sessions offered during midterm and final examination periods.
- ❖ **Peer and Professional Support:**
 - Tutoring provided by faculty members, graduate students, and highly qualified undergraduate peer tutors.

Student Utilization & Impact

During the 2025–2026 academic year, the Math Resource Center recorded 5,597 student visits across the Fall, Winter, and Spring semesters.

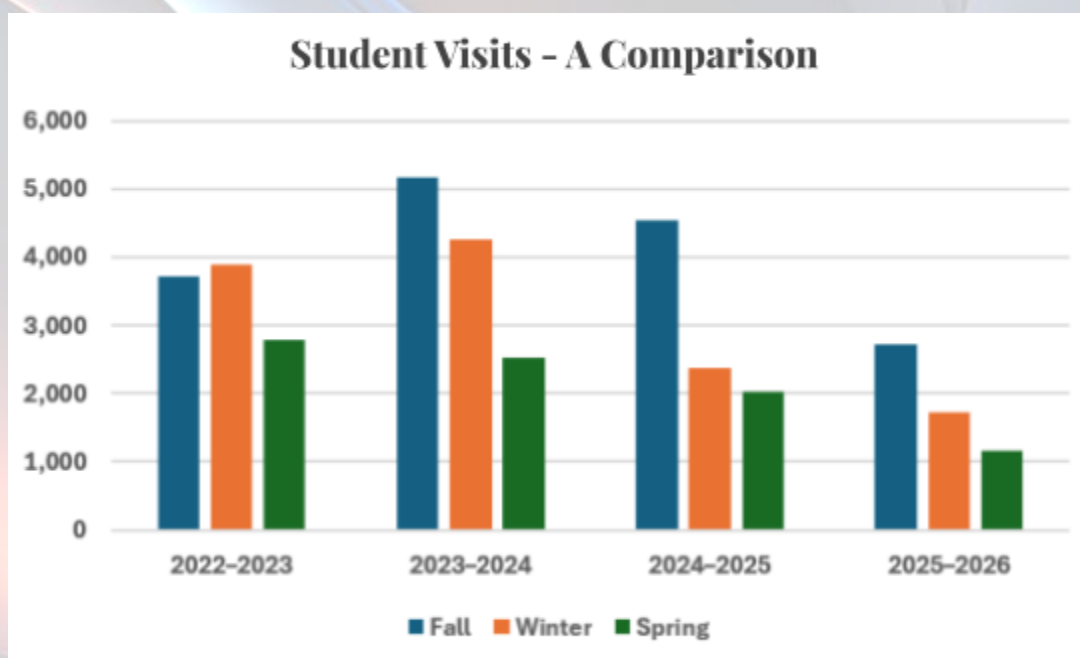


Although overall utilization was lower than in previous years, the MRC continued to provide critical academic support to students seeking assistance with coursework, homework, exam preparation, and mathematical problem-solving.

Student feedback indicates that MRC services remain highly valued by those who utilize them. Students frequently report improved understanding of mathematical concepts, increased confidence in their coursework, and stronger academic performance resulting from regular tutoring attendance.

Four-Year Utilization Trends

Over the past four academic years, the Math Resource Center has served a total of 36,882 student visits.



The highest level of utilization occurred during the 2023–2024 academic year, when the MRC recorded 11,940 visits. Since that peak, attendance has declined across all semesters. Total visits decreased by approximately 25% from 2023–2024 to 2024–2025 and by an additional 37.5% from 2024–2025 to 2025–2026.

Overall, student visits in 2025–2026 were 53.1% lower than the peak year of 2023–2024, representing approximately 47% of peak utilization.

Quarter Trends

Fall Quarter

- Fall attendance reached a high of 5,176 visits in 2023–2024.
- Attendance declined to 4,543 visits in 2024–2025 and 2,717 visits in 2025–2026.
- Current Fall utilization is approximately 47.5% below the 2023–2024 peak.

Winter Quarter

- Winter attendance peaked at 4,249 visits in 2023–2024.
- Visits declined to 2,376 in 2024–2025 and 1,716 in 2025–2026.
- Winter experienced the largest quarter decline, with utilization decreasing by nearly 60% from its peak.

Spring Quarter

- Spring attendance decreased steadily from 2,792 visits in 2022–2023 to 1,164 visits in 2025–2026.
- Spring 2025–2026 attendance was approximately 58% lower than in 2022–2023.

Integration with the Academic Resource Center

As a component of the Academic Resource Center, the MRC works collaboratively with other academic support programs, including writing assistance, academic coaching, and tutoring services in STEM disciplines. This integrated approach provides students with comprehensive academic support and promotes student success across the university.

MRC in Action



Future Directions

Analysis of recent utilization data suggests the need to better understand factors influencing student engagement with tutoring services. Potential factors may include enrollment trends,

instructional modalities, student awareness of available resources, and changing academic support needs.

In response, the MRC will focus on the following priorities:

- ❖ Expanding outreach efforts to increase awareness among incoming and continuing students.
- ❖ Strengthening partnerships with faculty to promote tutoring services within mathematics courses.
- ❖ Exploring additional online and hybrid tutoring opportunities.
- ❖ Monitoring utilization patterns and student feedback to identify opportunities for service enhancement.

CoAS Open House



Fall Peer Tutor Orientation



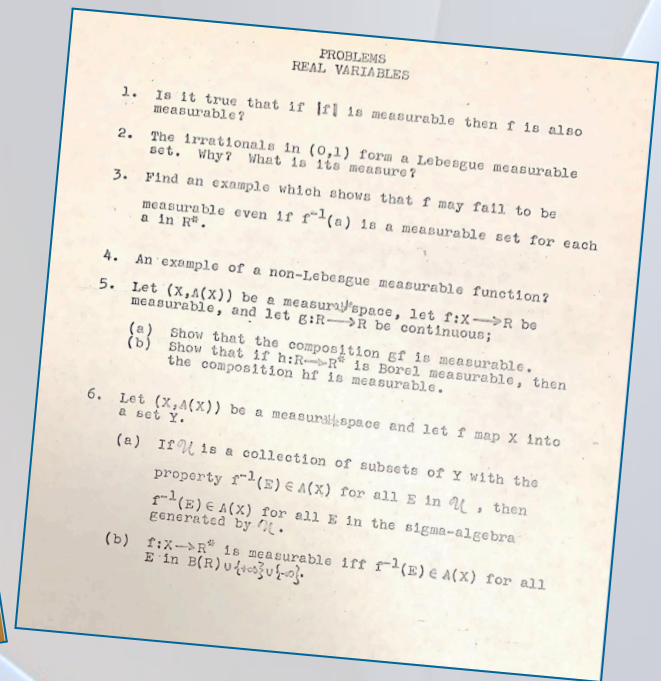
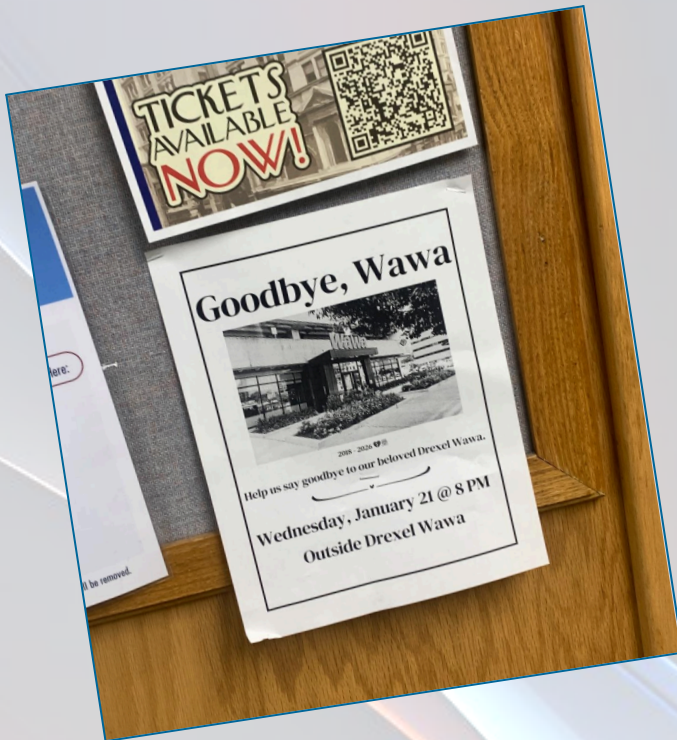
Report Prepared by Sobha Philip

In & Around Korman

~Snowy Days & Campus Bunnies~



~Contributions by R. Andrew Hicks~



Problem set by Robert J. Bickel



Saxby potato

