Mason A. Porter

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CURRICULUM VITAE

PERSONAL DATA

- Date of Birth: 10 February 1976, Los Angeles, California, USA
- Nationality: United States citizen
- Languages: English, Spanish

EMPLOYMENT

- Faculty positions
  - 6/16–present
    - Professor, Department of Mathematics, University of California, Los Angeles (UCLA)
    - Secondary Appointment ("0% Appointment"): Professor, Department of Sociology, University of California, Los Angeles (UCLA) [from 7/23]
    - Other affiliations within UCLA
      - Faculty, Computational Applied Mathematics, Department of Mathematics [from 6/16]
      - Affiliate Faculty, Bhaumik Institute for Theoretical Physics [from 9/16]
      - Affiliate Faculty, Institute of Transportation Studies [from 12/16]
      - Affiliate Faculty, Center for Social Statistics [from 8/18]
      - Affiliate Faculty, Computational and Systems Biology [from 3/20]
    - Other affiliations in the University of California system
      - UC Health & CDPH COVID Modeling Consortium [from 4/21]
  - 10/07–9/16
    - Faculty, Mathematical Institute, University of Oxford
      - 7/14–9/16: Professor of Nonlinear and Complex Systems
      - 1/14–7/14: Associate Professor
      - 10/07–12/13: University Lecturer
    - Tutorial Fellow, Somerville College, University of Oxford [10/07–8/16]
    - Affiliations within Oxford
      - Faculty, Oxford Centre for Industrial and Applied Mathematics [10/07–9/16]
      - Affiliated Faculty
        - Complex Agent-Based Dynamic Networks (CABDyN) Complexity Cluster [10/07–9/16]
        - Centre for Nonlinear Partial Differential Equations, Mathematical Institute [11/07–9/16]
        - Discrete Mathematics group, Mathematical Institute [10/08–9/16]
        - Mathematical Physics group, Mathematical Institute [10/09–9/16]
        - Wolfson Centre for Mathematical Biology, Mathematical Institute [3/11–9/16]
        - Theoretical and Computational Neuroscience ("Neurotheory") [6/14–9/16]
- Visiting faculty positions and external affiliations
  - 8/21–7/27: External Professor, Santa Fe Institute
  - 10/16–present: Visiting Professor and Research Fellow, Mathematical Institute, University of Oxford
  - 10/16–9/30: Senior Research Fellow, Somerville College, University of Oxford
  - 9/01/19–12/31/24: Long-Term High-Level Visiting Scientist of the IGAT Base at Beijing University of Posts and Telecommunications
  - 9/10–9/19: Research Professor [Adjunct Faculty], Simon A. Levin Mathematical, Computational and Modeling Sciences

Center (MCMSC), Arizona State University
    - 9/1/18–9/15/18: Visiting Professor, Macquarie University
    - 9/14–1/15: Visiting Scholar, Department of Biology, School of Humanities and Sciences, Stanford University
- Postdoctoral positions
    - 6/05–9/07
        - Postdoctoral Scholar, Center for the Physics of Information and Department of Physics, California Institute of Technology
            - Mentor: Michael C. Cross (Physics)
    - 8/02–5/05
        - NSF VIGRE Visiting Assistant Professor, School of Mathematics, Georgia Institute of Technology
            - Mentor: Leonid A. Bunimovich (Mathematics)
        - Research Associate, Center for Nonlinear Science, School of Physics, Georgia Institute of Technology
            - Mentor: Predrag Cvitanovic (Physics)
    - 1/03–5/03
        - Postdoctoral Scholar, Semester Program on "Semiclassical Analysis", Mathematical Sciences Research Institute (MSRI), Berkeley, CA, USA [on leave from postdoctoral position at Georgia Tech]

EDUCATION

- Ph.D., Center for Applied Mathematics, Cornell University [5/26/02]
    - Thesis Advisor: Richard L. Liboff [deceased] (Electrical & Computer Engineering, Applied & Engineering Physics)
    - Others on Thesis Committee: Steven H. Strogatz (Theoretical & Applied Mechanics), John Guckenheimer (Mathematics), and Gregory S. Ezra (Chemistry & Chemical Biology)
- M.S., Center for Applied Mathematics, Cornell University [1/17/01]
- B.S. with Honors, Applied Mathematics, California Institute of Technology [6/12/98]
    - Academic Advisors: Oscar P. Bruno (Applied Mathematics), Gerald B. Whitham (Applied Mathematics)
    - Undergraduate Research Mentors: Jerrold E. Marsden (Control & Dynamical Systems), Nikolai G. Makarov (Mathematics), and Charles R. Plott (Economics)
- Salutatorian, Beverly Hills High School [June 1994]

HONORS

- Fellow of the Network Science Society (NSS) [2025]
- George Pólya Prize for Mathematical Exposition, Society for Industrial and Applied Mathematics (SIAM) [2025]
- Robert Sorgenfrey Distinguished Teaching Award, Department of Mathematics, UCLA [2023–24 academic year]
- Highly Cited Researcher ["Cross-Field" category], Clarivate Web of Science [2020, 2021, 2022, 2023, 2024, 2025]
- Fellow of the Society for Industrial and Applied Mathematics (SIAM) [2019]
- Fellow of the American Mathematical Society (AMS) [2018]
- Council on Undergraduate Research (CUR) Faculty Mentoring Award (Advanced Career Category; Mathematics and Computer Science Division) [2017]
- SIGEST award from SIAM (for the paper "Core-Periphery Structure in Networks", *SIAM Journal of Applied Mathematics*, 2014) [2017]
- Fellow of the American Physical Society (APS) (nominated by the Topical Group on Statistical and Nonlinear Physics [GSNP]) [2016]
- Departmental Teaching Award, Mathematical Institute, University of Oxford [2016]
- Finalist (of 4 total), Outstanding Supervisor (Division of Mathematical, Physical, and Life Sciences), Oxford University Student Union (OUSU) Teaching Awards [2016]
- Young Scientist Award for Socio- and Econophysics, German Physical Society (DPG) [2016]
- Whitehead Prize, London Mathematical Society (LMS) [2015]
- Paper on "Robust Detection of Dynamic Community Structure in Networks" selected by the Editor-in-Chief as the 2013 article for the "25 Articles for 25 Years" retrospective of the journal *Chaos* [2015]
- Erdös–Rényi Prize in Network Science, Network Science Society [2014]
- Zachary Karate Club Club Trophy (2nd recipient) [6/13]
- Sigma Xi Young Investigator Award [2008]
- Master of Arts, University of Oxford (degree by resolution) [2007]
- Project NExT Fellowship (one of the Fellows sponsored by the American Mathematical Society [AMS]) [2003–2004]

- Society for Industrial and Applied Mathematics (SIAM) Student Paper Prize (for "An Introduction to Quantum Chaos") [2001]
- National Defense Science and Engineering Graduate (NDSEG; DoD) Fellowship [8/98–8/01]
- Honorable Mention, National Science Foundation (NSF) Graduate Fellowship [1998]
- Honorable Mention, AT&T Graduate Fellowship [1998]
- SIAM Early-Career Travel Award, International Congress on Industrial and Applied Mathematics [7/07]
- SIAM Student Travel Awards:
  - SIAM Annual Meeting [7/01]
  - SIAM Pacific Rim Conference on Dynamical Systems [8/00]
- Promoted to Sigma Xi full membership [2001]
- Undergraduate Awards
  - Caltech Merit Scholarships [junior, senior years]
  - Eric Temple Bell Prize in Undergraduate Mathematics Research [Caltech award; 1997]
  - Frederick J. Zeigler Memorial Award for Mathematics and Applied Mathematics [Caltech award; 1996]
  - Elected to Tau Beta Pi membership [junior year]
  - Elected to Sigma Xi (The Scientific Research Honor Society) associate membership [junior year; subsequently elected to full membership during graduate school]
  - National Dean's List (and semifinalist for National Dean's List Scholarship) [junior year]
  - Honorable Mention, McKinney Prize in Literature [Caltech award; junior, senior years]
  - National Science Scholarship [freshman, sophomore years]
- High School Awards (selected)
  - National Advanced Placement Scholar

GRANTS

- 1. Co-Principal Investigator, "DMREF/Collaborative Research: Iterative Design and Fabrication of Hyperuniform-Inspired Materials for Targeted Mechanical and Transport Properties", National Science Foundation [No. 2323343], NSF 23-530 Designing Materials to Revolutionize and Engineer our Future (PI: Karen E. Daniels; other co-PIs: Ryan C. Hurley, Katherine A. Newhall, and Christopher Rock), $332,070 awarded to MAP from the overall award [12/01/23–11/30/27]
- 2. Co-Principal Investigator, "RTG: Geometry and Topology at UCLA", National Science Foundation [No. 2136090], Division of Mathematical Sciences, Research Training Grants in the Mathematical Sciences (PI: Sucharit Sarkar; other co-PIs: Deanna Needell, Michael Hill/Joaquín Moraga, Burt Totaro), $1,150,000; total intended award is $2,500,000 [9/1/22–8/31/27]
- 3. Co-Principal Investigator, "Collaborative Research: MIM: Using Multilayer Interaction Networks to Predict Microbiome Assembly and Function", National Science Foundation [No. 2124903], URoL-Understanding the Rules of Life: Predicting Phenotype (PI: Elena Litchman; other co-PIs: Christopher A. Klausmeier and Shannon D. Manning), $260,535 awarded to MAP from the overall award [10/01/21–9/30/25]
- 4. Co-Principal Investigator, "RAPID: Analysis of Multiscale Network Models for the Spread of COVID-19", National Science Foundation [No. DMS-2027438], Mathematical Biology (PI: Andrea L. Bertozzi), $200,000 [4/15/20–3/31/22]
- 5. Principal Investigator, "ATD: Models of Spreading Dynamics in Multilayer Networks", National Science Foundation [No. 1922952], Algorithms for Threat Detection (ATD), $500,000 [7/15/19–6/30/24]
  - Supplement of $15,999 [No. 1945838] to work on Challenge Problems awarded on 7/31/19
- 6. Co-Principal Investigator, "NCS-FO: How Real-World Interaction Networks Shape and are Shaped by Neural Information Processing", National Science Foundation [No. 1835239], Integrative Strategies for Understanding Neural and Cognitive Systems (NSF-NCS) (PI: Carolyn Parkinson), $976,747 [4/1/19–3/31/24]
- 7. Principal Investigator, "Dynamic Optimization and Network Analysis for Bus Transportation for the Los Angeles Unified School District", funded as a 2018 UCLA Institute of Transportation Studies (IST) research proposal (co-PI: Mario Gerla), $101,447 [10/01/18–7/31/20]
- 8. Principal Investigator, "PLEXMATH: Mathematical Framework for Multiplex Networks", European Commission FET-Proactive Project [No. 317614], FP7-ICT-2011-8, Dynamics of Multi-Level Complex Systems (joint with A. Arenas, M. Barthelemy, J. P. Gleeson, and Y. Moreno), €1,520,540 (including €287,069 to University of Oxford) [11/12–10/15]
  - Software, data, and other materials are available at http://deim.urv.cat/~alephsys/plexmath/
- 9. Principal Investigator, "Network Science: School Engagement", component of Engineering and Physical Sciences Research Council (EPSRC) Pathways to Impact Block Grant to University of Oxford, £7,000 [8/12–3/13]
- 10. Principal Investigator, "Community Structure in Multislice Networks", EPSRC grant [No. EP/J001759/1], £211,051 [6/12–5/14]
  - Accredited as part of Research Councils UK Global Uncertainties Programme
- 11. Principal Investigator, "Network Science: School Engagement", component of EPSRC Pathways to Impact Block Grant to University of Oxford, £5,000 [11/11–6/12]
- 12. Principal Investigator, "Coevolution, Interconnections, and Communities of Social and Political Networks in the United

States Congress" James S. McDonnell Foundation [No. JSMF#220020177, Studying Complex Systems Research Award], 21st Century Science Initiative (joint with J. H. Fowler), $418,038 [2/09–1/14]
- 13. EPSRC Collaborative (Industrial CASE) award to supervise a D.Phil. student, joint with Unilever, about £100,000 [10/11–6/15]
- 14. EPSRC Collaborative (Industrial CASE) awards to supervise D.Phil. students, joint with S. D. Howison (Mathematical Institute, University of Oxford) and S. Williams (HSBC bank), about £100,000 each [2 of them: 9/09–5/13, 10/11–9/15]
- 15. EPSRC Vacation Bursaries for supervision of undergraduate student research projects [2008, 2009, 2010]
- 16. Nuffield Science Bursaries for supervision of undergraduate student research project [2009, 2011]
- 17. Travel Grants from organizers to attend numerous conferences and workshops since 2000
- 18. Graduate Student Travel Grants, Cornell University (4 of them)

RESEARCH AREA

- Applied Mathematics; Network Science; Complex Systems; Nonlinear Systems
- Google Scholar Profile: http://scholar.google.com/citations?user=hSyfNekAAAAJ&hl=en [h-index = 79; >34000 total citations; >3100 citations in 2025]
- Slide decks for some presentations are available at http://www.slideshare.net/masonporter

EDITORIAL DUTIES

- Editorial Boards
  - Member of the Editorial Board, *La Matematica* (Association for Women in Mathematics; journal published through Springer-Verlag) [6/22–present]
  - Member of the Editorial Board, *Epi-SCIENCE: The Science Behind Population Health* (Universidad de Costa Rica) [1/22–present]
  - Member of the Editorial Board, *Physical Review E* (American Physical Society) [1/21–12/26]
  - Associate Editor, *SIAM Journal on Mathematics of Data Science* [*SIMODS*] (Society for Industrial and Applied Mathematics) [inaugural editorial board; 2/18–12/26]
  - Member of the Editorial Board, *Annals of Improbable Research* [9/16–present]
  - Associate Editor, *Network Neuroscience* (MIT Press) [inaugural editorial board; 4/16–present]
  - Associate Editor, Dynamical and Complex Systems, *Transactions of Mathematics and its Applications: A Journal of the IMA* (Oxford University Press) [inaugural editorial board; 2/15–present]
  - Associate Editor, Research Spotlights section, *SIAM Review* [*SIREV*] (Society for Industrial and Applied Mathematics) [1/15–12/26]
  - Associate Editor, *IEEE Transactions on Network Science and Engineering* (Institute of Electrical and Electronic Engineers) [inaugural editorial board; 3/14–12/21]
  - Associate Editor, *European Journal of Applied Mathematics* (Cambridge University Press) [9/13–12/26]
  - Associate Editor, *IMA Journal of Applied Mathematics* (Oxford University Press) [6/13–present]
  - Associate Editor, *Journal of Complex Networks* (Oxford University Press) [inaugural editorial board; 11/12–3/19]
  - Executive Associate Editor, *Journal of Engineering Mathematics* (Springer-Verlag) [1/11–1/16]
- Special Issues
  - Editor, special issue on "Networks: Spectral Theory, Methods, and Applications" [October 2020: Vol. 30, No. 5], *Journal of Nonlinear Science* (joint with D. S. Bassett, A. L. Bertozzi, Y. G. Kevrekidis, & C. W. Rowley)
    - Reference: D. S. Bassett, A. L. Bertozzi, Y. G. Kevrekidis, MAP, & C. W. Rowley, "Networks: Spectral Theory, Methods, and Applications", *Journal of Nonlinear Science*, Vol. 30, No. 5
  - Editor, special issue on "Network Analysis and Modelling" [December 2016: Vol. 27, No. 6], *European Journal of Applied Mathematics* (joint with G. Bianconi).
    - Reference: MAP & G. Bianconi [2016], "Network Analysis and Modelling: Special Issue of *European Journal of Applied Mathematics*", *European Journal of Applied Mathematics*, Vol. 27, No. 6
- Guest Editorial Positions
  - *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), 2019

BOOKS

- 1. H. Z. Brooks, M. Feng, MAP, & A. Volkening (Eds.) [2025], *Mathematical and Computational Methods for Complex Social*

Systems, Proceedings of Symposia in Applied Mathematics, Volume 80 (American Mathematical Society; Providence, RI, USA)

- 2. C. Cramer, MAP, H. Sayama, L. Sheetz, & S. Uzzo (Eds.) [2018], *Network Science in Education — Tools and Techniques for Transforming Teaching and Learning* (Springer International Publishing; Cham, Switzerland)
- 3. MAP & J. P. Gleeson [2016], "Dynamical Systems on Networks: A Tutorial", *Frontiers in Applied Dynamical Systems: Reviews and Tutorials*, Volume 4 (Springer International Publishing; Cham, Switzerland)

PUBLICATIONS IN REFEREED JOURNALS

- 1. W. Chu & MAP [2026], "Bounded-Confidence Opinion Models with Random-Time Interactions", Physical Review E, in press (arXiv:2409.15148)
- 2. E. Zhang, J. Scott, Q. Du, & MAP [2025], "Ginzburg–Landau Functionals in the Large-Graph Limit", *Pure and Applied Functional Analysis*, in press (arXiv:2408.00422)
- 3. L. Mohr, P. Hjorth, & MAP [2025], "A Weighted-Median Model of Opinion Dynamics on Networks", *SIAM Journal on Applied Dynamical Systems*, in press (arXiv:2406.17552)
- 4. L. Böttcher & MAP [2025], "Clustering-Induced Localization of Quantum Walks on Networks", *Physical Review E*, Vol. 112, No. 6: L062301
- 5. S. Krishnagopal & MAP [2025], "Bounded-Confidence Models of Opinion Dynamics with Neighborhood Effects", *Physical Review E*, Vol. 112, No. 5: 054317
- 6. E. C. Baek, R. Hyon, K. López, MAP, & C. Parkinson [2025], "Perceived Community Alignment Increases Information Sharing", *Nature Communications*, Vol. 16: 5864
- 7. C. R. Sampson, J. G. Restrepo, & MAP [2025], "Oscillatory and Excitable Dynamics in an Opinion Model with Group Opinions", *Physical Review E*, Vol. 112, No. 2: 024303
- 8. L. Böttcher & MAP [2025], "Dynamical Processes on Metric Networks", *SIAM Journal on Applications of Dynamical Systems*, Vol. 24, No. 4: 2848–2885
- 9. J. Kim, D.-S. Lee, B. Min, MAP, M. San Miguel, & K.-I. Goh [2025], "Competition Between Group Interactions and Nonlinearity in Voter Dynamics on Hypergraphs", *Physical Review E*, Vol. 111, No. 5: L052301
- 10. H. Z. Brooks & MAP [2025], "An "Opinion Reproduction Number" for Infodemics in a Bounded-Confidence Content-Spreading Process on Networks", *Chaos*, Vol. 35, No. 1: 013160
  - Named an Editor's Pick
- 11. E. Young & MAP [2024], "Dynamical Importance and Network Perturbations", *Physical Review E*, Vol. 110, No. 6: 064304
- 12. G. J. Li, J. Luo, & MAP [2025], "Bounded-Confidence Models of Opinion Dynamics with Adaptive Confidence Bounds", *SIAM Journal on Applied Dynamical Systems*, Vol. 24, No. 2: 994–1041
- 13. E. Vargas Bernal, MAP, & J. Tien [2024], "Adapting InfoMap to Absorbing Random Walks Using Absorption-Scaled Graphs", *SIAM Journal on Applied Dynamical Systems*, Vol. 23, No. 3: 2557–2592
- 14. A. Hickok, B. Jarman, M. Johnson, J. Luo, & MAP [2024], "Persistent Homology for Resource Coverage: A Case Study of Access to Polling Sites", *SIAM Review*, Vol. 66, No. 3: 481–500
- 15. W. Chu, Q. Li, & MAP [2024], "Inference of Interaction Kernels in Mean-Field Models of Opinion Dynamics", *SIAM Journal on Applied Mathematics*, Vol. 84, No. 3: 1096–1115
- 16. L. Böttcher & MAP [2024], "Complex Networks with Complex Weights", *Physical Review E*, Vol. 109, No. 2: 024314
- 17. S. Coombes, M. Sayli, R. Thul, R. Nicks, MAP, & Y. M. Lai [2024], "Oscillatory Networks: Insights from Piecewise-Linear Modeling", *SIAM Review*, Vol. 66, No. 4: 619–679
- 18. H. Z. Brooks, P. S. Chodrow, & MAP [2024], "Emergence of Polarization in a Sigmoidal Bounded-Confidence Model of Opinion Dynamics", *SIAM Journal on Applied Dynamical Systems*, Vol. 23, No. 2: 1442–1470
- 19. C. Andris, C. Koylu, & MAP [2023], "Human-Network Regions as Effective Geographic Units for Disease Mitigation", *European Physical Journal — Data Science*, Vol. 12: 60
- 20. H. Lyu, Y. H. Kureh, J. Vendrow, & MAP [2024], "Learning Low-Rank Latent Mesoscale Structures in Networks", *Nature Communications*, Vol. 15: 224
- 21. Z. Li, MAP, & B. Choubey [2023], "Recurrence Recovery in Heterogeneous Fermi–Pasta–Ulam–Tsingou Systems", *Chaos*, Vol. 33, No. 9: 093108
  - Named an Editor's Pick
- 22. T. Ruangkriengsin & MAP [2023], "Low-Dimensional Behavior of a Kuramoto Model with Inertia and Hebbian Learning", *Chaos*, Vol. 33, No. 12: 123122
- 23. W. Chu & MAP [2023], "A Density Description of a Bounded-Confidence Model of Opinion Dynamics on Hypergraphs", *SIAM Journal on Applied Mathematics*, Vol. 83, No. 6: 2310–2328
- 24. W. Chu & MAP [2023], "Non-Markovian Models of Opinion Dynamics on Temporal Networks", *SIAM Journal on Applied Dynamical Systems*, Vol. 22, No. 3: 2624–2647

- 25. Z. Xiao, J. Zhu, Y. Wang, P. Zhou, W. H. Lam, MAP, & Y. Sun [2023], "Detecting Political Biases of Named Entities and Hashtags on Twitter", *European Physical Journal — Data Science*, Vol. 12: 20
- 26. G. J. Li & MAP [2023], "Bounded-Confidence Model of Opinion Dynamics with Heterogeneous Node-Activity Levels", *Physical Review Research*, Vol. 5, No. 2: 023179
  - Named an Editors' Suggestion
- 27. F. Ying, A. O. G. Wallis, MAP, S. D. Howison, & M. Beguerisse-Díaz [2023], "Minimizing Congestion in Single-Source, Single-Sink Queuing Networks", *SIAM Journal on Applied Mathematics*, Vol. 83, No. 5: 1832–1853
- 28. U. Kan, M. Feng, & MAP [2023], "An Adaptive Bounded-Confidence Model of Opinion Dynamics on Networks", *Journal of Complex Networks*, Vol. 11, No. 1: cnac055
- 29. E. C. Baek, R. Hyon, K. López, M. Du, MAP, & C. Parkinson [2023], "Lonely Individuals Process the World in Idiosyncratic Ways", *Psychological Science*, Vol. 34, No. 6: 683–695
- 30. H. Gupta & MAP [2022], "Mixed Logit Models and Network Formation", *Journal of Complex Networks*, Vol. 10, No. 6: cnac045
- 31. A. J. Moston-Duggan, MAP, & C. J. Lustri, [2023], "Nanoptera in Higher-Order Nonlinear Schrödinger Equations: Effects of Discretization", *Journal of Nonlinear Science*, Vol. 33: 12
- 32. A. Hickok, D. Needell, & MAP [2022], "Analysis of Spatial and Spatiotemporal Anomalies Using Persistent Homology: Case Studies with COVID-19 Data", *SIAM Journal on Mathematics of Data Science*, Vol. 4, No. 3: 1116–1144
- 33. T. E. Valles, H. Shoenhard, J. Zinski, S. Trick, MAP, & M. R. Lindstrom [2022], "Networks of Necessity: Simulating COVID-19 Mitigation Strategies for Disabled People and Their Caregivers", *PLoS Computational Biology*, Vol. 18, No. 5: e1010042
- 34. E. C. Baek, R. Hyon, K. López, E. S. Finn, MAP, & C. Parkinson [2022], "In-Degree Centrality in a Social Network is Linked to Coordinated Neural Activity", *Nature Communications*, Vol. 13: 1118
- 35. J. Carlen, J. de Dios Pont, C. Mentus, S.-S. Chang, S. Wang, & MAP [2022], "Role Detection in Bicycle-Sharing Networks Using Multilayer Stochastic Block Models", *Network Science*, Vol. 10, No. 1: 46–81
- 36. Q. Chen & MAP [2022], "Epidemic Thresholds of Infectious Diseases on Tie-Decay Networks", *Journal of Complex Networks*, Vol. 10, No. 1: cnab031
- 37. A. Hickok, Y. Kureh, H. Z. Brooks, M. Feng, & MAP [2022], "A Bounded-Confidence Model of Opinion Dynamics on Hypergraphs", *SIAM Journal on Applied Dynamical Systems*, Vol. 21, No. 1: 1–32
- 38. K. Peng, Z. Lu, V. Lin, M. R. Lindstrom, C. Parkinson, C. Wang, A. L. Bertozzi, & MAP [2021], "A Multilayer Network Model of the Coevolution of the Spread of a Disease and Competing Opinions", *Mathematical Models and Methods in Applied Sciences*, Vol. 31, No. 12: 2455–2494
- 39. C. W. Curtis & MAP [2021], "Detecting Functional Communities in Networks of Randomly Coupled Oscillators Using the Dynamic-Mode Decomposition", *Physical Review E*, Vol. 104, No. 4: 044305
- 40. G. Deng, C. J. Lustri, & MAP [2021], "Nanoptera in Weakly Nonlinear Woodpile Chains and Diatomic Granular Chains", *SIAM Journal on Applied Dynamical Systems*, Vol. 20, No. 4: 2412–2449
- 41. A. C. Schwarze & MAP [2021], "Motifs for Processes on Networks", *SIAM Journal on Applied Dynamical Systems*, Vol. 20, No. 4: 2516–2557
- 42. L. Böttcher & MAP [2021], "Classical and Quantum Random-Walk Centrality Measures in Multilayer Networks", *SIAM Journal on Applied Mathematics*, Vol. 81, No. 6: 2704–2724
- 43. K. Sugishita, MAP, M. Beguerisse-Díaz, & N. Masuda [2021], "Opinion Dynamics in Tie-Decay Networks", *Physical Review Research*, Vol. 3, No. 2: 023249
- 44. W. Ahmad, MAP, & M. Beguerisse-Díaz [2021], "Tie-Decay Networks in Continuous Time and Eigenvector-Based Centralities", *IEEE Transactions on Network Science and Engineering*, Vol. 8, No. 2: 1759–1771
- 45. M. D. Gould, N. Hautsch, S. D. Howison, & MAP [2020], "Counterparty Credit Limits: The Impact of a Risk-Mitigation Measure on Everyday Trading", *Applied Mathematical Finance*, Vol. 27, No. 6: 520–548
- 46. C. Chong, Y. Wang, D. Maréchal, E. G. Charalampidis, M. Molerón, A. J. Martínez, MAP, P. G. Kevrekidis, & C. Daraio [2021], "Nonlinear Localized Modes in Two-Dimensional Hexagonally-Packed Magnetic Lattices", *New Journal of Physics*, Vol. 23: 043008
- 47. X. Zuo & MAP [2021], "Models of Continuous-Time Networks with Tie Decay, Diffusion, and Convection, *Physical Review E*, Vol. 103, No. 2: 022304
- 48. D. Taylor, MAP, & P. J. Mucha [2021], "Tunable Eigenvector-Based Centralities for Multiplex and Temporal Networks", *Multiscale Modeling and Simulation: A SIAM Interdisciplinary Journal*, Vol. 19, No. 1: 113–147
- 49. A. R. Pamfil, S. D. Howison, & MAP [2020], "Inference of Edge Correlations in Multilayer Networks", *Physical Review E*, Vol. 102, No. 6: 062307
- 50. B. J. Stolz, T. Emerson, S. Nahkuri, MAP, & H. A. Harrington [2021], "Topological Data Analysis of Task-Based fMRI Data from Experiments on of Schizophrenia", *Journal of Physics: Complexity*, Vol. 2: 035006
- 51. A. Volkening, D. F. Linder, MAP, & G. A. Rempala [2020], "Forecasting Elections Using Compartmental Models of Infection", *SIAM Review*, Vol. 62, No. 4: 837–865
- 52. Z. Boyd, MAP, & A. L. Bertozzi [2020], "Stochastic Block Models are a Discrete Surface Tension", *Journal of Nonlinear Science*, Vol. 30, No. 5: 2429–2462

- 53. R. M. del Rio-Chanona, Y. Korniyenko, M. Patnam, & MAP [2020], "The Multiplex Nature of Global Financial Contagions", *Applied Network Science*, Vol. 5: 74
- 54. M. Feng & MAP [2020], "Spatial Applications of Topological Data Analysis: Cities, Snowflakes, Random Structures, and Spiders Spinning Under the Influence", *Physical Review Research*, Vol. 2, No. 3: 033426
- 55. E. C. Baek, MAP, & C. Parkinson [2021], "Social Network Analysis for Social Neuroscientists", *Social Cognitive and Affective Neuroscience*, Vol. 16, No. 8: 883–901
- 56. A. N. M. Darmon, M. Bazzi, S. D. Howison, & MAP [2021], "Pull Out All the Stops: Textual Analysis via Punctuation Sequences", *European Journal of Applied Mathematics*, Vol. 32, No. 6: 1069–1105
- 57. M. Feng & MAP [2021], "Persistent Homology of Geospatial Data: A Case Study with Voting", *SIAM Review*, Vol. 63, No. 1: 67–99
  - M. Feng won a 2021 SIAM Student Paper Prize for this paper
- 58. A. Liu & MAP [2020], "Spatial Strength Centrality and the Effect of Spatial Embeddings on Network Architecture", *Physical Review E*, Vol. 101, No. 6: 062305
  - Software is available at https://bitbucket.org/14andrewliu/spatial-strength-centrality/src/master/
- 59. Y. H. Kureh & MAP [2020], "Fitting In and Breaking Up: Nonlinear Versions of Coevolving Voter Models", *Physical Review E*, Vol. 101, No. 6: 062303
- 60. H. Z. Brooks & MAP [2020], "A Model for the Influence of Media on the Ideology of Content in Online Social Networks", *Physical Review Research*, Vol. 2, No. 2: 023041
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STUDY-GROUP PAPERS, TECHNICAL REPORTS, and WHITE PAPERS

- 1. M. R. Lindstrom, MAP, H. Shoenhard, S. Trick, T. Valles, & J. M. Zinski [2020], "Networks of Necessity: Preventing COVID-19 Among Disabled People and Their Caregivers, UCLA Computational and Applied Mathematics Reports, 20-33
- 2. MAP, D. J. Spencer, & C. H. Hung [2020], "Automatic Generation of School Bus Routes in Los Angeles", UCLA Institute of Transportation Studies (ITS) Report, available at https://escholarship.org/uc/item/46g1z00p
  - Policy brief available at https://www.its.ucla.edu/publication/automatic-generation-of-school-bus-routes-in-los-angeles-brief/
- 3. Y. Korniyenko, M. Patnam, R. M. del Rio-Chanona, & MAP [2018], "Evolution of the Global Financial Network and Contagion: A New Approach", International Monetary Fund (IMF) Working Paper, WP/18/113
- 4. Fourth Montreal Industrial Problem Solving Workshop [2011], "Optimization of the Temporal Shape of Laser Pulses for Ablation", problem proposed by Institut Nationale d'Optique
- 5. Second Montreal Industrial Problem Solving Workshop [2008], "Optimal Retrofit of a Heat Recovery Network at a Pulp and Paper Mill for Minimizing Energy and Water Consumption", problem proposed by Canmet Energy Technology Centre, Varennes, Natural Resources Canada
- 6. European Study Group in Industry 64 [2008], "Overcoming Data Sparsity & Bias in Order to Recommend from the 'Long Tail'", problem proposed by Unilever UK

LETTERS AND OTHER SCHOLARLY AND EDUCATIONAL WORKS

- 1. MAP [2018], "Paper-Writing in Applied Mathematics: A Tutorial", video, available on YouTube at https://www.youtube.com/watch?v=oNgqQyF0GfY&t=1743s
- 2. MAP [2011], "Letter proposing creation of the journal *SIAM Letters*", in 'Letters to the Editor', *SIAM News*, Vol. 44, No. 6 (7–8/11)
- 3. M. Marko, MAP, A. Probst, C. Gershenson, & A. Das [2002], "Transforming the World Wide Web Into a Complexity-Based Semantic Network", *InterJournal of Complex Systems*, 568
- 4. C. Gershenson, MAP, A. Probst, M. Marko, & A. Das [2002], "A Study on the Relevance of Information in Discriminative and Non-Discriminative Media", *InterJournal of Complex Systems*, 533

SOFTWARE (in addition to ones associated with refereed publications)

- 1. S. Lansel & MAP [2004], "A GUI Billiard Simulator for MATLAB" (with 2006 updates by K. Kazlowski); Documentation available at arXiv: nlin.CD/0405003; software is available at http://www.mathworks.com/matlabcentral/fileexchange/10692-billiard-simulator [the current version is version 2.0, created in 2016, by M. Devers, C. Keady, & S. King, at https://www.mathworks.com/matlabcentral/fileexchange/58354-billiard-simulator]

DOCTORAL DISSERTATION

- MAP [2002], "Quantum Chaos in Vibrating Billiard Systems", Center for Applied Mathematics, Cornell University

PREPRINTS

- 1. B. I. Mahler, U. Tillmann, & MAP [2020], "Analysis of Contagion Maps on a Class of Networks that are Spatially Embedded in a Torus", arXiv:1812.09806 (v2)
  - This paper was accepted by *SIAM Journal on Applied Mathematics*. During the 2nd round of page proofs, it was decided that this paper would be a single-authored work by B. I. Mahler, so U. Tillmann and I withdrew our names from the paper. It was ultimately published as: B. I. Mahler [2021], "Analysis of Contagion Maps on a Class of Networks that are Spatially Embedded in a Torus", *SIAM Journal on Applied Mathematics*, Vol. 81, No. 4: 1416–1440
- 2. B. J. Stolz, H. A. Harrington, & MAP [2018], "The Topological "Shape" of Brexit", arXiv:1610.00752
- 3. MAP [2014], "Addendum to 'Critical Truths About Power Laws'", viXra:1403.0931
- 4. J. K. Grewal, C. L. Hall, MAP, & M. S. Dawkins [2013], "Formation of Dominance Relationships via Strategy Updating in an Asymmetric Hawk–Dove Game", arXiv:1308.5358
- 5. M. P. Rombach & MAP [2013], "Discriminating Power of Centrality Measures", arXiv:1305.3146
- 6. A. S. Waugh, L. Pei, J. H. Fowler, P. J. Mucha, & MAP [2012], "Party Polarization in Congress: A Network Science Approach", arXiv:0907.3509
  - Processed data is available at http://figshare.com/articles/Roll_Call_Votes_United_States_House_and_Senate/1590036
- 7. MAP [2002], "A Hitchhiker's Guide to LaTeX (or How I Learned to Stop Worrying and Love Writing My Dissertation)", available at http://www.math.ucla.edu/~mason/papers/lala.pdf
- 8. MAP [2001], "An Introduction to Quantum Chaos", arXiv:nlin/0107039

BOOK (non-scientific)

- A. H. Looijen & MAP, Eds. [2007], *Legends of Caltech III: Techer in the Dark*, published by the Caltech Alumni Association (author order is alphabetical). Additional online content is available at *www.legendsofcaltech.com*
  - The script for the in-progress movie *Techers* is inspired by the above book and its predecessors. I am consulting for this movie both scientifically and with respect to Caltech life and culture.

COVER ARTICLES, PRESS COVERAGE, AND TRANSLATIONS

[not comprehensive; see https://www.math.ucla.edu/~mason/press.html for a more comprehensive selection of my press coverage]

- Cover articles
  - "Quasiperiodic Granular Chains and Hofstadter Butterflies", *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* [front cover; Vol. 376, No. 2127, 2018]
  - "Core-Periphery Structure in Networks (Revisited)", *SIAM Review* [front cover; Vol. 59, No. 3, 2017]
  - "Extraction of Force-Chain Network Architecture in Granular Materials Using Community Detection", *Soft Matter* [front inside cover; 4/21/15]
  - "Comparing Community Structure to Characteristics in Online Collegiate Social Networks", *SIAM Review* [front cover; Vol. 53, No. 3, 2011]
  - "Mushroom Billiards", *Notices of the American Mathematical Society* [front cover; 3/06]
  - "Chaos on the Quantum Scale", *American Scientist* [front cover; 11–12/01]
  - "Vibrating Quantum Billiards on Riemannian Manifolds" and "Quantum Chaos for the Vibrating Rectangular Billiard",

International Journal of Bifurcation and Chaos [front cover; 9/01]

- Interviewed on *The Science Show*, Australian Broadcasting Corporation (ABC) Radio National [2/28/25]
- Paper on using topological data analysis to study resource coverage was featured in *Quanta* [3/26/24] and *Wired* [4/21/24]
- NSF grant on modeling microbial communities featured in a press release from Michigan State University [9/21/21]
- Paper on forecasting elections with compartmental models of infections featured in a SIAM Research Nugget [10/28/20], a press release by Northwestern University [10/29/20], and *Forbes* [10/30/20]
- NSF grant on modeling of dynamics of COVID-19 transmission featured in a blurb from UCLA's Department of Mathematics [4/16/20], a press release from UCLA [4/17/20], and a blurb from UCLA's Department of Mechanical & Aerospace Engineering [4/29/20]
- Paper on modeling customer mobility and congestion in supermarkets featured in a media tip sheet from the American Physical Society [12/18/19] and a blurb from UCLA's Department of Mathematics [12/18/19]
- Paper on forecasting failures in two-dimensional disordered lattices featured in a commentary [8/02/19] in *Proceedings of the National Academy of Sciences of the United States of America* (the journal in which the paper was published), a press release by North Carolina State University [8/05/19], and a Research Spotlight in *Nature Physics* [9/03/19]
- Paper on modeling herd splitting in cows featured in a press release by American Institute of Physics (AIP) [6/20/17] and in articles in *Wired* [6/20/17], *ScienceDaily* [6/20/17], *Daily Mail* [6/21/17], and *The Atlantic* [9/08/17]
- Paper on information measures and cognitive limits in transportation networks featured in a University of Oxford press release [2/19/16], *The Guardian* [2/19/16], *Sputnik International* [2/21/16], *Pacific Standard* [2/22/16], *Medical Daily* [2/23/16], *CityLab* (from *The Atlantic*) [2/25/16], *Business Insider* [2/27/16], *Mental Floss* [2/26/16], *Le Monde* (in French) [3/01/16], *The Washington Post* [3/03/16], and several other venues. I was also interviewed for BBC radio [aired 2/21/16] and Radio Sputnik World Service, Moscow [live interview, 2/21/16]
- Paper that describes our efforts to create a network literacy booklet covered by a press release from Binghamton University [11/12/15]
- Research on topological data analysis of spreading processes on networks covered in a University of Oxford Press release [7/21/15] and in *Nature Physics* [7/31/15]
- Research on long-term migration in Korea covered by an APS Physics synopsis [10/16/14], *Hani*: Science On [Korean, 10/29/14], and *Donga Science* [Korean, 2/02/15]
- Research on a simple generative model of collective online behavior featured in a University of Oxford press release [7/07/14], *The Telegraph* [7/07/14], *SINC* [Spanish, 7/07/14], University of Limerick Press release [7/08/14], *Da Telegraaf* [Dutch, 7/08/14], *La Nación* [Spanish, 7/08/14], *The Times of India* [7/15/14], *Science.ie* [7/30/14]
- Research on mathematical modeling of bipolar individuals featured in *The Guardian* [4/29/14]
- Outreach on network science for school students featured in a University of Oxford press release [11/23/12] and a University of Oxford promotional video (http://t.co/k2WEkHjsp1) [7/14/13]
- Interviewed by Princeton University Press blog for Mathematics Awareness Month 2010 (on "Mathematics and Sports") [4/23/10]
- Images from my papers on network taxonomies [9/12] and granular force networks [10/12] have been featured in *Physical Review E*'s "Kaleidoscope Images"
- Research on motor chunking featured in *Neuroscience News* [6/12/12], a UC Santa Barbara press release [6/12/12], and Science Daily [6/12/12]
- Opinion piece on power laws featured in *Physicsworld.com* [2/10/12], *BBC News* [2/13/12], and *BBC Mundo* [in Spanish, 2/18/12]
- Research on correlations in financial markets featured in *The Wall Street Journal* [8/20/10, 2/8/12], *The New York Times* [4/2/11, 1/28/12], *Institution Asset Manager* [2/7/12], *Financial Review* [2/15/12], the *Financial Times* Alphaville blog [4/19/12, 8/31/12, 11/9/12, and other dates; this place now has a tag to mark articles related to this topic], and in several other venues, such as *Risk Magazine*. [I believe that only the *NYT* articles explicitly mention University of Oxford's involvement in the research.] HSBC's "risk-on/risk-off" (RORO) index, which is based on the research in our paper, has entries in Wikipedia and Investopedia.
- Research on dynamic reconfiguration of human brain networks during learning featured in a UC Santa Barbara press release [4/18/11], a University of Oxford press release [4/19/11], and Science Daily [4/19/11]
- Research on community structure in protein interaction networks featured on the back cover of *Biomedical Computation Review* [Spring 2011]
- Research on community structure in multislice networks featured in a University of North Carolina at Chapel Hill press release [5/13/10], a University of Oxford press release [5/13/10], National Science Foundation [5/13/10], *Communications of the Association for Computing Machinery* [5/17/10], Science Daily [5/21/10], American Mathematical Society's "Math in the News" [6/10], and National Affairs blog [7/01/10]
- Research on cow synchronization featured in *Technology Review*'s blog [5/12/10], Boing Boing [5/12/10], Marginal Revolution [5/13/10], *The Guardian* [12/12/11], The Loh Down on Science [7/05/12], and Bloomberg "Odd Lots" podcast [Episode 52; 10/28/16]
- Research on baseball networks featured in *Wired* online [8/04/09], *Freakonomics Blog* [8/06/09], several baseball blogs, and the Math Digest section of American Mathematical Society's "Math in the Media" [8/09]

- Research on Facebook networks featured in an American Physical Society press conference and press release [3/16/09], a North Carolina State University press release [4/30/12], a National Science Foundation 'News from the Field' blurb [4/30/12], *The Times of India* [5/01/12], and *The Atlantic* [5/03/12]. A figure from my Facebook research is also featured in media, publications, and communications (such as their book catalog and SIAM Connect) from the Society for Industrial and Applied Mathematics [starting 7/12]
- Research on nonlinearity management in optics featured in *Physical Review Focus* [7/10/06], a Caltech press release [8/04/06], *Photonics Spectra* [10/06], and *Engineering & Science* [a Caltech publication; Vol. LXIX, No. 3, 2006]
- Research on Congressional networks featured in a Georgia Tech press release [5/16/05], *ScienceNow* [5/16/05], *New Scientist* [5/17/05], *The Associated Press* [6/10/05], *Bulletin of the Atomic Scientists* [9-10/05], a "Mathematical Moment" (MM/54, in 2 different languages) published by the American Mathematical Society, and *io9* [11/02/10]
- Research on random walker rankings for college football featured in *ESPN: The Magazine* [11/10/03], *Nature Science Update* [11/14/03], a Georgia Tech press release [11/18/03], *The Chronicle of Higher Education* [11/28/03], the Math Digest section of the American Mathematical Society's "Math in the Media" [11/03, 12/05], CNN Headline News [12/30/03], *The Atlanta Journal-Constitution* [4/24/04], an American Mathematical Society press release [8/4/04], the MathTrek section of *Science News Online* [9/4/04, Vol.166, No. 10], *The Washington Post* [12/10/05, 3/21/16], The Mathematical Tourist section of *MAA Online* [11/15/07], and *The News & Observer* [9/13/09]
- Some of my articles in *Frontiers for Young Minds* have been translated into Arabic, Hebrew, and/or Portuguese
- Handbook on network literacy translated into 19 languages as of 4/11/17 [Arabic, Brazilian Portuguese, Catalan, Chinese–Mandarin, Chinese–Mandarin (traditional), Dutch, French, German, Hebrew, Hungarian, Italian, Japanese, Korean, Persian, Polish, Russian, Spanish, Turkish, and Ukrainian]
- Expository article on the Fermi–Pasta–Ulam–Tsingou (FPUT) problem translated into Italian for *Le Scienze* (Italian version of *Scientific American*) [6/25/09], translated into Spanish for *Investigacion y Ciencia* (Spanish version of *Scientific American*) [8/09], translated into French for *Pour la Science* (French version of *Scientific American*) [10/09], and translated into German for *Spektrum der Wissenschaft* (German version of *Scientific American*) [10/22/10]. Also featured in the Math Digest section of American Mathematical Society's "Math in the Media" [5/09]
- Expository article on transition states in atomic and celestial physics featured in an American Mathematical Society press release [8/31/05], the MathTrek section of *Science News* online [9/9/05, Vol. 168, No. 11], a Georgia Tech press release [9/28/05], a National Science Foundation press release [9/29/05], and *Science* [11/18/05]. The American Mathematical Society has also published a "Mathematical Moment" (in 9 different languages) based on this article (MM/49)
- Expository article on quantum chaos translated into German for *Spektrum der Wissenschaft* (German version of *Scientific American*) [3/03], translated into Spanish for *Investigacion y Ciencia* (Spanish version of *Scientific American*) [4/03], and reprinted in *PowerWeb: Conceptual Physics* [The McGraw-Hill Companies, 2003]

CONSULTING

- Advisory Board: Omnity, Inc. [6/15–9/19]
- Consultant: Market Sentinel [2008–2011]
- Consultant: *Meet Dave* [movie], 20th Century Fox [released 7/11/08]

RESEARCH MENTORSHIP OF POSTDOCTORAL SCHOLARS AND GRADUATE STUDENTS

- Postdoctoral scholars (UCLA)
  - 1. Dr. Edith Zhang, Department of Mathematics, TBD topics in graphons [7/25–present]
  - 2. Dr. Linnéa Gyllingberg, Department of Mathematics, Dynamical Systems on Networks [7/24–present]
  - 3. Dr. David Beers, Department of Mathematics, TBD topics in topological data analysis [7/24–present]
  - 4. Dr. Tung Nguyen, Department of Mathematics, TBD topics in networks and dynamics [7/24–present]
  - 5. Dr. Leah Keating, Department of Mathematics, Contagions on Networks [7/23–6/25]
    - Placement: Now a postdoctoral associate in the Vermont Complex Systems Institute at University of Vermont
  - 6. Dr. Casey Johnson, Department of Mathematics, Opinion Dynamics on Networks [12/22–present]
  - 7. Dr. Sanjukta Krishnagopal, Department of Mathematics, Topics in Complex Systems, joint with J. T. Chayes (School of Information, UC Berkeley) [7/22–6/24]
    - Placement: Now an assistant professor in the Department of Computer Science at UC Santa Barbara
  - 8. Dr. Gillian Grindstaff, Department of Mathematics, Topological Data Analysis of Social Systems [7/22–8/23]
    - Placement: Now a postdoctoral scholar in the Mathematical Institute at University of Oxford
  - 9. Dr. Sarah Tymochko, Department of Mathematics, Microbiome Dynamics and Topological Data Analysis [7/22–6/25]
    - Placement: Now an Assistant Professor in Mathematics and Computer Science at Holy Cross College

- 10. Dr. Weiqi Chu, Department of Mathematics, "Models of Opinion Dynamics on Networks", joint with A. L. Bertozzi [7/21–8/23]
  - Placement: Now an assistant professor in the Department of Mathematics and Statistics at University of Massachusetts, Amherst
- 11. Dr. Philip Chodrow, Department of Mathematics, Various Projects in Network and Data Science [7/20–6/22]
  - Placement: Now an assistant professor in the Department of Computer Science at Middlebury College
- 12. Dr. Elisa Baek, Department of Psychology, "How Real-World Interaction Networks Shape and are Shaped by Neural Information Processing", joint with C. Parkinson (Dept. of Psychology) [7/19–12/22]
  - Placement: Now an assistant professor in the Department of Psychology at University of Southern California
- 13. Dr. Nina Otter, Department of Mathematics, "Mathematics of Data Science", joint with G. Montúfar (Dept. of Mathematics) [1/19–6/21]
  - Placement: Became a lecturer in the Department of Mathematics at Queen Mary University of London
- 14. Dr. Heather Zinn Brooks, Department of Mathematics, "Dynamical Systems on Networks" [7/18–6/20]
  - Placement: Now an assistant professor in the Department of Mathematics at Harvey Mudd College

- Postdoctoral scholars (University of Oxford)
  - 1. Dr. Marya Bazzi, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Community Structure in Networks", joint with S. D. Howison (Mathematical Institute) [1/16–9/16]
    - Placement: Worked in industry for a year. After that, she was a postdoctoral fellow in the Alan Turing Institute and at University of Warwick. She was then an Assistant Professor in the Mathematics Institute at University of Warwick
  - 2. Dr. Lucas Jeub, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Community Structure in Networks", joint with S. D. Howison (Mathematical Institute) [1/16–8/16]
    - Placement: Became a postdoctoral fellow in the School of Informatics at University of Indiana Bloomington and was then a postdoctoral scholar at the ISI Foundation in Italy
  - 3. Dr. Mikko Kivelä, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Multilayer Networks" [3/13–10/15]
    - Was then postdoctoral scholar in the Department of Computer Science at Aalto University, and then became an assistant professor in the Department of Computer Science at Aalto University
  - 4. Dr. Sang Hoon Lee, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Multilayer Networks, Core-Periphery Structure, and Mobility" [6/12–6/14]
    - Placement: Became a postdoctoral fellow in the Integrated Center for Fostering Global Creative Researcher in the Department of Energy Science at Sungkyunwkan University. He then became a Research Fellow at Korea Institute for Advanced Study. He is now an Assistant Professor in the Department of Liberal Arts at Gyeongnam National University of Science and Technology
  - 5. Dr. Sergey Melnik, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Cascades on Networks" [12/10–12/11]; Sergey was previously a Visiting Postdoctoral Scholar in my group [1/10–3/10]
    - Placement: Became a postdoctoral scholar in the Department of Mathematics & Statistics at University of Limerick
- Visiting postdoctoral scholars
  - Dr. Faiz Imam [6/24–6/25]
  - Dr. Alina Dubovskaya, visiting from University of Limerick [5/23–7/23]
  - Dr. Sergey Melnik, visiting from University of Limerick [1/10–3/10]
- Doctoral students, UCLA
  - Supervisor
    - 1. Mia Zender, Department of Mathematics, Opinion Dynamics on Networks [Spring 2025–present]
    - 2. Kye Shi, Department of Mathematics, Network Dynamics and Structure of Directed Acyclic Graphs [Spring 2024–present]
    - 3. James V. Raj, Department of Physics and Astronomy, "Disordered Metamaterials"; R. Bruinsma (Physics and Astronomy) listed as co-chair because James is in the physics department [Fall 2023–present]
    - 4. Dr. Theodore Y. Faust, Department of Mathematics, "Inference and Size Localization of Mesoscale Structures in Temporal Networks" [Spring 2022–Spring 2025]
    - 5. Joshua Enwright, Department of Mathematics, Topics in Topological Data Analysis and Opinion Dynamics [Fall 2021–Spring 2023]
      - Joshua moved back to theoretical mathematics to do a Ph.D. thesis in algebraic geometry
    - 6. Dr. Michael C. Johnson, Department of Mathematics, "Topics in Network Science: Modeling of Microbiome Populations in Interacting Hosts and an Application of Persistent Homology to Resource Coverage" [Fall 2021–Spring 2025]
    - 7. Christine M. Craib, Department of Computational Medicine, Topics in Network Epidemiology and Dynamical Systems on Networks [Fall 2021–present]
    - 8. Dr. Jiajie ("Jerry") Luo, Department of Mathematics, "Topics in Persistent Homology and Complex Social Systems" [Fall 2020–Spring 2024]
    - 9. Dr. Grace J. Li, Department of Mathematics, "Some Generalizations of Bounded-Confidence Models of Opinion

Dynamics" [Fall 2020–Spring 2024]

- 10. Dr. Kaiyan Peng, Department of Mathematics, "Mathematical Modeling of Disease Dynamics, Opinion Dynamics, and Environmental Crimes", joint with A. L. Bertozzi (Mathematics) [Fall 2019–Spring 2022]
  - Placement: Now works at Facebook
- 11. Dr. Abigail Hickok, Department of Mathematics, "Topics in Geometric and Topological Data Analysis" [Summer 2019–Spring 2023]
- 12. Dr. Zhiping ("Patricia") Xiao, Department of Computer Science, "Ideology Analysis for Social-Media Users via Multi-Modal Data Mining", joint with Y. Sun (Computer Science) [Winter 2019–Spring 2024]
  - Placement: Now a postdoctoral scholar in computer science at University of Washington
- 13. David Spencer, Department of Mathematics, "Routing in Transportation Networks" [Fall 2018–Fall 2019]
  - David left the program with a Masters degree
- 14. Dr. Michelle Feng, Department of Mathematics, "Topological Tools for Understanding Complex Systems" [Spring 2017–Spring 2020]
  - Placement: Received a James S. McDonnell Postdoctoral Fellowship in complex systems and used this fellowship to take the position of postdoctoral scholar (a von Karman Instructor) in Computing + Mathematical Sciences at California Institute of Technology
- 15. Dr. William G. Oakley, Department of Mathematics, "Strong Consensus-Seeking in a Model of Social Consensus Formation" [Fall 2016–Summer 2020]
  - Placement: Now a software engineer at NewCo
- 16. Dr. Yacoub H. Kureh, Department of Mathematics, "Nonlinear Opinion Models and Other Networked Systems" [Fall 2016–Spring 2020]
- 17. Dr. Charlie Marshak, Department of Mathematics, "Applications of Network Science to Criminal Networks, University Education, and Ecology", joint with A. L. Bertozzi (Mathematics) [Fall 2016–Spring 2017]
  - Placement: Took a data science position. Since December 2017, he has been a postdoctoral scholar at Jet Propulsion Laboratory

- Thesis Committee Member (UCLA students)
  - 1. Fred Xu (supervisor: Yizhou Sun), Computer Science, Topics in Dynamical Systems on Networks [Summer 2025–present]
  - 2. Mark Kong (supervisor: Deanna Needell), Mathematics, Topics in Machine Learning [Fall 2024–present]
  - 3. Charles Maxwell Metzler-Winslow (supervisor: Dolores Bozovic, Physics and Astronomy), Physics and Astronomy, Dynamics of Hair Cells [Spring 2024–present]
  - 4. Dr. Joyce Chew (supervisor: Deanna Needell), Mathematics, "Topics in Geometric Deep Learning and Learning on Manifolds" [Summer 2023–Spring 2025]
  - 5. Dr. Erin George (supervisor: Deanna Needell), Mathematics, "Fairness and Foundations of Machine Learning" [Summer 2022–Spring 2025]
  - 6. Dr. Jason Brown (supervisor: Andrea L. Bertozzi), Mathematics, "Improving Image Feature Detection and Classification in Low-Label Regime with Deep and Classical Methods" [Spring 2022–Spring 2024]
  - 7. Dr. Ben Jarman (supervisor: Deanna Needell), Mathematics, "Kaczmarz's Method for Systems of Linear Equations: Coherence, Corruption, and Consensus" [Fall 2021–Spring 2023]
  - 8. Dr. Xia Li (supervisors: Andrea L. Bertozzi and Deanna Needell), "Mathematical Modeling of Epidemics and Adversarial Learning in Distributed Systems" [Summer 2020–Summer 2022]
  - 9. Dr. Dominic Yang (supervisor: Andrea L. Bertozzi), Mathematics, "Exploiting Symmetry in Subgraph Isomorphism and Formulating Neural Network Constrained Optimization Problems" [Summer 2020–Spring 2023]
  - 10. Dr. Mina Shahi (supervisors: Peyman Golshani [Neurology]) and Weizhe Hong [Neurobiology]), Bioengineering, "Hippocampal Neural Dynamics of Spatial Navigation in the Morris Water Maze" [Spring 2020–Spring 2024]
    - I was also a co-advisor, but I was not listed officially for logistical reasons.
  - 11. Dr. Zehan Chao (supervisors: Deanna Needell and Andrea L. Bertozzi), Mathematics, "Data Completion and Robust Principal Component Analysis under Low-Rank Restrictions" [Winter 2020–Fall 2022]
  - 12. Dr. Duncan Clark (supervisor: Mark S. Handcock), Statistics, "Latent Order Logistic Modelling of Social Networks" [Spring 2019–Spring 2022]
  - 13. Dr. Jacob Moorman (supervisors: Deanna Needell and Andrea L. Bertozzi), Mathematics, "Stochastic Optimization and Subgraph Search" [Spring 2019–Summer 2021]
  - 14. Dr. Thomas Tu (supervisor: Andrea L. Bertozzi), Mathematics, "Subgraph Matching on Attributed Multiplex Networks with Applications to Knowledge Graphs" [Spring 2019–Summer 2021]
  - 15. Tianyun ("Jason") Lin (supervisor: Van Savage), Biomathematics, Food-Web Stability Inference [Summer 2018–Fall 2024]
  - 16. Dr. Jalil Kazemitabar Amirkolaei (supervisor: Arash A. Amini), Statistics, "Problems in Epidemic Inference on Complex Networks"[Summer 2018–Spring 2020]
  - 17. Dr. Hao Li (supervisor: Andrea L. Bertozzi), Mathematics, "Graph-Based Learning and Data Analysis" [Spring

2018–Fall 2020]
        - 18. Dr. Fiona Yeung (supervisor: Mark S. Handcock), Statistics, "Statistical Revealed Preference Models for Bipartite Networks" [Fall 2017–Spring 2019]
        - 19. Dr. Zachary M. Boyd (supervisor: Andrea L. Bertozzi), Mathematics, "Community Detection Using Total Variation and Surface Tension" [Fall 2017–Summer 2018]
        - 20. Dr. Baichuan Yuan (supervisor: Andrea L. Bertozzi), Mathematics, "Large-scale and Deep Spatiotemporal Point-Process Models" [Spring 2017–Spring 2020]
        - 21. Dr. Shyr-Shea Chang (supervisor: Marcus Roper), Mathematics, "Revealing Design Principles of Biological Networks through Optimization and Dynamical Systems Approaches" [Winter 2017–Summer 2019]
        - 22. Dr. Cassidy Mentus (supervisor: Marcus Roper), Mathematics, "Information Theoretic and Statistical Models for Spatial Transportation Networks: Total Mixing Entropy on Optimal Fluid Flow Networks and Time Dependent Stochastic Block Models" [Fall 2016–Fall 2019]
    - Additional PhD students mentored (UCLA students)
        - Annie Wang, Physics and Astronomy, "Percolation Models of Neuronal Networks" [Spring 2025–present]
        - Aidan Bachmann, Physics and Astonomy, Nonlinear Dynamics and Plasma Physics [Winter 2025–present]
- Doctoral students, University of Oxford
    - 1. Dr. Fabian M. Ying, Industrially Focussed Mathematical Modelling (InFoMM) Centre for Doctoral Training, Mathematical Institute, "Spatio-temporal Patterns Among Shoppers", joint with M. Beguerisse Díaz (Mathematical Institute) and S. D. Howison (Mathematical Institute), industrial partner Tesco [Spring 2016–Fall 2019]
        - Placement: Now a Quantitative Researcher at G-Research
    - 2. Dr. Florian Klimm, Systems Approaches to Biomedical Sciences Centre for Doctoral Training, "Generalised Networks for Protein Interaction Analysis", joint with C. M. Deane (Statistics), J. Wray (e-Therapeutics plc), and P. K. Maini (Mathematical Institute) [Summer 2015–Spring 2019]
        - Placement: Became a postdoctoral scholar in Statistics at University of Oxford, then did a postdoctoral scholar in Mathematics at Imperial College, and is now a research staff member in the biological sciences at University of Oxford
    - 3. Dr. Alice C. Schwarze, Systems Approaches to Biomedical Sciences Centre for Doctoral Training, "Robustness and Entropy for Dynamics on Networks", joint with J. Wray (e-Therapeutics plc) and P. K. Maini (Mathematical Institute) [Summer 2015–Fall 2019]
        - Placement: Became a postdoctoral scholar in the Department of Biology at University of Washington and was then a postdoctoral scholar in the Department of Mathematics at Dartmouth College
    - 4. Dr. Jake P. Stroud, Life Sciences Interface (LSI) Doctoral Training Centre, "Spatio-Temporal Control of Network Activity Through Gain Modulation in Cortical Circuit Models", joint with T. P. Vogels (Physiology, Anatomy, and Genetics) [Spring 2015–Fall 2018]
        - Placement: Postdoctoral scholar at University of Cambridge
    - 5. Dr. A. Roxana (Feier) Pamfil, Industrially Focussed Mathematical Modelling (InFoMM) Centre for Doctoral Training, Mathematical Institute, "Communities in Annotated, Multilayer, and Correlated Networks", joint with S. D. Howison (Mathematical Institute), industrial partner dunnhumby [Spring 2015–Spring 2019]
        - Placement: Data scientist at QuantumBlack
    - 6. Dr. Barbara I. Mahler, Systems Biology Doctoral Training Centre, "Contagions and Manifolds", joint with U. Tillmann (Mathematical Institute); for the initial part of the project, also joint with H. A. Harrington (Mathematical Institute) [Spring 2014–Spring 2020]
        - Placement: Was a postdoctoral scholar in the Mathematical Institute at University of Oxford. She then briefly had a job as a data scientist and was then a postdoctoral scholar in mathematics at KTH Royal Institute of Technology in Stockholm
    - 7. Dr. Jake P. Taylor-King, Systems Approaches to Biomedical Sciences Centre for Doctoral Training, "Cancer, Networks, and the Role of Interactions in Somatic Evolution", joint with D. Basanta (Moffitt Cancer Center, USA) and S. J. Chapman (Mathematical Institute); H. A. Harrington (Mathematical Institute) was a co-supervisor in the initial lab-rotation project [Summer 2014–Fall 2016].
        - Note: I left the supervision team — before Jake completed his doctorate — in Fall 2016, with S. J. Chapman and D. Basanta remaining as supervisors.
    - 8. Dr. Birgit Brüggemeier, Neuroscience, Department of Physiology, Anatomy, and Genetics, "*Drosophila* Courtship Song: Modelling Behavioural Patterns in Terms of Neural and Muscle Dynamics", joint with S. F. Goodwin (Dept. of Physiology, Anatomy, and Genetics) [Fall 2013–Fall 2017]
        - Placement: Became a postdoctoral scholar at the Fraunhofer Institute and is now a senior scientist ("Team Leader") at the Fraunhofer Institute
    - 9. Dr. Alejandro J. Martínez, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Disordered Granular Crystals", joint with S. J. Chapman (Mathematical Institute) [Fall 2013–Fall 2018]
        - Placement: Became a postdoctoral scholar in computational biology at Fundación Ciencia y Vida
    - 10. Vladimirs Murevics, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Systemic Risk in

Financial Systems", joint with S. D. Howison (Mathematical Institute), industrial partner HSBC [Fall 2013–Spring 2019]

- 11. Dr. Valentin Danchev, International Migration Institute, joint with M. Keith (Centre on Migration, Policy, and Society), "Spatial Network Structures of World Migration: Heterogeneity of Global and Local Connectivity" [Spring 2013–Fall 2015]
  - Placement: Became a postdoctoral scholar in the Knowledge Lab in the Department of Sociology at University of Chicago and was then a postdoc in METRICS at Stanford University. He was then an assistant professor in the Department of Sociology at University of Essex and is now a lecturer (assistant professor) in the School of Business and Management at Queen Mary University of London
- 12. Dr. Se Wook Oh, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Complex Contagions with Lazy Adoption", joint with S. J. Chapman (Mathematical Institute) [Spring 2013–Spring 2018]
  - Placement: Became a data scientist at Wonderful Platform and is now a data scientist at Samsung
- 13. Dr. Paul Brodersen, Systems Biology Doctoral Training Centre, "Relating Neuronal Coding to Network Architecture", joint with C. J. Akerman (Dept. of Pharmacology) [Fall 2012–Fall 2017]
  - Placement: Now a postdoctoral scholar in pharmacology at University of Oxford
- 14. Dr. Marta Sarzynska, Systems Biology Doctoral Training Centre, "Spatial Community Structure and Epidemics", joint with E. A. Leicht (Saïd Business School) [Fall 2011–Summer 2015]
  - Placement: Now working at Bain & Company
- 15. Dr. Marya Bazzi, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Community Structure in Temporal Multilayer Networks, and its Application to Financial Correlation Networks", joint with S. D. Howison (Mathematical Institute), industrial partner HSBC [Fall 2011–Winter 2016]
  - Placement: Did a brief postdoctoral fellowship in the Mathematical Institute at University of Oxford. She then worked in industry for a year and was then a postdoctoral scholar at the Alan Turing Institute and the Mathematics Institute at University of Warwick. She is now a lecturer (assistant professor) in the Mathematics Institute at University of Warwick
- 16. Dr. Lucas G. S. Jeub, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Networks, Communities, and Consumer Behaviour", industrial partner Unilever [Fall 2011–Winter 2016]
  - Placement: Did a brief postdoctoral fellowship in the Mathematical Institute at University of Oxford. He then was a postdoctoral fellow in the School of Informatics at University of Indiana Bloomington and was then a postdoctoral fellow at ISI Foundation in Italy. He is now a data scientist in a startup company that is making software for studying temporal networks
- 17. Dr. Sofia H. Piltz, Life Sciences Interface Doctoral Training Centre, "Models for Adaptive Feeding and Population Dynamics in Plankton", joint with P. K. Maini (Mathematical Institute) [Fall 2010–Summer 2015]
  - Placement: Held a postdoctoral scholarship at the National Institute of Aquatic Resources, Centre for Ocean Life (and also in the Department of Mathematics and Computer Science) at Technical University of Denmark (DTU). She was then a Post-Doc Assistant Professor in the Department of Mathematics at University of Michigan and is now a data scientist at the Finnish Social Insurance Institution
- 18. Dr. M. Puck Rombach, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Colouring, Centrality and Core-Periphery Structure in Graphs", joint with A. Scott (Mathematical Institute) [Fall 2009–Fall 2013]
  - Placement: Now an Adjunct Assistant Professor (i.e., postdoctoral scholar) in the Department of Mathematics at UCLA. She is now an Associate Professor in the Department of Mathematics & Statistics at The University of Vermont
- 19. Dr. Martin D. Gould, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute, "Limit Order Books", joint with S. D. Howison (Mathematical Institute), industrial partner HSBC [Fall 2009–Summer 2014]
  - Placement: Received a James S. McDonnell Postdoctoral Fellowship in complex systems and used it at Imperial College, where he was a CFM-Imperial Research Fellow. He was then CEO and a founder of the company Sonalytic (which was purchased by Spotify in March 2017). After Sonalytic was purchased by Spotify, Martin joined Spotify as a group leader. He is now starting a new company
- 20. Dr. Sumeet Agarwal, Systems Biology Doctoral Training Centre "Networks in Nature: Dynamics, Evolution, and Modularity", joint with C. M. Deane (Dept. of Statistics) and N. S. Jones (Dept. of Physics) [Summer 2008–Summer 2012]
  - Placement: Now an Assistant Professor of Electrical Engineering at Indian Institute of Technology in Delhi
- 21. Dr. Anna C. F. Lewis, Systems Biology Doctoral Training Centre, "Communities and Homology in Protein-Protein Interactions", joint with C. M. Deane (Dept. of Statistics) and N. S. Jones (Dept. of Physics) [Spring 2008–Spring 2012]
  - Placement: Became a consultant at McKinsey & Company and was then employed as a computational biologist for Omicia (a genomics startup company). She is now a postdoc in bioethics
- 22. Dr. Daniel J. Fenn, Mathematical and Computational Finance Group, Mathematical Institute, "Network Communities and the Foreign Exchange Market", joint with S. D. Howison (Mathematical Institute) and N. S. Jones (Dept. of Physics), industrial partner HSBC [Spring 2008–Winter 2011]
  - Placement: Now at HSBC Bank

- Doctoral students, other universities

- Supervisor
  - 1. Dr. Filippo Riscica Lizzio, Philosophy, Faculty of Humanities, Universität Hamburg, "Epistemic Groups: Epistemology and Formal Modelling", joint with T. Krödel (Institute of Philosophy, Universität Hamburg) and P. Niesen (Faculty of Economics and Social Sciences, Universität Hamburg) [Summer 2021–Fall 2024]
- Thesis Committee Member
  - 1. Corbit Sampson (supervisor: Juan Gabriel Restrepo), Applied Mathematics, University of Colorado Boulder [Winter 2023–Spring 2025]
  - 2. Dr. Nicholas Landry (supervisor: Juan Gabriel Restrepo), Applied Mathematics, University of Colorado Boulder [Winter 2021–Spring 2022]

- Visiting doctoral students
  - 1. Edith Zhang, visiting doctoral student from Ph.D. program in Applied Mathematics, Columbia University, "Network Clustering, Glauber Dynamics, and Graphons" [June–September 2022, August 2023]
  - 2. Yohei Sakamoto, visiting doctoral student from Department of Physics, Kyoto University, "Exploring the Ajdacent Possible with Random Walks on Networks" [Fall 2015]
- Masters students, UCLA (including visiting students)
  - 1. Alessandro Cavalleri, visiting student from Economics, Sapienza University of Rome, "Risk Sharing in Multilayer Financial Networks" [May–June 2023]
  - 2. Cu Hauw ("Willy") Hung, Computer Science, UCLA, "Bus Transportation for the Los Angeles Unified School District" [Winter 2019–Spring 2019]
- Masters students, University of Oxford (including visiting students)
  - 1. Dimitri Lozeve, Centre for Doctoral Training in Statistical Science, University of Oxford, "Topological Data Analysis of Temporal Networks", joint with H. A. Harrington (Mathematical Institute) and R. Lambiotte (Mathematical Institute) {for bureaucratic reasons, Gesine Reinert (Department of Statistics) is listed as the supervisor on paper} [Spring–Summer 2018]
    - Placement: Data scientist at Mindsay
  - 2. Alexandra Darmon, Mathematical Modelling and Scientific Computation (MMSC), "Algorithmic Classification of Writing Styles via Time-Series Analysis of Punctuation", joint with S. D. Howison (Mathematical Institute) and M. Bazzi (Mathematical Institute) [Spring–Summer 2016]
    - Placement: Data scientist at Fuse Mobile Technologies Ltd.
  - 3. Karan Jain, Mathematical Modelling and Scientific Computation (MMSC), "Establishment of Dominance Hierarchies and Cooperation: A Game-Theoretic Perspective", joint with C. L. Hall (Mathematical Institute) [Spring–Summer 2016]
  - 4. Lena Mangold, Mathematical Modelling and Scientific Computation (MMSC), "Should I Stay or Should I Go: Clash of Opinions in the Brexit Twitter Debate" [Spring–Summer 2016]
    - Placement: Got a job doing social-media analysis for the Labour Party (UK). She then did other jobs in data science and is now a PhD student in computational social science at Centre Marc Bloch in Berlin
  - 5. Walid Ahmad, Mathematical Modelling and Scientific Computation (MMSC), "Continuous-Time Analysis of Temporal Networks", joint with M. Beguerisse Díaz (Mathematical Institute) [Spring–Summer 2016]
  - 6. Leo Speidel, Systems Biology Doctoral Training Centre, "A Spatially-Embedded Random-Graph Model Based on Random Sequential Adsorption", joint with H. A. Harrington (Mathematical Institute) and S. J. Chapman (Mathematical Institute) [Spring–Summer 2016]
    - Placement: Doctoral student based in the Department of Statistics at University of Oxford
  - 7. Luc Stultiens, Mathematics and the Foundations of Computer Science (MFoCS), "Community Detection in the European Parliament: A Network Approach" [Spring–Summer 2016]
    - Placement: A job at the Ministry of Finance in The Netherlands
  - 8. Liam Brown, Systems Approaches to Biomedical Sciences Centre for Doctoral Training, "Statistics and Inference in Protein Interaction Networks", joint with C. M. Deane (Statistics) and J. Wray (E-Therapeutics) [Summer 2015]
    - Placement: D.Phil. student based in the Mathematical Institute at University of Oxford
  - 9. Erin Price-Wright, Mathematics and the Foundations of Computer Science (MFoCS), "A Topological Approach to Temporal Networks", joint with H. A. Harrington (Mathematical Institute) [Spring–Summer 2015]
    - Placement: Got a job at Palantir
  - 10. Daniella Ayala Garcia, Mathematical Modelling and Scientific Computation (MMSC), "Temporal Percolation in the Erdös–Rényi Model and the Effect of Burstiness", joint with M. Kivelä (Mathematical Institute) [Spring–Summer 2015]
  - 11. Thomas Gaudelet, Mathematical Modelling and Scientific Computation (MMSC), "Short-Range Impact of Damage on Object Recognition in a Trained Neuronal Network", joint with M. Kivelä (Mathematical Institute) [Spring–Summer 2015]
    - Placement: Became a Ph.D. student in Computer Science at University College London
  - 12. Jonas Søgaard Juul, visiting student from Niels Bohr Institute, University of Copenhagen, "Social Influence on Networks with Synergy and Hipsters" [Spring 2015–Summer 2015]
    - Placement: Earned a Ph.D. at Niels Bohr Institute, University of Copenhagen and was then a postdoctoral scholar in applied mathematics at Cornell University

- 13. Bernadette J. Stolz, Mathematical Modelling and Scientific Computation (MMSC), "Computational Topology in Neuroscience", joint with H. A. Harrington (Mathematical Institute) [Spring–Summer 2014]; Systems Approaches to Biomedical Sciences Centre for Doctoral Training, "Analysis of Persistent Homology in Neuronal Networks", joint with H. A. Harrington (Mathematical Institute), F. Sambataro (Roche Innovation), and S. Nahkuri (Roche Innovation) [Summer 2015]
  - Placement: Earned D.Phil. in the Mathematical Institute at University of Oxford and was then a postdoctoral scholar in the Mathematical Institute at University of Oxford
- 14. Frederique Akse, Mathematical Modelling and Scientific Computation (MMSC), "Aggregate Waiting Time Reduction on Public Transportation Networks: An Application of Multilayer Networks", joint with M. Kivelä (Mathematical Institute) [Spring–Summer 2014]
  - Placement: Got a job at Quintiq
- 15. Camilo Palazuelos Calderón, visiting student from Universidad de Cantabria, "Time-Dependent Community Structure in Networks" [Fall 2013]
- 16. Florian Klimm, Physics, visiting student from Humboldt-Universität zu Berlin, "Filtrations and Contagion Dynamics on Networks" [Summer 2013]
  - Placement: Then became a D.Phil. student in the Mathematical Institute, through the Systems Approaches to Biomedical Sciences Centre for Doctoral Training, at University of Oxford. He was then a postdoctoral scholar in the Department of Statistics at University of Oxford
- 17. Melissa Lever, Systems Biology Doctoral Training Centre, "Characterising Patients and Controls with Brain Graphs Constructed from fMRI Data", joint with S. H. Lee (Mathematical Institute) [Summer 2012]
  - Placement: Earned a D.Phil. from the Department of Pathology at University of Oxford and was then a postdoc in the Computational Systems Biology Laboratory at University of São Paolo
- 18. Marianne McKenzie, Mathematics and the Foundations of Computer Science (MFoCS), "Stability-Optimization Algorithms for the Detection of Community Structure in Networks" [Spring–Summer 2012]
  - Now part of the computer instruction team at Indianapolis Marion County Public Library
- 19. Jasvir Grewal, Mathematical Modelling and Scientific Computation (MMSC), "Cooperation Versus Dominance Hierarchies in Animal Groups", joint with M. S. Dawkins (Zoology) and C. L. Hall (Mathematical Institute) [Spring–Summer 2012]
- 20. Georgios Kapros-Anastasiadis, Mathematical Modelling and Scientific Computation (MMSC), "Cascades on Temporal Networks" [Spring–Summer 2012]
- 21. Laura Keating, Mathematical Modelling and Scientific Computation (MMSC), "A Test of Time: Time-Aggregated Networks and Time-Ordered Networks in Behavioural Ecology" [Spring–Summer 2012]
  - Placement: In Fall 2012, Laura interned with Save The Elephants (STE) in Kenya. She then worked in environmental planning in Canada, and she is now working for Strategic Decisions Group
- 22. Tom Prescott, Life Sciences Interface (LSI) Doctoral Training Centre, "Examining Dynamic Network Structure in Relation to the Spread of Infectious Diseases", joint with E. A. Leicht (Saïd Business School) [Summer 2011]
  - Placement: Earned a D.Phil. in the Department of Engineering Science at University of Oxford and was then a postdoctoral scholar in the Department of Engineering Science at University of Oxford.
- 23. Priya Narayan, Mathematical Modelling and Scientific Computation (MMSC), "Mathematics Genealogy Networks", joint with E. A. Leicht (Saïd Business School) [Spring–Summer 2011]
- 24. Annika Wipprecht, Mathematical Modelling and Scientific Computation (MMSC), "Structure of Charity Networks" [Spring–Summer 2011]
  - Placement: Became a Ph.D. student in Mathematical Finance at University College London
- 25. Chang Wang, Mathematical Modelling and Scientific Computation (MMSC), "Collisionally Inhomogeneous Bose–Einstein Condensates" [Spring–Summer 2011]
  - Placement: Subsequently earned a D.Phil. in the Mathematical Institute (OCIAM group) at University of Oxford
- 26. Sally Hutchings, Mathematics and the Foundations of Computer Science (MFoCS), "Mathematical and Computational Properties of Modularity Optimization", joint with R. A. Hauser (Mathematical Institute) [Spring–Summer 2011]
  - Placement: Sally now has an actuarial job.
- 27. Patrick Raanes, Mathematical Modelling and Scientific Computation (MMSC), "Crowding: Using Statics to Understand the Dynamics of Densely Packed Hard Particles", joint with R. Erban (Mathematical Institute) and N. S. Jones (Dept. of Physics) [Spring–Summer 2010]
  - Placement: Subsequently earned a D.Phil. in the Mathematical Institute (OCIAM group) at University of Oxford and is was then a postdoc in the Nansen Environmental and Remote Sensing Center
- 28. Antoine Levitt, Mathematical Modelling and Scientific Computation (MMSC), "Nonlinear Waves in Granular Crystals" [Spring–Summer 2010]
  - Placement: Earned a Ph.D. in applied mathematics from Université Paris-Dauphine. He then did postdocs at Commissariat à l'Énergie Atomique in the Direction des applications militaires in Bruyères-le-Châtel and then in the Laboratoire Lacques-Louis Lions at Paris 6. He is now a research faculty member on the Materials Team at Inria Paris and École des Ponts

- 29. Sofian Otmani, Mathematics and the Foundations of Computer Science (MFoCS), "Random Graph Models with Clustering" [Spring–Summer 2009]
  - Subsequently worked for Market Sentinel, Winton Group, and Bloomberg LP. He is now a Lead Engineer at Onfido
- 30. Benjamin Franz, Mathematical Modelling and Scientific Computation (MMSC), "Synchronisation Properties of an Agent-Based Animal Behaviour Model", joint with M. S. Dawkins (Dept. of Zoology) [Spring–Summer 2009]
  - Placement: Earned a D.Phil. from the Mathematical Institute (OCCAM group) at University of Oxford
- 31. Wojciech Gryc, Mathematical Modelling and Scientific Computation, "Modelling Cabinet Networks in Parliamentary Democracies" [Spring–Summer 2009]
  - Placement: Founder and CEO of Canopy Labs
- 32. Michael Byrne, Mathematical Modelling and Scientific Computation (MMSC), "Nonlinear Waves in Granular Lattices" [Spring–Summer 2009]
  - Placement: Earned a Ph.D. in Earth, Atmospheric, and Planetary Sciences at MIT. He then was a postdoctoral scholar in Mechanical and Process Engineering at ETH Zürich and was then a research fellow in Physics at Imperial College
- 33. John Pearson, Mathematical Modelling and Scientific Computation (MMSC), "Computation of Hypergeometric Functions", joint with S. Olver (Computing Laboratory) and Numerical Algorithms Group (NAG) [Spring–Summer 2009]
  - Placement: Earned a D.Phil. in the Mathematical Institute (numerical analysis group) at University of Oxford. He was then a postdoctoral scholar in mathematics at University of Edinburgh and then a Lecturer (i.e., assistant professor) in the School of Mathematics, Statistics, and Actuarial Science at University of Kent. He is now a Lecturer in the School of Mathematics at University of Edinburgh
- 34. Mariano Beguerisse Díaz, Mathematical Modelling and Scientific Computation (MMSC), "Analysis of a Bipartite Network of Movie Ratings and Catalogue Network Growth Models", joint with J.-P. Onnela (Dept. of Physics) [Winter–Summer 2008]
  - Placement: Earned a Ph.D. in the Centre for Integrative Systems Biology at Imperial College London and then became (through a James S. McDonell Postdoctoral Fellowship in Complex Systems) a postdoctoral scholar in the Department of Mathematics and Department of Chemistry at Imperial College. He was then a postdoctoral scholar in the Mathematical Institute at University of Oxford and now works as a data scientist at Spotify
- 35. Ben Sparks, Mathematical Modelling and Scientific Computation (MMSC), "Plastic Self-Organizing Maps and Classification of Radar Data", joint with Philip Bond and the Thales Group [Spring–Summer 2008]
- 36. Thomas Mooney, Mathematical Modelling and Scientific Computation (MMSC), "Solitonic and Extended Periodic Solutions of the Quasi-1D Gross–Pitaevskii Equation with a Piecewise-Constant Nonlinearity" [Spring–Summer 2008]

- Masters students, other universities
  - 1. Lasse Mohr Mikkelsen, Applied Mathematics and Computer Science, Technical University of Denmark, "Median-Based Bounded-Confidence Models of Opinion Models on Networks", joint with P. Hjorth (Department of Applied Mathematics and Computer Science, Technical University of Denmark) [Winter 2021–Summer 2021]
    - Placement: Became a Ph.D. student in applied mathematics at Technical University of Denmark

RESEARCH MENTORSHIP OF UNDERGRADUATE STUDENTS

- UCLA
  - 1. Nathan Zumut, Applied Mathematics, UCLA, To Be Determined Topic in Topological Data Analysis, joint with D. Beers (Dept. of Mathematics) [Fall 2025–present]
  - 2. Kai Bengston, Applied Mathematics, UCLA, "Evolutionary Games on Networks", joint with L. Gyllingberg (Dept. of Mathematics) [Fall 2025–present]
  - 3. Oliver Zheng, Mathematics, UCLA, "Opinion Models with Media Nodes" [Spring 2025–present]
  - 4. William Yao, Mathematics and Economics, UCLA, "Agent-Based Models and Finance" [Spring 2025–present]
  - 5. Emma Vega, Mathematics/Applied Science, UCLA, TBA in Percolation Theory, joint with J. Raj (Dept. of Physics, UCLA) [Spring 2025–present]
  - 6. Leila Thompsky, Mathematics and English, UCLA and Yuexuan ("Yolanda") Wu, Mathematics and Economics, UCLA [listed separately below for her own project], "Bounded-Confidence Models of Opinion Dynamics", joint with J. Luo (Knowledge Lab, University of Chicago) [Fall 2024–Spring 2025]
  - 7, 8, 9, 10, 11. Makenna Greenwalt (University of Oregon), Kelvin Luu (UCLA), Zachary Ojakli (Dartmouth College), Amy Somers (UC Santa Barbara), and Ahoora Tamizifar (UC Irvine), "Topics in Topological Data Analysis", joint with S. Raman (Mathematics, UC Irvine) and S. Tymochko (Dept. of Mathematics, UCLA), REU for the UCLA Research Training Grant (RTG) in Geometry and Topology [Summer 2024]
    - Makenna, Kelvin, and Ahoora worked on "Topological Data Analysis of Mathematics Genealogies" and Zachary and Amy worked on "Topological Data Analysis and Knot Theory"
  - 12. Sinaya Joshi, Mathematics and Economics, Social Networks and Healthcare [Spring 2024–Spring 2025]
  - 13. Zi ("Shawn") Zhu, Applied Mathematics, UCLA, "Opinion Dynamics in Online Social-Media Networks" [Spring

2024–Spring 2025]

- 14. Yuexuan ("Yolanda") Wu, Mathematics and Economics, UCLA, "Multilayer Networks in Microfinance" [Winter 2024–Fall 2024]
- 15. Xiaohan ("Cathy") Sun, Mathematics of Computation, UCLA, "Hyperuniform Networks", joint with J. Raj (Dept. of Physics, UCLA) [Fall 2023–Spring 2025]
- 16. Max Eisenberg, Mathematics, UCLA, "A Coupled Susceptible–Infected–Susceptible Model of Two Sexually Transmitted Diseases", joint with C. Craib (Biomathematics, UCLA) [Fall 2023–Spring 2024]
- 17. Megan Mathews, Computational & Systems Biology, UCLA, "Multiplex Networks Analysis of a University Social Network" [Spring 2023–Winter 2025]
- 18, 19, 20. Max Collins (Harvey Mudd College), Arie Ogranovich (Rice University), and Nicholas White (University of Nebraska, Lincoln); along with Zhuying ("Emily") Gong (UCLA) [listed separately below for her own project], "Opinion Dynamics on Networks", joint with S. Tymochko (Dept. of Mathematics), part of the REU in the Department of Mathematics, UCLA [Summer 2023]
- 21. Marieth Coetzer, Data Theory, UCLA, "A Bounded-Confidence Model of Opinion Dynamics with Peacemakers" [Spring 2023]
  - Placement: Earned Masters degree from the Oxford Internet Institute at University of Oxford
- 22. Chloe Florit, Mathematics, UCLA, "An Agent-Based Model of Evacuation from Buildings", joint with G. J. Li (Dept. of Mathematics) [Winter 2023–Spring 2023]
  - Placement: Now a PhD student in mathematics at University of California, Irvine
- 23. Nick Monozon, Applied Mathematics, UCLA, "Preferential Attachment of Hypergraphs" [Winter 2023–Spring 2024]
  - Placement: Now a Master's student in data science at Stanford University
- 24. Sarah Sotoudeh, Data Theory, UCLA, "Data Analysis of Influence in Congress", joint with S. Krishnagopal (Dept. of Mathematics) [Winter 2023–Winter 2024]
- 25. Ruiyao Xu, Mathematics, UCLA, "Community Structure in Networks of Reddit Discussions of COVID-19" [Fall 2022–Spring 2023]
  - Placement: Now a PhD student in Statistics at Northwestern University
- 26. Zhuying ("Emily") Gong, Mathematics, UCLA, "Twitter Debates on COVID-19 Policy in China", "Multiplex Functional Brain Networks", and part of the summer 2023 REU project "Opinion Dynamics on Networks" (the last one mentored jointly with S. Tymochko (Dept. of Mathematics) [Summer 2022–Spring 2024]
- 27. Ethan Young, Data Theory, UCLA, "Dynamical Importance and Network Perturbations" [Spring 2022–Spring 2023]
  - Placement: Now a Master's student in Applied Mathematics at University of Washington
- 28. Hanfei Lin, Applied Mathematics (with a specialization in Computing), UCLA, "A Model for the Spread of West Nile Fever" [Spring 2022]
- 29. Xiaohe ("Haley") Zhang, Mathematics and Neuroscience (double major), UCLA, "Bounded-Confidence Models with Repulsion", joint with J. Luo (Dept. of Mathematics) [Winter 2022–Spring 2022]
- 30. Julianne ("Julie") Miller, Astrophysics, UCLA, "Hyperuniform Networks and Granular Materials" [Summer 2021–Spring 2022]
  - Placement: Now a PhD student in astronomy at Washington State University
- 31, 32, 33, 34. Matthew Hudes, Applied Mathematics, Tufts University; Naji Ammar Sarsam, Mathematics, UCLA; Chenxin ("Amy") Shen, Mathematics, UCLA; and Wenwen Tang, Mathematics and Civil Engineering, University of Southern California, "Detecting Anomalies in Traffic Patterns", NSF ATD Challenge Problem, part of the REU in the Department of Mathematics, UCLA [Summer 2021]
- 35. Ruixiao Wang, Mathematics of Computation, UCLA, "Dynamics of the Glass Ceiling on Networks", joint with H. Z. Brooks (Dept. of Mathematics, Harvey Mudd College) [Winter 2021–Spring 2022]
  - Placement: Now a PhD student in statistics and data science at Yale University
- 36. Siew Fen ("Angeline") Eow, Data Theory, UCLA, Topics in Network Science [Winter 2021–Spring 2022]
- 37. Varchasvi Vedula, Statistics, UCLA, "Multilayer Transportation Networks" [Fall 2020–Spring 2021]
  - Placement: Earned a Masters degree in Statistics at Columbia University
- 38. Christine ("Mika") Hamakawa, Data Theory, UCLA," Modeling the Bamboo Ceiling", joint with M. Feng (Dept. of Computing + Mathematical Sciences, California Institute of Technology [Summer 2020–Spring 2023]
  - Placement: Now works at Microsoft
- 39. Anna Tsai, Physics, UCLA, "Magnetic Billiards" [Fall 2020–Winter 2021]
  - Placement: Now a PhD student in physics and astronomy at University of Toronto
- 40. Teresa Rexin, Mathematics, UCLA, "Mobility and Short Paths" [Summer 2020–Spring 2021]
  - Placement: Teresa then earned a Masters degree in statistics at UC San Diego and now works at Microsoft
- 41. Tachin ("Bank") Ruangkriengsin, Mathematics, UCLA, "Kuramoto Models with Inertia" and "Human Mobility Models" [Spring 2020–Spring 2022]
  - Placement: Now a PhD student in applied and computational mathematics at Princeton University
- 42. Unchitta Kanjanasaratool, Applied Mathematics, UCLA, "Bounded-Confidence Models of Opinion Dynamics on Adaptive Networks", joint with M. Feng (Dept. of Mathematics) [Fall 2019–Summer 2020]

    - Placement: Now a Ph.D. student in Computational and Data Sciences at George Mason University
  - 43. Harsh Gupta, Economics, "Preferential Attachment and Discrete-Choice Models" [Summer 2019]
    - Placement: Now a Ph.D. student in Economics at Stanford University
  - 44. Xie He, Mathematics, "Community Structure in Multiplex and Temporal Networks" [Spring 2019–Summer 2019]
    - Placement: Earned a Ph.D. in Mathematics from Dartmouth College
  - 45. Gabrielle Lorenzi, Mathematics, "Networks, Bias, and Self-Segregation of Women and Minorities in Academia", joint with H. Z. Brooks (Dept. of Mathematics) [Spring 2019–Spring 2020]
  - 46. Qinyi Chen, Applied Mathematics (with a Specialization in Computing), "Disease Spreading on Tie-Decay Networks" [Spring 2019–Summer 2020]
    - Placement: Now a Ph.D. student in Operations Research at MIT
  - 47. Xiaojing ("Lily") Ren, visiting student, "Contagions on Networks" [Spring 2019–Summer 2019]
  - 48. Joseph Zicaro, Computational & Systems Biology, "Analysis of a Social Network Rural Korea" [Fall 2018–Spring 2019]
  - 49. Andy Liu, Mathematics, Mathematics, UCLA, "Growth Mechanisms for Geometric Networks" [Summer 2018–Summer 2019]
    - Placement: Now a Ph.D. student in Mathematics at University of Utah
  - 50. Qingze ("Tony") Liu, Mathematics of Computation, UCLA, "Ranking Systems and Networks" [Summer 2018–Summer 2020]
    - Placement: Earned a Masters degree in Statistics at Washington University in St. Louis
  - 51. Christian Klinteberg, visiting student, Engineering Physics, University of Lund, "Opinion Dynamics and Structural Balance on Networks" [Summer 2018]
  - 52. Wenda Li, Mathematics, UCLA, "Synchronization on Networks" [Winter 2018–Summer 2018]
  - 53. Xinzhe Zuo, Mathematics and Physics (double major), UCLA, "Nonlinear Lattices with Long-Range Interactions" and "Tie-Decay Networks" [Winter 2018–Summer 2019]
    - Placement: Became a Ph.D. student in Computational Medicine at UCLA. He transferred to the mathematics department and is now a Ph.D. student in Mathematics at UCLA
  - 54. Nino Migineishvili, Computing and Mathematical Sciences, UCLA, "Using `Big Data' to Improve Social Problems" [Winter 2018–Spring 2018]
  - 55. Annie Rak, visiting student, "Multiple-Particle Billiards" and "Data Analysis of Bicycle Usage in Cities" (two separate projects) [Fall 2017–Winter 2018]
    - Placement: Now a staff scientist (doing data science) in Michael Dickenson's lab at Caltech
  - 56. Ahmed Allibhoy, Electrical Engineering and Mathematics (double major), UCLA, "Cluster Synchronization on Networks" [Summer 2017–Summer 2018]
    - Placement: Earned a Ph.D. in Mechanical Engineering at UC San Diego
  - 57. Pei Zhou, Mathematics of Computation, "Sentiment Analysis in Online Political Discussions", joint with Y. Sun (Dept. of Computer Science) [Fall 2017–Summer 2019]
    - Placement: Earned a Ph.D. in Computer Science at USC
  - 58. Rong ("Rose") Huang, Applied Mathematics with Specialization in Computing, "Biological Contagions on Networks" [Fall 2017–Winter 2018]
  - 59. William Black, Mathematics, "Kuramoto Models with Inertia", [Summer 2017–Fall 2018]
  - 60. Keyu ("Kurt") Zhu, visiting student (Cross-disciplinary Scholars in Science and Technology (CSST) program), Department of Mathematics, Shanghai Jaio Tong University, "The Deffuant Model on Networks" [Summer 2017]
    - Ph.D. student in Industrial & Systems Engineering at Georgia Tech
  - 61. Haebin ("Zelda") Lim, visiting student, California Institute of Technology, "Neural Networks, Operads, and Language Semantics" [Spring 2017–Summer 2018]
  - 62. Jack Guo, Computational & Systems Biology, "Simulated Dynamics of a 3-Neuron Network" [Winter 2017–Summer 2017]
  - 63, 64. Ritvik Kharkar, Mathematics of Computation (and a second major in Economics) and Jessica Tran, Mathematics of Computation, "Data-Driven Forecasting of Retention Within the UCLA Mathematics Major" [Fall 2016–Spring 2017]
    - Placement: Ritvik became a software engineer at Laserfiche. In Fall 2019, he became a Masters student in Statistics at UCLA
- UCLA: Class projects that led to a mentored publication (but not coauthored)
  - Caitlin Shener, Brian Oceguera, and Sally Lee [2018], "Comparing Language Use and Network Structure Using Twitter", *SIAM Undergraduate Research Online (SIURO)*, Vol. 11; article available at DOI: 10.1137/18S016655; from a class project for Math 191 ("Introduction to Networks"), Spring 2017
- University of Oxford
  - 1. Ta Chu ("Calvin") Kao, Physics & Philosophy, "Multilayer Networks" [Fall 2015–Winter 2016]
    - Placement: Earned a Ph.D. in neuroscience at University of Cambridge and is now a postdoc in computational neuroscience at University College London
  - 2. Joseph Pollard, Mathematics & Computer Science, "The Effect of a Dissipative Reservoir on the Dynamics of Delta-

Kicked Oscillators" [Fall 2015–Winter 2016]
  - Placement: Became a Ph.D. student in the Centre for Complexity Science at University if Warwick
- 3. Xianglin ("Flora") Meng, Mathematics, "Centrality Measures in Multilayer Networks", joint with M. Kivelä (Mathematical Institute) [Fall 2014–Winter 2015]; "Opinion Formation Models on Networks Based on Game Theory", joint with Robert A. Van Gorder (Mathematical Institute) [Fall 2015–Winter 2016]
  - Placement: Earned a Ph.D. in Electrical Engineering at MIT and is now a data scientist at Waymo
- 4. Jennifer Kitson, "Robustness in Interdependent Networks" [Fall 2013–Winter 2014]
  - Placement: Got a job at Metaswitch Networks
- 5. Aqil Taiyeb, Physics, "Spatial Networks and Human Mobility: An Application of the Intervening Opportunities Model to the London Cycle Hire Scheme" [Fall 2013–Winter 2014]
  - Placement: Got a job in London
- 6. Jack Setford, Physics, "Models of Granular Networks in Two and Three Dimensions" [Fall 2013–Winter 2014]
  - Placement: Became a Ph.D. student in Physics at University of Sussex
- 7. Alexander Bramham, Mathematics, "Role Similarity in Networks" [Summer 2013]
- 8. Ryan Flanagan, Mathematics, "Network Analysis of Separated Cognitive States in the Human Brain", joint with S. H. Lee (Mathematical Institute) [Summer 2013–Winter 2014]
  - Placement: Earned a Ph.D. in Mathematics at Queen Mary University of London
- 9. Fabian Ying, Mathematics, "Dynamical Processes on Random Geometric Graphs", joint with S. H. Lee (Mathematical Institute) [Summer 2013]
  - Placement: Earned a D.Phil. in the Industrially Focussed Mathematical Modelling (InFoMM) Centre for Doctoral Training in the Mathematical Institute at University of Oxford and is now a Quantitative Researcher at G-Research
- 10. Timur Tankayev, Mathematics, "An Analysis of Changes in Mathematical Subfields Via Time-Dependent Coauthorship Network" [Fall 2012–Winter 2013]
  - Placement: Became a Ph.D. student in Operations Research at Georgia Tech
- 11. Robyn Ffrancon, Physics, visiting student from Cardiff University, "Family and Geographic Movement in Korea", joint with S. H. Lee (Mathematical Institute) [Summer 2012]
  - Placement: Became a Ph.D. student in physics at University of Gothenburg
- 12. Kai Yue ("Theodore") Charm, Mathematics, "Ecological Implications of Compensatory Perturbations" [Summer 2012]
- 13. Edward Rolls, Mathematics, "Stability of Complex Ecosystems" [Summer 2012] and "Sports Coaching Networks: Using Community Detection to Analyse Coaching Strategies" [Fall 2013–Winter 2014]
  - Placement: Became a D.Phil. student in the Systems Biology Doctoral Training Centre at University of Oxford
- 14. Till Hoffmann, Physics, "Routing on Spatiotemporal Networks Without Global Knowledge" [Fall 2011–Summer 2012]
  - Placement: Earned Ph.D. in Mathematics at Imperial College London
- 15. Gwilym Enstone, Physics, "The Dispersion Relation and Time Evolution of a Twisted Planar Ring", joint with A. Goriely (Mathematical Institute) [Winter 2012]
  - Placement: Became a Ph.D. student in Complexity Science Doctoral Training Centre at University of Warwick
- 16. Scott Holmes, Physics, "On Bose–Einstein Condensates with Spatially Inhomogeneous Scattering Length" [Winter 2012]
  - Placement: Became a Ph.D. student in physics at University of Birmingham
- 17. Nimish Telang, Mathematics & Statistics, "An Investigation of Federal Election Donation Networks from 1980 to 2010" [Fall 2011–Winter 2012]
- 18. James Ramsay, Mathematics, "Cascades on Networks", joint with S. Melnik (Mathematical Institute) [Fall 2011]
  - Placement: Earned a Masters degree in Petroleum Engineering at Imperial College London and is now a petroleum engineer at ERC Equipoise
- 19. Geoff Evans, Physics, "Mathematics Genealogies and the Movement of Academics" [Winter 2011]
  - Placement: Now a software engineer at Softwire
- 20. Wen Si ("Echo") Gao, Mathematics, "Mathematical Genealogies and the Evolution of Research Groups" [Fall 2010–Winter 2011]
  - Placement: Now an Analyst at Merrill Lynch in London
- 21. Yulian Ng, Mathematics, "Community Structure in Epidemics" [Fall 2010–Winter 2011]
  - Placement: Subsequently enrolled as a Ph.D. student in computing at Imperial College London and was then working on becoming an actuary
- 22. Dominic Kerr, Mathematics, "Modelling Terrorist Networks" [Fall 2010–Winter 2011]
  - Placement: Became a Ph.D. student in Complexity Science Doctoral Training Centre at University of Warwick
- 23. Eoin Devane, Mathematics, "Quantization of a Mixed Regular-Chaotic System" [Summer 2010]
  - Placement: Earned a Ph.D. in mathematics from the University of Cambridge (in the Cambridge Centre for Analysis, which is a Doctoral Training Centre)
- 24. Sandra (Rankovic) Stupar, Mathematics, "Recurrences in Multiple-Particle Billiard Systems" [Summer 2010, Summer

2011]
    - Placement: Earned a Ph.D. Pn physics at ETH Zurich
- 25. James Service, Physics, "Discrete Vortices in Bose–Einstein Condensates", joint with D. Jaksch (Dept. of Physics) [Winter 2010]
- 26. Felix Flicker, Physics, "Nonlinear Waves in Granular Crystals" [Winter 2010]
    - Placement: Felix earned a Masters in Physics at Perimeter Institute and a Ph.D. in Physics from University of Bristol. He was then a postdoctoral scholar in physics at UC Berkeley
- 27. Tom Hosking, Physics, "Random Networks with Clustering", joint with N. S. Jones (Dept. of Physics) [Winter 2010]
- 28. Clayton D'Souza, Mathematics & Statistics, "Optimising a Tournament for Use with Ranking Algorithms" [Fall 2009—Winter 2010]
- 29. Anupam Das, Mathematics, "Network Growth Mechanisms for Social Networking Sites" [Summer 2009]
    - Placement: Became a Ph.D. student in Computer Science at University of Bath
- 30. Matt Lowe, Mathematics, "Attachment Mechanisms in Catalog Networks", joint with N. S. Jones (Dept. of Physics) [Summer 2009]
    - Placement: Got a job at Metaswitch Networks
- 31. Steffen Schaper, Physics, "Network Discovery", joint with N. S. Jones (Dept. of Physics) and E. Lopez (Dept. of Physics and Saïd Business School) [Winter 2009]
    - Placement: Became a D.Phil. student in theoretical physics at University of Oxford
- 32. Jamie Hill, Physics, "The Physics of Crowding, Packing, and Adsorbing", joint with R. Erban (Mathematical Institute) and N. S. Jones (Dept. of Physics) [Winter 2009]
    - Placement: Became a D.Phil. student in the Systems Biology Doctoral Training Centre at University of Oxford
- 33. Franziska Klingner, Physics, "Opinion Models on Networks with Community Structure", joint with N. S. Jones (Dept. of Physics) and D. M. D. Smith (Mathematical Institute) [Winter 2009]
    - Placement: Became a student at the Max Planck Institute for Dynamics and Self-Organization
- 34. Robert Sworder, Mathematics, "Matter-Wave Solitons in Accordion Lattices" [Summer 2008]
    - Placement: Got a job as a software developer for Metaswitch Networks
- 35. Yi Ming Lai, Mathematics, "Nonlinear Waves in Randomised Granular Chains" [Summer 2008–Summer 2009]
    - Placement: Earned a D.Phil. from the Mathematical Institute (OCCAM group) at University of Oxford, and then became a postdoctoral scholar in Mathematics & Statistics at University of Strathclyde and subsequently a Research Fellow in Computing (in Engineering) at University of Leeds
- 36. James ("Jimmy") Wall, Mathematics, "Opinion Dynamics and Community Structure in Complex Networks", joint with N. S. Jones (Dept. of Physics) [Summer 2008]
    - Placement: Got a job at a financial firm in London
- 37. Xiangyun ("Ella") Xu, Mathematics & Statistics, "Gerrymandering using Matrices", joint with N. S. Jones (Dept. of Physics) [Summer 2008]
    - Placement: Earned a Masters in Financial Engineering from Columbia University
- 38. Stephen Reid, Physics, "Legislatures as Spin Glasses", joint with N. S. Jones (Dept. of Physics) and J.-P. Onnela (Dept. of Physics and Saïd Business School) [Winter 2008]
    - Placement: Earned a Masters degree in Complex Systems from University of Bristol. Then worked at New Economics Foundation and is now Founder and Director of The Psychadelic Society

- California Institute of Technology
    - 1. Sujai Hiremath, Mathematics, "Bounded-Confidence Models on Networks", joint with F. Hoffmann (Dept. of Computing & Mathematical Sciences, Caltech) and H. Z. Brooks (Mathematics, UCLA) [Summer 2020]
    - 2. Siqiao Mu, Applied and Computational Mathematics, "Spreading Dynamics of COVID-19 on Networks", joint with F. Hoffmann (Dept. of Computing + Mathematical Sciences, Caltech) and H. Z. Brooks (Mathematics, UCLA) [Spring 2020–Summer 2020]
    - 3. Alex Pan, Mathematics, "Opinion Formation on Networks", joint with F. Hoffmann (Dept. of Computing + Mathematical Sciences, Caltech) and H. Z. Brooks (Mathematics, UCLA) [Summer 2019]
    - 4. Xi ("Sherry") Chen, Physics, "Synchronization in Antiferromagnetic Oscillators Systems", joint with M. C. Cross (Dept. of Physics) and J. L. Rogers (Applied & Computational Physics, HRL Laboratories) [Summer 2007]
        - Currently a Ph.D. student in electrical engineering at University of Washington
    - 5. Natasha ("Alex") Cayco Gajic, Applied & Computational Mathematics, "Synchronization Basins in Coupled Phase Oscillators", joint with M. C. Cross (Dept. of Physics) and J. L. Rogers (Applied & Computational Physics, HRL Laboratories) [Summer 2007]
        - Placement: Earned a Ph.D. in applied mathematics from University of Washington in 2015 and was then a postdoc in experimental neuroscience at University College London. In Fall 2019, she became an assistant professor in Cognitive Studies at École Normale Supérieure in Paris
    - 6. Matt Grau, Physics, "Synchronization in Small Numbers of Coupled Nanomechanical Oscillators", joint with M. C. Cross (Dept. of Physics) and J. L. Rogers (Applied & Computational Physics, HRL Laboratories) [Summer 2007]
        - Placement: Earned a Ph.D. in Physics at University of Colorado at Boulder and was then a postdoctoral scholar in

physics (doing experimental quantum information) at ETH Zurich
- 7. Olya Mandelshtam, "Growth Models of Social Networks" [Summer 2007]
  - Placement: Earned a Ph.D. in Mathematics from UC Berkeley. She was then a postdoc in mathematics at UCLA and was then a postdoc in mathematics at Brown University
- 8. Liuyi ("Ye") Pei, Physics, "Detecting Community Structure in the U.S. Congress" [Summer 2007]
  - Placement: Earned a Ph.D. in Physics and Astronomy at UC Irvine. She was then a postdoctoral scholar in astronomy at UIUC and now works for the United States government
- 9. Yan Zhang, Mathematics, "Community Structure in Congressional Networks" [Summer 2006]
  - Placement: Earned a Ph.D. in mathematics at University of Chicago. He then got job as a quantitative analyst at Deutsche Bank and subsequently at the Citi group
- 10. Thomas Mainiero, Physics, "Quantization of a Free Particle Interacting Linearly with a Harmonic Oscillator" [Summer 2006–Summer 2007]
  - Placement: Became a Ph.D. student in physics at UT Austin
- 11. William A. ("Austin") Webb, Applied Mathematics, "A Computational Study of the Quantization of Billiards with Mixed Dynamics" [Summer 2006]
  - Placement: Earned a Ph.D. in Computer Science and Engineering at University of Washington and was then an algorithmist at Enigma Technologies
- 12. Kris Kazlowski, Mathematics, "Periodic Orbits in Generalized Mushroom Billiards" [Summer 2006]
  - Placement: Became a quantitative analyst for Susquehanna International Group
- 13. Tatjana Wiese, Mathematics, "Faraday Patterns in Bose–Einstein Condensates" [Summer 2006]
  - Placement: Completed the one-year post-baccalaureate IRTA program at the National Institutes of Health and then earned a Ph.D. in Neural Computation at Carnegie Mellon University
- 14. Eric Kelsic, Physics, "Community-Finding Algorithms in Complex Networks" [Summer 2005]
  - Placement: Earned a Ph.D. in Systems Biology at Harvard University and was then a postdoc in genetics at the Harvard Medical School
- 15. Sean Li, Mathematics, "A Perturbative Analysis of Plankton Population Dynamics" [Summer 2005]
  - Placement: Earned a Ph.D. in mathematics from New York University (Courant Institute) in 2013, then did a postdoc ("L. E. Dickson Instructor") in the mathematics department at University of Chicago, and is now an assistant professor in the mathematics department at University of Connecticut

- Georgia Institute of Technology
  - 1. A. J. Friend, Discrete Mathematics, "Hierarchical Clustering in Complex Networks", joint with P. J. Mucha (Dept. of Mathematics) [Spring 2005—Spring 2006]
    - Placement: After completing his degree, he became a Ph.D. student in applied mathematics at Stanford University
  - 2. Udbhav ("Woody") Sharma, Aerospace Engineering, joint with S. Peles (Dept. of Physics), "Hopf Bifurcations Near the Flutter Speed in Airfoils" [Fall 2004–Spring 2005]
    - Placement: Currently working at the Liquid Propulsion Systems Center of the Indian Space Research Organization
  - 3. Jennifer Rieser, Physics, joint with S. Peles (Dept. of Physics), "Transient Amplification and Contact Line Instabilities in Spreading of Thin Liquid Films" [Fall 2004–Spring 2005]
    - Placement: Obtained a Masters in Physics from Cornell University, and then earned a Ph.D. in Physics at University of Pennsylvania. She was then a postdoctoral scholar in Physics at Georgia Tech and is now an assistant professor in Physics at Emory University
  - 4, 5. Stephanie (Chung) Garrison, Applied Mathematics and Caroline Seabrook, Applied Mathematics, "Singular Value Decompositions, Information, and Entropy", joint with S.-N. Chow (Dept. of Mathematics) [Summer 2004–Spring 2005]
    - Placement (Garrison): Got a job as an actuary at Safeco (a part of Liberty Mutual)
    - Placement (Seabrook): Became a Ph.D. student in statistics at North Carolina State University
  - 6, 7. Julie Bjornstad, Discrete Mathematics and Alexei ("Leo") Dachevski, Electrical & Computer Engineering and Applied Mathematics, "Dynamics of Plankton Food Chains in the Presence of Seasonal Variation and Fluctuations in Resource Availability", joint with C. Klausmeier (Dept. of Biology) and L. A. Bunimovich (Dept. of Mathematics) [Summer 2004–Spring 2005]
    - Placement (Bjornstad): Obtained a Masters degree in City and Regional Planning from University of North Carolina at Chapel Hill
    - Placement (Dachevski): Obtained a M.Sc. degree in Algorithms, Combinatorics, and Optimization at Georgia Tech and was then a biostatistician at the Fred Hutchinson Cancer Research Center
  - 8. Adrianne Stroup, visiting student from Caltech, "Dynamics of the Triple Pendulum" (through Caltech's Summer Undergraduate Research Fellowship program) [Summer 2004]
    - Placement: Got a job as a Systems Engineer at Amonix Inc
  - 9. Vivien Chua, Electrical and Computer Engineering, "Cubic-Quintic Duffing Oscillators" [Fall 2003] and "Spatial Resonances in Bose–Einstein condensation in superlattices" [Spring 2004–Fall 2004]
    - Placement: Earned a Ph.D. applied mathematics from Stanford University in 2011. Between 2012 and 2017, she was an assistant professor in the Department of Civil and Environmental Engineering at National University of Singapore.

She is now Chief Technological Officer and Director at Shenton Insurance Brokers
- 10, 11. Jeremy Corbett, Applied Mathematics and Behram Mistree, visiting student from MIT, "Pattern Formation in Periodically Forced Granular Media using Continuum Coupled Maps", joint with S.-N. Chow (Dept. of Mathematics) [Summer 2003]
  - Placement (Mistree): Earned a B.S. (2007) and an M.Eng. (2008) in Electrical Engineering and Computer Science from MIT in 2007 and then became a Ph.D. student in Electrical Engineering at Stanford University
  - Placement (Corbett): Got a job as a senior software engineer at Domballa
- 12. Casey Warmbrand, Discrete Mathematics, "Community Structure in Congressional Networks", joint with P. J. Mucha (Dept. of Mathematics) [Summer 2003–Fall 2003]
  - Placement: Became a Ph.D. student in mathematics at University of Arizona.
- 13. Jessica (Snyder) Troyer, Applied Mathematics, "Liénard Oscillator Models of Bipolar Disorder" [Summer 2003]
  - Placement: Worked at L-3 Communications Corporation in Huntsville, Alabama. She is now working on raising two children.
- 14. Thomas Callaghan, Applied Mathematics, "Ranking Division I-A College Football Teams Using Random Walkers on the BCS Network", joint with P. J. Mucha (Dept of Mathematics) [Summer 2003–Fall 2004]
  - Placement: Earned a Ph.D. in applied mathematics from Stanford University in 2010 and was then a postdoc ("VIGRE Instructor") in the Department of Computational and Applied Mathematics at Rice University. He now works for Quantres
- 15. Steven Lansel, Electrical & Computer Engineering and Applied Mathematics, "A Graphical User Interface for Simulating Classical Billiards" [Summer 2003–Spring 2004] and "Elliptical Mushroom Billiards", joint with L. A. Bunimovich (Dept. of Mathematics) [Fall 2004–Spring 2005]
  - Placement: Earned a Ph.D. in electrical engineering from Stanford University and then got a job working on algorithms for imaging products at Olympus

- Mathematical and Theoretical Biology Institute (MTBI) projects, Cornell University
  - 1. Mathematical Modeling of Bipolar Disorder [Summer 2002]
  - 2. Buckling of Fibers [Summer 2001]

EXAMINATION DUTIES

- Ph.D./D.Phil. Defenses ("Vivas")
  - Co-Examiner for Giona Casiraghi, Chair of Systems Design, ETH Zurich (Doctoral thesis supervisor: Frank Schweitzer) [Spring 2019]
  - External Examiner for Alexander Karton-Giles, Department of Electrical and Electronic Engineering, University of Bristol, "Connectivity and Centrality in Dense Random Geometric Graphs" (Doctoral thesis supervisor: C. P. Dettmann, Department of Mathematics, University of Bristol) [2/24/16]
  - Internal Examiner for Ioannis Psorakis, Department of Engineering Science, University of Oxford, "Probabilistic Inference in Ecological Networks; Graph Discovery, Community Detection and Modelling Dynamic Sociality" (Doctoral thesis supervisors: S. J. Roberts, Department of Engineering Science and B. C. Sheldon, Department of Zoology) [8/08/13]
  - Internal Examiner for William Roper, Mathematical Institute, University of Oxford, "Boundary States in Conformal Field Theories on the Annulus" (Doctoral thesis supervisors: J. Wheater, Department of Physics and K. Hannabuss, Mathematical Institute) [7/24/09]
  - Internal Examiner for David M. D. Smith, Mathematical Institute, University of Oxford: "Agents, Games and Networks" (Doctoral thesis supervisors: N. F. Johnson, Department of Physics, University of Miami and S. D. Howison, Mathematical Institute) [12/07]
- Confirmation of Status Examinations
  - Examiner for Malte Luecken, Department of Statistics, University of Oxford, "Application of Multi-Resolution Partitioning of Intreraction Networks to the Study of Complex Disease" (Doctoral thesis supervisors: C. M. Deane, Department of Statistics; G. Reinert, Departmenrt of Statistics) [Fall 2015]
  - Examiner for Alhaji Cherif, Mathematical Institute, University of Oxford, "Mathematical Evolutionary Epidemiology: Limited Epitopes, Evolution of Strain Structures and Age-specificity [in Influenza]" (Doctoral thesis supervisors: P. K. Maini, Mathematical Institute; S. Gupta, Dept. of Zoology; and J. Dyson, Mathematical Institute) [7/01/13]
- Transfer Examinations
  - Examiner for Alpha Lee, Mathematical Institute, University of Oxford (Doctoral thesis supervisor: A. Goriely, Mathematical Institute) [9/08/14]
  - Examiner for Zheng ("Vince") Choo, Department of Statistics, University of Oxford, "Probabilistic Analysis of the Prime Factorisation of Walks with Applications to Shortest Paths" (Doctoral thesis supervisor: G. Reinert, Department of Statistics) [12/10/13]
- Other Examination Duties

- Part B (third year) Examiner in Mathematics [Michaelmas 2014–Trinity 2017]
- Part C (fourth year) Examiner in Mathematics [Michaelmas 2008–Trinity 2010]
- Examiner for the M.Sc. course in Mathematical Modelling and Scientific Computing [Spring 2008–Fall 2009, Fall 2010–Fall 2011]

SEMINARS, PRESENTATIONS, AND OTHER INVITED PARTICIPATION

- Invited Conference Presentations (plenary and equivalent)
  - "A Metacommunity Model of Interacting Hosts with Microbiome Exchange"
    - Smale@95: A Conference in Honor of Steve Smale [7/21/25–7/22/25]
  - "Topological Data Analysis of Spatial Systems"
    - Data Science Week 2024 (keynote talk) [12/02/24–12/06/24]
  - "Topological Data Analysis"
    - 82nd World Science Fiction Convention [WorldCon82], Glasgow, Scotland [8/08/24–8/12/24]
  - "Setting the Stage with Networks and Network Dynamics"
    - Mathematical Approaches for Connectome Analysis, Institute for Pure and Applied Mathematics (IPAM), University of California, Los Angeles (UCLA), Los Angeles, CA, USA [2/12/24–2/16/24]
  - "Multilayer Networks in Neuroscience"
    - Mathematical Challenges in Neuronal Network Dynamics, Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, RI, USA [9/18/23–9/22/23]
  - "Mathematical Modeling of Opinion Dynamics"
    - Dynamics Days US 2025, Denver, CO, USA [1/03/25–1/05/25]
  - "Bounded-Confidence Models of Opinion Dynamics on Networks"
    - 19th Workshop on Modelling and Mining Networks (WAW 2024), Warsaw, Poland [6/03/24–6/07/24]
    - Sixth Northeast Regional Conference on Complex Systems (NERCCS 2023), Potsdam, NY, USA [3/22/23–3/24/23]
    - SIAM Invited Address, Joint Mathematics Meetings 2023 [JMM 2023] [1/04/23–1/07/23]
  - "Networks, Politics, and Voting": CompleNet International Conference on Complex Networks (COMPLENET '19), Tarragona, Spain [3/18/19–3/21/19]
  - "Centrality in Time-Dependent Networks" (keynote talk; "Springer Complexity Lecture"): NetSci2018, Paris, France [6/11/18–6/15/18]
  - "Opinion Dynamics and Spreading Processes on Networks"
    - XXIII Simposio Internacional de Métodos Matemáticos Aplicados a las Ciencias (XXIII SIMMAC), Thematic Session on Modeling and Dynamical Systems [2/21/22–2/25/22]
    - Discrete and Continuous Models in the Theory of Networks (keynote talk), Bielefeld, Germany [11/27/17–12/01/17]
    - First Latin American Conference on Complex Networks (LANET '17), Puebla, Mexico [9/25/17–9/29/17]
    - XI Americas Conference on Differential Equations and Nonlinear Analysis, Alberta, Canada [8/15/17–8/19/17]
  - "Network Modeling, Social Applications, and Consumers" (joint with Chris Brooks, Head of Science, dunnhumby): Mathematics for the Modern Economy, Royal Society Meeting, UK [6/27/17]
  - "Topological Data Analysis of Contagion Maps for Examining Spreading Processes on Networks": Summer Solstice — 8th International Conference on Discrete Models in Complex Systems, University of Aveiro, Portugal [6/20/16–6/22/16]
  - "Localized Modes in Granular Crystals": Focus Session on "Intrinsic Localized Modes: Recent Developments and Future Perspectives", American Physical Society (APS) March Meeting [3/16]
  - "Multilayer Networks and Applications"
    - Southern California Applied Mathematics Symposium (SOCAMS) 2018, UCSB, Santa Barbara, CA, USA [4/28/18]
    - NetSciX, Wroclaw, Poland [1/11/16–1/13/16]
  - "A Simple Generative Model of Collective Online Behavior"
    - Dynamics Days US 2017, Silver Springs, MD [1/04/17–1/06/17]
    - Imperial College, SIAM Student Chapter Annual Meeting [6/19/15]
  - "Migration of Populations via Marriages in the Past": University of Cambridge, SIAM Student Chapter Conference [4/27/15]
  - "Multilayer Community Structure and Functional Brain Networks", Advances in Discrete Networks, Conference, 2014 Fall Theme Semester on Discrete Networks: Geometry, Dynamics and Applications", Department of Mathematics, University of Pittsburgh [12/12/14–12/14/14]
  - Erdös–Rényi Prize Lecture: NetSci 2014 [6/02/14–6/06/14]
  - "Cascades and Social Influence on Networks", NetSci 2013, Copenhagen, Denmark [6/03/13–6/07/13]
  - "Community Structure in Time-Dependent, Multiscale, and Multiplex Networks": Conference on Brain Networks, Yeosu, Korea [11/26/11]
  - "Communities in Networks": Young Investigator Award Lecture, Sigma Xi Annual Meeting [11/22/08]

- Invited talks at the National Center for Theoretical Sciences (NCTS), Taiwan, International Conference on Chaos and Dynamical Complexity [5/05]
  - "Bose–Einstein Condensates in Lattice and Superlattice Potentials" (regularly scheduled talk)
  - "Congress Can't Hide From Mathematics" (extra talk)
- "Solitons and Coherent Structures in Bose–Einstein Condensates", Focus Session on "Solitons and Applications in the 50 Years since Fermi–Pasta–Ulam", American Physical Society (APS) March Meeting [3/23/05]

- Named/Distinguished Lecture Series at Universities and Other Venues
  - "Mathematical Modeling of Opinion Dynamics on Social Networks"
    - Edmund R. Michalik Distinguished Lecture, Department of Mathematics, University of Pittsburgh [11/03/23]
  - "Spatial Systems and Topological Data Analysis"
    - Mathematical Biosciences Institute (MBI) National Colloquium [3/25/20]
  - "Multilayer Networks"
    - Cornell University, Center for Applied Mathematics, Notable Alumni Lecture Series [11/17/17]
    - University of Pennsylvania, Warren Center for Network and Data Sciences, Distinguished Lecture Series [11/05/15]
    - Arizona State University, Brauer–Mickens Distinguished Seminar Series, School of Mathematical & Statistical Sciences [11/24/14]
  - "Collective Behavior in Online Social Networks, Politicians, and Cows"
    - UCLA, Jacob Marschak Interdisciplinary Colloquium (on Mathematics in the Behavioral Sciences) [5/2/17]
- Public Lectures
  - "The Beauty of Networks", Cafe Scientifique, Cheltenham [12/01/15]
  - "The Beauty of Networks", Science Exchange Wallingford (in the Cafe Scientifique network) [3/17/15]
  - "The Physics of Social Networks", University of Oxford [5/09/11]
- Invited School and Tutorial Lectureships
  - "Topics in Network Science", European Summer School in Modelling, Analysis and Simulation in Crime and Image Processing, Mathematical Institute, University of Oxford [7/04/16–7/08/16]
  - "Mesoscale Structures in Networks", Lake Como School of Advanced Studies, School on "Complex Networks: Theory, Methods and Applications II", Lake Como, Italy [5/16/16–5/20/16]
  - "Networks and Network Dynamics", Complex Oscillatory Systems: Modeling and Analysis (COSMOS), Florence, Italy [11/16/15–11/25/15]
  - "A Simple Generative Model of Collective Online Behavior", 2nd Mediterranean School of Complex Networks, Salina, Sicily, Italy [9/03/15–9/08/15]
  - "Networks, Dynamics, and the Ongoing Evolution", Minitutorial on Network Dynamics, 2015 SIAM Conference on Applications of Dynamical Systems [5/17/15]
  - "Community Structure in Human Brain Networks", 1st Mediterranean School of Complex Networks, Salina, Sicily, Italy [6/09/14–6/13/14]
  - "Introduction to Multilayer Networks", Tutorial, NetSci International School on Network Science, Berkeley, CA, USA [6/03/14]
  - Lecturer, "Networks: Structure and Dynamics" (3 lectures of 1 hour each), Expository Quantum Lecture Series (EQuaLS) 2013, "Complex Systems", Universiti Putra Malaysia [11/22/13–11/24/13]
  - Lecturer, "Network Dynamics" (10 lectures of about 2.5 hours each), Applied Mathematics Summer School, Shanghai Jiao Tong University [7/05/10–7/16/10]
- Invited Participation in Working Groups and in Study Groups with Industry
  - Workshop on Data Analytics for Climate and Earth (Dance): Causality, Patterns and Prediction (Lake Arrowhead, California) [3/27/19–3/29/19]
  - NIMBioS Working Group: Learning in Networks (National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville) [2/22/18–2/24/18; 2/25/19–2/26/19]
  - Fourth Montreal Industrial Problem Solving Workshop (Canada) [8/11]
  - Second Montreal Industrial Problem Solving Workshop (Canada) [8/08]
- Invited Participation in Long-Term Academic Programs
  - Simons Laufer Mathematical Sciences Institute (SLMath) [formerly the Mathematical Sciences Research Institute (MSRI)], Semester Program on "Algorithms, Fairness, and Equity", Berkeley, CA, USA [September 2023; 1-month visit]
  - Mathematical Biosciences Institute (MBI), Emphasis Semester on "Dynamics of Biologically Inspired Networks", Columbus, OH, USA [Spring 2016; 1-month visit]
  - "Research Fellow", Institute for Computational and Experimental Research in Mathematics (ICERM), Semester Program on "Network Science and Graph Algorithms", Providence, RI, USA [2/03/14–5/09/14; 1-month visit]
  - Kavli Institute for Theoretical Physics (KITP), Miniprogram on Network Architecture of Brain Structures and Functions, Santa Barbara, CA, USA [7/18/11–8/05/11]
  - Statistical and Applied Mathematical Sciences Institute (SAMSI), "Program on Complex Networks", Research Triangle, North Carolina, USA [2010–2011; 2 months of visiting during the year]
- Invited Workshop Presentations

- "Complex Networks with Complex Weights"
  - KIAS–KU Workshop on Theoretical Challenges in Network Science, Seoul, Korea [11/04/24–11/08/24]
  - Quantitative Methods for Dynamics on Networks, Los Alamos National Laboratory (LANL) [8/19/24–8/21/24]
- "Overview of Metric Networks"
  - Workshop on Metric Networks, Frankfurt School of Finance & Management, Frankfurt, Germany [7/18/24–7/19/24]
- "Opinion Dynamics and Spreading Processes on Networks"
  - ICIAM 2023 Satellite Workshop: Stochastic Modeling and Data Analysis for Biological Systems, Institute for Basic Science (IBS), Daejeon, Korea [8/16/23–8/18/23]
- "Emergent Polarization and Fragmentation in Social Networks": The 21st Century Question: Emergently Engineering the Future, Santa Fe, NM, USA [11/04/22–11/05/22]
- "Social Dynamics on Networks": WINQ Workshop on Complex Dynamical Networks, Nordita, Stockholm, Sweden [6/13/22–6/15/22]
- Panelist, "Social Science Aspects": Deep Fakery: Mathematical, Cryptographic, Social, and Legal Perspectives, Institute for Pure & Applied Mathematics (IPAM), Los Angeles, USA [11/15/19–11/16/19]
- Topological Data Analysis of Spatial Complex Systems: Topological Data Analysis, Network Science, and Their Relationships, Politecnico di Torino and ISI Foundation [10/14/19–10/15/19]
- "Punctuating Literature with Time-Series Analysis": Sam Howison's 60th Birthday Workshop, Oxford, UK [6/27/18–6/28/18]
- "Persistent Homology of Spatial Networks": Mapping Complexity Foundations and Applications of Network Geometry (Macfang), Barcelona, Spain [11/06/17–11/08/17]
- "Cascades in Social Spreading Dynamics": Transdisciplinary Extreme Risk Modelling, Université Côte d'Azur, Skema Business School, Nice, France [9/08/17]
- "Mesoscale Structures in Functional Neuronal Networks"
  - Dynamical Systems and Data Analysis in Neuroscience: Bridging the Gap (Workshop 3, semester emphasis program on Analysis of Complex Data in Biological Systems), Mathematical Biosciences Institute [10/17/16–10/21/16]
- "Networks, the Social Sciences, and the Humanities"
  - Workshop on Language Concepts, History; Somerville College, Oxford [4/22/16]
- "A Simple Generative Model of Collective Online Behavior"
  - Computational Social Science (CSS) Initiative London Workshop, Oxford [5/27/16]
- "Multilayer Networks and Applications"
  - Workshop on Graph Techniques for Adversarial Activity Analytics (GTA3); sponsored by HRL Laboratories and Arizona State University; held in conjunction with 11th International Association for Computing Machinery (ACM) International Conference on Web Search and Data Mining (WSDM 2018); Marina Del Rey, CA, USA [2/09/18]
  - Workshop on Graph Limits and Statistics, Semester Programme on Theoretical Foundations for Statistical Network Analysis, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK [7/11/16–7/15/16]
  - InFoMM CDT Annual Meeting, Mathematical Institute, University of Oxford [4/29/16]
  - Workshop on Synchronization and Oscillators with Generalized Coupling, University of Exeter [4/20/16–4/22/16]
  - Mathematics and Social Sciences Workshop, Imperial College [11/16/15–11/17/15]
- "Multilayer Networks and Network Pharmacology: Looking Forward", Workshop on Network Pharmacology, Keble Networks Research Cluster, University of Oxford [9/15/15]
- "Networks in Space: Granular Force Networks and Beyond", Workshop on Network Geometry, Queen Mary University of London [7/16/15]
- "Community Structure and Multilayer Networks (and a Few Protein Interactions)", Protein Network Workshop, Institute for Mathematical Sciences, National University of Singapore [6/8/15–6/12/15]
- "Migration of Populations via Marriages in the Past"
  - Population Models in the 21st Century (Workshop 4, semester emphasis program on Analysis of Complex Data in Biological Systems), Mathematical Biosciences Institute [11/14/16–11/18/16]
  - Groups and Interactions in Data, Networks and Biology, KI-Net Workshop, Department of Mathematical Sciences, Carnegie Mellon University [5/27/15–5/29/15]
- "Topological Data Analysis of Contagion Maps for Examining Spreading Processes on Networks"
  - Computational Algebraic Topology [CAT-School 2015], CMI–LMS Research School 2015, Alan Turing Institute – Scoping Workshop, Mathematical Institute, University of Oxford [9/10/15–9/11/15]
  - Workshop on Dynamics of and on Networks, Santa Fe Institute [12/1/14–12/5/14]
- "Teach Network Science to Teenagers"
  - NetSciEd 3: Satellite Symposium on Network Science in Education, Satellite Symposium for NetSci 2014, Berkeley, CA, USA [6/02/14]
- "Synchronization of Cows": Workshop on Synchronisation in Complex Systems, Imperial College London [5/11/12]
- "Cascades on Networks": Dynamics on Networks, SAMSI Program on Complex Networks [3/21/11]
- "Social Structure of Facebook Networks": Workshop on Evolution of Solution Norms, University of Reading [12/11]
- "Community Structure in Time-Dependent, Multiscale, and Multiplex Networks"

        - Structure and Dynamics of Networks on Networks (theoretical ecology workshop), Göttingen [9/15/14–9/17/14]
        - Keble Networks Research Cluster Workshop, University of Oxford [6/02/11]
        - Oxford/Harvard Workshop on Networks and Statistics, University of Oxford [5/20/10–5/21/10]
        - Nonlinear Dynamics of Networks, University of Maryland at College Park [4/04/10–4/09/10]
    - "Community Structure in Networks"
        - Joint BioMaPS and Rutgers/Penn/IAS Applied Topology Workshop, Rutgers University [2/06/13]
        - Cambridge Networks Day, University of Cambridge [5/18/12]
        - Oxford Networks Day, University of Oxford [9/28/09]
    - "Bose–Einstein Condensates in Nonlinear Lattices"
        - Wolfgang Pauli Institute, Workshop on "The Gross-Pitaevskii equation and its application for BEC in optical lattices" [09/08]
    - "Bose–Einstein Condensates in Optical Lattices and Superlattices"
        - Nonlinearities – from Turbulent to Magic, Niels Bohr Institute, Denmark [5/06]
- Minisymposium Conference Presentations (invited)
    - "Opinion Dynamics with Polyadic Interactions"
        - 2025 SIAM Conference on Applications of Dynamical Systems [5/10/25–5/15/25]
    - "Topological Data Analysis of Spatial Systems": International Congress on Industrial and Applied Mathematics 2023 [ICIAM 2023], Topological Data Analysis and Machine Learning [8/20/23–8/25/23]
    - "Bounded-Confidence Models of Opinion Dynamics on Networks"
        - 2023 SIAM Conference on Applications of Dynamical Systems [5/14/23–5/18/23]
    - "Node Centralities in Multilayer Networks": Joint Mathematics Meetings 2023 [JMM 2023], AMS Special Session on Tensor Representation, Completion, Modeling and Analytics of Complex Data [1/04/23–1/07/23]
    - "Multilayer Networks in Ecology and Animal Behavior": 1.6 Eco-Evolutionary Dynamics in Multilayer Networks: From Lakes to Oceans, INTECOL 2022 [8/28/22–9/02/22]
    - "Opinion Dynamics on Generalized Networks": Multiscale & Integrative Complex Networks: EXperiments & Theories 2022 [MIX-NEXT 3], NetSci 2022 [7/14/22]
    - "My Experience Writing Papers for *Frontiers for Young Minds*": NetSciEd 2021, Satellite Symposium on Network Science in Education, NetSci 2021 [6/28/21–6/29/21]
    - "Community Structure in Multilayer Networks"
        - 2020 SIAM Conference on Mathematics of Data Science [5/20] (note: this minisymposium was cancelled due to the COVID-19 pandemic; a subset of the conference was held online, but this minisymposium wasn't part of that subset)
        - Multiplex Networks, First Latin American Conference on Complex Networks (LANET '17), Puebla, Mexico [9/17]
    - "The Topological "Shape" of Brexit and Functional Networks"
        - 2017 SIAM Conference on Applications of Dynamical Systems [5/17]
    - "Introduction to Multilayer Networks"
        - Joint Mathematics Meetings 2018 [JMM 2018], AMS Special Session on Network Science [1/18]
        - 2015 Sunbelt (XXXV) Social Networks Conference [6/15]
    - "Disordered Granular Chains"
        - 2014 SIAM Conference on Nonlinear Waves and Coherent Structures [8/14]
    - "The Influence of Topology on Sound Propagation in Granular Force Networks"
        - 10th AIMS Conference on Dynamical Systems, Differential Equations, and Applications [7/14]
    - "Mathematical Formulation of Multilayer Networks"
        - MNAM: Multiple Network Modeling, Analysis and Mining, Satellite Symposium for NetSci 2014, Berkeley, CA, USA [6/02/14]
    - "Time-Dependent Community Structure in Brain Networks"
        - Temporal and Dynamic Networks, Satellite Symposium for NetSci 2013, Copenhagen, Denmark [6/03/13–6/04/13]
    - "Multi-Stage Complex Contagions"
        - 9th AIMS Conference on Dynamical Systems, Differential Equations, and Applications [7/12]
    - "Synchronization of Cows"
        - 2011 SIAM Conference on Applications of Dynamical Systems [5/11]
    - "Fermi, Pasta, Ulam, and the Birth of Experimental Mathematics"
        - 2010 SIAM Conference on Nonlinear Waves and Coherent Structures [8/10]
    - "Communities in Networks"
        - 2009 SIAM Conference on Applications of Dynamical Systems [5/09]
    - "Complex Networks: From U.S. College Football to the U.S. Congress"
        - 2008 Conference of the European Consortium for Mathematics in Industry [7/08]
    - "Wave Propagation in Granular Lattices"
        - 2008 Conference of the European Consortium for Mathematics in Industry [7/08]
        - Joint Mathematics Meetings 2008 [JMM 2008] [1/08]
    - "Community Structure in the United States House of Representatives"

        - 2007 SIAM Conference on Applications of Dynamical Systems [5/07]
    - "Bose–Einstein Condensates in Optical Lattices and Superlattices"
        - 2006 SIAM Annual Meeting [7/06]
        - 2004 SIAM Annual Meeting [7/04]
    - "Modulated Amplitude Waves in Bose–Einstein Condensation"
        - 2003 SIAM Annual Meeting [6/03]
        - 2003 SIAM Conference on Applications of Dynamical Systems [5/03]
    - "An Introduction to Quantum Chaos"
        - 2001 SIAM Annual Meeting [7/01]
- Contributed Workshop Presentations
    - "Topological Data Analysis of Contagion Maps for Examining Spreading Processes on Networks"
        - Control and Observability of Network Dynamics (Workshop 4, semester emphasis program on Dynamics of Biologically Inspired Networks), Mathematical Biosciences Institute [4/11/16–4/15/16]
    - "When is a Cow Truly Spherical?": Open Mathematical Problems from Industry and Elsewhere, Mathematical Institute, University of Oxford [12/09/10]
    - "Nonlinearity Management in Optics": MSRI Introductory Workshop on Dynamical Systems with Emphasis on Extended Systems [1/22/07–1/26/07]
    - "A Network Analysis of Committee Assignments in the United States House of Representatives": MSRI Workshop on Models of Real-World Random Networks [4/18/05–4/22/05]
- Contributed Conference Presentations
    - "Disordered Metamaterials": 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA [8/13/25–8/17/25]
    - "Complex Networks with Complex Weights": Joint March & April Meeting: Global Physics Summit 2025 [3/16/25–3/21/25]
    - "Textual Analysis via Punctuation Sequences": Joint Mathematics Meetings 2024 [JMM 2024], AMS Special Session on Modeling Complex Adaptive Systems in Life and Social Sciences [1/03/24–1/06/24]
    - "UCLA's New Lower-Division Capstone Course in Mathematical Modeling": Joint Mathematics Meetings 2023 [JMM 2023], COMAP Contributed Paper Session: Integrating Modeling into Established Courses [1/04/23–1/07/23]
    - "Bounded-Confidence Models of Opinion Dynamics on Networks": Joint Mathematics Meetings 2022 [JMM 2022], AMS Special Session on Real World Applications of Mathematics [1/05/22–1/08/22] (postponed due to COVID-19 omicron variant)
    - "Mathematical Models of the Spread of Diseases, Opinions, Information, and Misinformation": 79th World Science Fiction Convention [WorldCon 79], Washington, D.C., USA [12/15/21–12/19/21]
    - "The "Shape" of Data": 78th World Science Fiction Convention [WorldCon78], Wellington, New Zealand [7/29/20–8/02/20]
    - "Opinion and Spreading Models on Social Networks"
        - Joint Mathematics Meetings 2020 [JMM 2020], AMS Special Session on Matrices and Graphs [1/20]
    - "The Science of 'Chaos'"
        - 77th World Science Fiction Convention [WorldCon77], Dublin, Ireland [8/15/19–8/19/19]
    - "Punctuating Literature with Time-Series Analysis"
        - 77th World Science Fiction Convention [WorldCon77], Dublin, Ireland [8/15/19–8/19/19]
        - 2019 SIAM Conference on Applications of Dynamical Systems [5/19]
    - "A Simple Generative Model of Collective Online Behavior"
        - 2013 European Conference on Complex Systems (ECCS), Satellite Conference on Collective Contagion [9/19/13]
    - "Core-Periphery Organization of Human Brain Dynamics"
        - 2013 SIAM Conference on Applications of Dynamical Systems [5/13]
    - "Core-Periphery Structure in Networks"
        - XXV IUPAP International Conference on Statistical Physics [7/13]
        - 2012 Sunbelt (XXXII) Social Networks Conference [3/12]
    - "Community Structure in Time-Dependent, Multiscale, and Multiplex Networks"
        - 2010 APS March Meeting [3/10]
    - "Communities in Networks"
        - Dynamics Days Europe XXXII [9/12]
        - Dynamics Days US 2010 [1/10]
    - "Community Structure in Online Collegiate Social Networks"
        - NetSci 2009 [6/09]
        - 2009 Sunbelt (XXIX) Social Networks Conference [3/09]
    - "Wave Propagation in Granular Lattices"
        - 2008 SIAM Conference on Nonlinear Waves and Coherent Structures [7/08]
    - "Computational Linear Algebra and Social Networks"

        - Joint Mathematics Meetings 2008 [JMM 2008] [1/08]
    - "Nonlinearity Management in Optics"
        - 2007 International Congress on Industrial and Applied Mathematics [7/07]
    - "Bose–Einstein Condensates in Optical Lattices and Superlattices" (and similar topics)
        - Joint Mathematics Meetings 2007 [JMM 2007] [1/07]
        - 2006 SIAM Conference on Nonlinear Waves and Coherent Structures [9/06]
        - Joint Mathematics Meetings 2006 [JMM 2006] [1/06]
        - Joint Mathematics Meetings 2005 [JMM 2005] [1/05]
        - 2004 SIAM Conference on Nonlinear Waves and Coherent Structures [10/04]
        - 2004 SIAM Annual Meeting [7/04]
        - 91st[t] Statistical Mechanics Conference; Rutgers, NJ [5/04]
        - Joint Mathematics Meetings 2004 [JMM 2004] [1/04]
        - Dynamics Days US 2003 [1/03]
    - "Billiards with Mixed Regular and Chaotic Dynamics"
        - Joint Mathematics Meetings 2007 [JMM 2007] [1/07]
    - "Community Structure in Legislative Networks"
        - NetSci 2008 [6/08]
        - Joint Mathematics Meetings 2007 [JMM 2007] [1/07]
    - "A Network Analysis of Committee Assignments in the United States House of Representatives"
        - 2006 SIAM Annual Meeting [7/06]
        - 2006 APS March Meeting [3/06]
        - Dynamics Days US 2006 [1/06]
        - Joint Mathematics Meetings 2006 [[JMM 2006] 1/06]
    - "How Well Can Random Walkers Rank Football Teams?"
        - Joint Mathematics Meetings 2006 [JMM 2006] [1/06]
        - 2004 SIAM Annual Meeting [7/04]
    - "Quantum Chaos in Vibrating Billiard Systems"
        - 2002 SIAM Annual Meeting [7/02]
        - 6th SIAM Conference on Applications of Dynamical Systems [5/01]
        - Penn State/University of Maryland Dynamical Systems Workshop [3/01]
        - Applied Math Days, Rensselaer Polytechnic Institute [10/00]
        - 3rd AIMS Conference on Differential Equations and Dynamical Systems [5/00]
        - David Blackwell and Richard Tapia Distinguished Lecture Series [5/00]
        - Spring 2000 Midwest Dynamical Systems Conference [3/00]
    - "The Hopf Fibration and its Applications"
        - Caltech SURF (Summer Undergraduate Research Fellowship) Seminar Day [10/96]
- Invited Seminars at Universities (and companies and other venues)
    - "Networks, Topological Data Analysis, and Social Dynamics"
        - Stockholm University, Nordic Institute for Theoretical Physics (NORDITA), AlbaNova Colloquium [10/16/25]
        - Max Planck Institute for the Physics of Complex Systems (MPI-PKS), Colloquium [10/06/25]
    - "Being a Mathematician and Scientist in 2025"
        - Arizona State University, School of Mathematical and Statistical Sciences, Professional Development Seminar [9/17/25]
    - "Quantum Networks"
        - Chicago Quantum Computing Group, Colloquium (virtual) [12/02/25]
        - Department of Mathematics and Department of Physics [joint colloquium], Colloquium, North Carolina State University [2/10/25]
    - "Topological Data Analysis of Voting-Site Coverage"
        - Math and Democracy Seminar (joint presentation with A. Hickok), New York University (NYU) Center for Data Science [5/06/24]
    - My 'Living History': Living Histories series (virtual) [2/21/24]
    - "Bounded-Confidence Models of Opinion Dynamics on Networks"
        - University of Minnesota, Department of Mathematics, Colloquium [10/30/25]
        - Arizona State University, School of Mathematical and Statistical Sciences, Colloquium [9/17/25]
        - University of California, Los Angeles, Department of Mathematics, PreCollege Summer Institute Lecture [7/24/25]
        - University of Southern California, Keck School of Medicine, Center for Applied Network Analysis [2/14/25]
        - University of North Carolina at Chapel Hill, Applied Mathematics Colloquium, Department of Mathematics [2/07/25]
        - University of California, Los Angeles, Workshop in Economics Theory, Department of Economics [6/01/23]
        - Rochester Institute of Technology, Mathematical Modeling Seminar Series [11/08/22]
        - Marquette University, Department of Mathematical and Statistical Sciences, Colloquium [9/09/22]

    - Santa Fe Institute, Colloquium [7/27/22]
- "Mathematical Models of the Spread of Diseases, Opinions, Information, and Misinformation"
    - Harvard Club of Southern California, Myron Kayton Science Pub Series [5/29/22]
- "Introduction to Data Ethics"
    - University of California, Los Angeles, Urban Data Lab graduate student seminar [5/12/22]
- "Topological Data Analysis of Spatial Systems" and "Introduction to Topological Data Analysis"
    - Institute for Basic Science (IBS) Biomedical Mathematics Online & Public Colloquium [3/24/22]
- "Centrality in Multilayer Networks"
    - MultiNet Webinar, Indiana University Network Institute [2/09/21]
- "Data Ethics for Mathematicians"
    - University of California, Los Angeles, Department of Mathematics, Computational and Applied Mathematics Colloquium [1/13/21]
- "Opinion Dynamics and Spreading Processes on Networks"
    - Massachusetts Institute of Technology, System Dynamics Seminar [12/13/24]
    - Dartmouth College, Department of Mathematics, Colloquium [3/28/24]
    - University of British Columbia, Department of Mathematics, Mathematical Biology Seminar [3/29/23]
    - Zuse Institute Berlin (ZIB), Einstein Lecture, series on The Mathematics of Complex Social Systems: Past, Present, and Future [4/28/22]
    - Universidad Nacional Autónoma de México (UNAM), Centro de Ciencias de la Complejidad, Colloquium [9/02/21]
    - University of Colorado at Boulder, Department of Applied Mathematics, Colloquium [8/27/21]
    - Institute for Pure and Applied Mathematics (IPAM) Research in Industrial Projects for Students (RIPS) Seminar [8/04/21]
    - University of Oxford, Oxford University Physics Society Colloquium [4/29/21]
    - Stockholm University, Nordic Institute for Theoretical Physics (NORDITA), WINQ–AlbaNova Colloquium [4/22/21]
    - Santa Fe Institute, Colloquium [12/09/20]
    - University of Kansas, Department of Mathematics, Colloquium [12/03/20]
    - TGSMC, Seminar [12/01/20]
    - Cornell University, Center for Applied Mathematics, Colloquium [11/06/20]
- "Topological Data Analysis of Spatial Systems"
    - 1W-MINDS Seminar (virtual), Michigan State University [10/31/24]
    - University of Michigan, Department of Computational Medicine & Bioinformatics [9/11/24]
    - Topos Institute, Colloquium (virtual) [6/27/24]
    - The Rockefeller University, Center for Studies in Physics and Biology, Colloquium [3/19/24]
    - University of Pittsburgh, Department of Mathematics, Mathematical Biology Seminar [11/02/23]
    - University of Utah, Department of Mathematics, Colloquium [12/02/21]
    - San Diego State University, Department of Mathematics and Statistics, Colloquium [11/15/21]
    - Washington State University, Department of Mathematics and Statistics, Mathematical Biology Seminar [11/09/21]
    - Michigan State University, Department of Computational Mathematics, Science and Engineering, Colloquium [11/01/21]
    - Applied Algebraic Topology Research Network [7/21/21]
    - Network Science for Fluid Mechanics Seminar Series [5/21/21]
    - New Jersey Institute of Technology, Department of Mathematical Sciences, Applied Mathematics Colloquium [10/23/20]
    - Arizona State University, School of Mathematical and Statistical Sciences, Mathematical Biology Seminar [9/18/20]
    - University of Cardiff, Department of Mathematics [4/15/20]
    - California State University at Northridge, Interdisciplinary Research Institute for the Sciences (IRIS) seminar [11/21/19]
    - University of Southern California, Keck School of Medicine, Center for Applied Network Analysis [11/08/19]
    - George Mason University, Special Joint Computational and Data Sciences, Mathematical Sciences, and Physics Seminar [10/24/19]
- "The Physics of Social Networks": Beijing University of Posts and Telecommunications [9/09/19]
- "Singular Value Decompositions and Networks of Legislators": Harvey Mudd College, guest lecture in Andrew Bernoff's course in computational linear algebra [2/27/19]
- "Pull Out All The Stops: Textual Analysis via Punctuation Sequences"
    - UCLA, Department of Mathematics, Graduate Student Recruitment Day [3/06/19]
    - UCLA, Networks Journal Club, Social Networks meeting [3/04/19]
    - Claremont Colleges, Claremont Center for the Mathematical Sciences, Colloquium [2/27/19]
- "Some Ideas in Complex Systems and Networks"
    - Centro de Investigación en Matemática Pura y Aplicada, Universidad de Costa Rica [1/23/19]
- "Centrality in Time-Dependent Networks"

    - HRL Laboratories [8/02/18]
- "Collective Behavior in Online Social Networks, Politicians, and Cows"
    - Michigan State University, Department of Physics and Astronomy, "Science at the Edge" Interdisciplinary Seminar [1/27/17]
- "Spreading Processes and Opinions on Networks"
    - The Ohio State University, Department of Mathematics, Applied Mathematics Seminar [9/10/20]
    - California Institute of Technology, Department of Computing and Mathematical Sciences, Computational Mathematics + X Seminar [10/19/18]
    - University of Sydney, Department of Mathematics [9/07/18]
    - Brigham Young University, Department of Mathematics, Applied Mathematics and Dynamical Systems Seminar [3/22/18]
    - University of Calgary, Pacific Institute for Mathematical Sciences (PIMS), Lunchbox Lectures [11/24/16]
- "Dynamical Systems on Networks"
    - Centro de Investigación en Matemática Pura y Aplicada, Universidad de Costa Rica [8/17/16]
        - Along with this seminar, I presented a series of minitutorials on various topics in networks and dynamical systems, and a seminar at another campus of the university [8/16/16–8/19/16]
- "Topological Data Analysis of Contagion Maps for Examining Spreading Processes on Networks"
    - University of Cambridge, Applied and Computational Analysis Seminar [6/10/16]
    - University of Nottingham, Algebra & Analysis Seminar [6/1/16]
- "A Simple Generative Model of Collective Online Behavior"
    - University of Houston, Department of Mathematics, Networks Cluster Seminar [3/10/17]
    - University of Oxford, Mathematical Institute, OCIAM group meeting [5/26/16]
- "Disordered Granular Chains"
    - U.C. Berkeley, Quantum Materials Seminar, Condensed Matter Theory Center, Seminar, Department of Physics [4/25/17]
    - San Diego State University, joint Mathematics and Computational Science Research Center Colloquium [3/24/17]
    - University of Warwick, Fluid Dynamics Seminar [1/27/16]
- "Migration of Populations via Marriages in the Past"
    - University of North Carolina at Chapel Hill, Applied Mathematics Colloquium, Department of Mathematics [11/14/14]
    - Stanford University, M. Feldman group meeting, Department of Biology [11/07/14]
- "Stuff (An Introduction to Me)"
    - Motivo [12/19/16]
    - Stanford University, M. Feldman group meeting, Department of Biology [10/24/14]
- "Introduction to the Mathematics of Networks"
    - Rensselaer Polytechnic Institute, Department of Mathematical Sciences, Undergraduate Seminar [9/04/13]
- "Multilayer Community Structure and Functional Brain Networks"
    - University of Oxford, Neurotheory Forum [8/19/14]
    - University of Nottingham, Centre for Mathematical Medicine and Biology Seminar Series, Department of Mathematics [2/18/14]
    - Stanford University, J. H. Lee group meeting, Department of Bioengineering [3/13/13]
- "Mesoscale Structures in Functional Neuronal Networks"
    - Brain Health Alliance Virtual Institute (BHAVI) webinar [8/05/19]
- "Multilayer Networks"
    - Beijing University of Posts and Telecommunications [9/04/19]
    - The Ohio State University, Translational Data Analytics Institute colloquium [11/14/18]
    - MacQuarie University, Department of Mathematics [9/14/18]
    - Brain Health Alliance Virtual Institute (BHAVI) webinar [7/30/18]
    - Washington University of Saint Louis, Department of Physics, Theory Seminar [3/30/17]
    - The Claremont Colleges, Claremont Center for the Mathematical Sciences, Applied Mathematics Seminar [3/20/17]
    - University of Southern California, Information Sciences Institute, Colloquium [12/16/16]
    - University of Calgary, Department of Mathematics, Colloquium [11/25/16]
    - UCLA, Department of Mathematics, The Level Set Collective [10/25/16]
    - Mathematical Biosciences Institute, Visitors Seminar [3/29/16]
    - University of Warwick, Complexity Symposium [2/10/16]
    - UCLA, Colloquium, Department of Mathematics [10/01/15]
    - University of Southern California, Colloquium, (joint with Center for Applied Mathematical Sciences Colloquium), Department of Mathematics [9/30/15]
    - Workshop on Mathematics and Physics of Multilayer Complex Networks [MAPCOM15] (joint presentation with A. Arenas), Max Planck Institute for the Physics of Complex Systems, Dresden, Germany [7/06/15]

    - E-Therapeutics [4/10/15]
    - University of Manchester, Department of Sociology [2/18/15]
    - University of Pennsylvania, Digital Media, Networks, and Political Communication Seminar, Annenberg School for Communication [12/15/14]
    - Northeastern University, Center for Complex Network Research Seminar [12/08/14]
    - Stanford University, Networks Forum [11/25/14]
    - North Carolina State University, Theoretical Computer Science Seminar, Department of Computer Science [11/17/14]
- "Multilayer Networks and Community Structure"
    - Max Planck Institute for the Physics of Complex Systems (MPI-PKS), Program on Causality, Information Transfer, and Dynamical Networks [5/20/14]
    - Stanford University, Networks Forum [4/16/14]
    - University of Oxford, Numerical Analysis Internal Seminar, University of Oxford [2/11/14]
- "Cascades and Social Influence on Networks"
    - University of Michigan, Center for the Study of Complex Systems Colloquium [9/22/15]
    - Northeastern University, Applied and Interdisciplinary Mathematics (AIM) Seminar [12/09/14]
    - Arizona State University, Mathematical Biology Seminar, School of Mathematical & Statistical Sciences [11/21/14]
    - Stanford University, Applied Mathematics Seminar, Department of Mathematics [11/19/14]
    - Universidad Nacional Autónoma de México, Departamento de Ciencias de la Computación [10/28/14]
    - UCLA, Department of Mathematics [10/22/14]
    - UC Santa Barbara, Center for Control, Dynamical-Systems, and Computation (CCDC) Seminar [10/03/14]
    - University of British Columbia, Applied Mathematics Colloquium, Department of Mathematics [3/31/14]
    - Simon Fraser University, Applied Mathematics Seminar, Department of Mathematics [3/28/14]
    - University College London, Networks Seminar [1/22/14]
    - Princeton University, Y. G. Kevrekidis group meeting, Department of Chemical and Biological Engineering [9/6/13]
    - Rensselaer Polytechnic Institute, Mathematical Sciences Colloquium [9/3/13]
    - Georgia Institute of Technology, Mathematical Biology Seminar, School of Mathematics [8/28/13]
    - Korea University, Informal Networks Seminar, Department of Physics [7/30/13]
    - Imperial College London, DynamIC Seminar, Department of Mathematics [5/30/13]
    - UC Davis, Computer Science Colloquium [4/11/13]
    - Facebook [4/04/13]
    - UC San Diego, The Cooperative Association for Internet Data Analysis (CAIDA) Complex Networks Seminar [3/25/13]
    - University of North Carolina at Chapel Hill, Applied Mathematics Colloquium, Department of Mathematics [2/22/13]
    - Cornell University, Center for Applied Mathematics Colloquium [2/01/13]
- "Potentially Useful Ideas and Methods from Networks"
    - University of Oxford, Networks in Biology Workshop, Mathematical Institute [12/05/12]
- "Core–Periphery Structure in Networks"
    - University of Strathclyde, Department of Mathematics and Statistics, Colloquium [10/03/12]
    - University of Oxford, Nuffield College and Oxford Internet Instititute Social Networks Seminar Series [5/07/12]
- "The Influence of Topology on Sound Propagation in Granular Force Networks"
    - University of Bristol, Mathematical Physics Seminar, Department of Mathematics [11/01/13]
    - Boston University, Biophysics/Condensed Matter Seminar, Department of Physics [3/29/12]
- "Dynamical Systems on Networks"
    - University of Bristol, Bristol Centre for Complexity Sciences [5/20/11]
- "Social Structure of Facebook Networks"
    - Universidad Rovira i Virgili, Department of Computer Science and Mathematics [6/7/11]
    - Duke University, Duke Network Analysis Center [4/04/11]
- "Modelling Bipolar Individuals as Nonlinear Oscillators"
    - 2014 Ig Nobel Tour of the UK, Imperial College London [3/14/14]
- "Synchronization of Cows"
    - 2012 Ig Nobel Tour of the UK, Imperial College London [3/09/12]
    - Queen Mary University of London, Dynamical Systems and Statistical Physics Seminar, School of Mathematical Sciences [1/24/12]
    - Technical University of Denmark, Nonlinear Dynamics and Complex Systems Seminar, Department of Mathematics [4/29/11]
    - University of North Carolina at Chapel Hill, Applied Mathematics Colloquium, Department of Mathematics [4/01/11]
    - University of Bristol, "Making it Real" Seminar, Department of Engineering Mathematics [10/29/10]
    - University of Limerick, Mathematics Applications Consortium for Science & Industry Seminar [10/19/10]
    - Georgia Institute of Technology, Mathematical Biology and Ecology seminar, School of Mathematics [9/07/10]
- "Community Structure in Multilayer Networks"

- Stanford University, J. Leskovec group meeting, InfoLab, Department of Computer Science [1/28/13]
- University of Bath, Centre for Nonlinear Mechanics Seminar, Bath Institute for Complex Systems [11/29/11]
- University of Oxford, Complex Agent-Based Dynamic Networks (CABDyN) Seminar [11/30/10]
- University of Oxford, Nuffield Social Networks Seminar Series [5/03/10]

- "Using Social Network Analysis to Understand Financial Data"
  - Duke University, Social Network Analysis group meeting, Department of Sociology [3/18/09]
- "How Social Networks Can Help Lead to Financial Disaster"
  - Somerville College (Oxford) Alumni City Group [11/27/08]
- "Classical and Quantum Systems with Mixed Regular-Chaotic Dynamics"
  - University of Southampton, Applied Mathematics Colloquium, Department of Mathematics [5/06/08]
- "Nonlinear Waves in One-Dimensional Granular Crystals"
  - UC Davis, Applied Math/PDE Seminar, Department of Mathematics [2/28/13]
  - University of East Anglia, School of Mathematics [12/05/11]
  - University of Illinois at Urbana Champaign, Department of Mechanical Science and Engineering [3/28/11]
  - University of Warwick, Applied Mathematics Seminar, Department of Mathematics [12/08/10]
  - North Carolina State University, Department of Physics [11/15/10]
  - University of Washington, Nonlinear Waves Seminar, Department of Applied Mathematics [11/09/10]
  - University of Manchester, Manchester Centre for Nonlinear Dynamics [10/13/10]
  - Arizona State University, Mathematical Biology Seminar, School of Mathematical & Statistical Sciences [3/26/10]
  - University of Sevilla, Nonlinear Physics Seminar, Department of Physics [3/04/10]
  - California Institute of Technology, Condensed Matter Physics Seminar, Department of Physics [1/08/09]
  - Keele University, Mathematics Seminar, School of Computing and Mathematics [3/04/09]
  - University of Oxford, Partial Differential Equations Seminar, Mathematical Institute [1/22/09]
  - The University of Nottingham, Theoretical Mechanics Seminar, School of Mathematical Sciences [10/01/08]
  - University of Bristol, Centre for Applied Nonlinear Mathematics Seminar, Department of Engineering Mathematics [6/20/08]
  - Loughborough University, Applied Mathematics Seminar, Department of Mathematical Sciences [6/18/08]
  - University of Surrey, Applied Mathematics Seminar, Department of Mathematics [2/13/08]
  - University of Oxford, Differential Equations and Applications Seminar, Oxford Centre for Industrial and Applied Mathematics, Mathematical Institute [10/25/07]
- "Nonlinearity Management in Optics, Granular Lattices, and Bose–Einstein Condensation" (and similar topics)
  - University of Cambridge, Mechanics and Mathematical Biology Seminar, Department of Applied Mathematics and Theoretical Physics [10/22/07]
  - University of Oxford, Mathematical Institute [10/27/06]
- "Community Structure in Online Collegiate Social Networks"
  - University of Oxford, Oxford Internet Institute/Nuffield Social Networks Seminar Series [11/10/08]
- "Community Structure in Networks"
  - University of Southampton, Applied Mathematics Seminar [2/4/14]
  - Université Pierre et Marie Curie, EPIcx Lab Seminar [1/27/14]
  - Queen Mary University of London, School of Mathematical Sciences, Dynamical Systems and Statistical Physics Seminar [11/05/13]
  - University of Cambridge, Networks Seminar [10/15/13]
  - Stanford University, Special Institute for Computational Mathematics and Engineering (ICME) Seminar [4/16/13]
  - Clarkson University, Arts & Sciences Seminar [1/30/13]
  - University of Manchester, Complex Systems and Statistical Physics Seminar, Department of Physics [10/17/12]
  - California Institute of Technology, Applied Mathematics Colloquium, Department of Computing & Mathematical Sciences [4/16/12]
  - Harvard University, Applied Mathematics Seminar, School of Engineering and Applied Science [3/30/12]
  - Northwestern University, Engineering Science and Applied Mathematics Colloquium [3/26/12]
  - University of Nottingham, Mathematical Physics Seminar, Department of Mathematics [3/07/12]
  - University of Warwick, Applied Mathematics and Statistics Seminar, Department of Mathematics [2/17/12]
  - UCLA, Applied Mathematics Colloquium, Department of Mathematics [1/11/12]
  - University of Leeds, Applied Nonlinear Dynamics Seminar, Department of Applied Mathematics [10/04/11]
  - Davidson College, Department of Mathematics [4/05/11]
  - Fred Hutchinson Cancer Research Center, Computational Biology and Biostatistics Seminar [11/10/10]
  - Arizona State University, Complex Systems General Talk, Mathematical Computational and Modeling Sciences Center [3/25/10]
  - Imperial College London, Institute for Mathematical Sciences [2/25/10]
  - California Institute of Technology, Applied and Computational Mathematics, Tea Talk [1/08/10]
  - Université Catholique de Louvain, Department of Mathematical Engineering Seminar [10/30/09]

- Duke University, joint Adventures in Theory Lecture, Center for Theoretical and Mathematical Sciences and Center for Nonlinear and Complex Systems Seminar [3/17/09]
- Somerville College, University of Oxford, MCS/SCR Symposium [1/29/09]
- University of Limerick, Mathematics Applications Consortium for Science & Industry Seminar [11/07/08]
- Market Sentinel [8/28/08]

- "Complex Networks: From Congress to College Football"
  - Brunel University, Complexity Seminar, Department of Mathematical Sciences [3/13/08]
  - University of Oxford, Systems Biology Doctoral Training Centre [2/28/08]
  - University of Bristol, Centre for Complexity Sciences Seminar [2/26/08]
  - University of Oxford, Oxford-Man Institute of Quantitative Finance Seminar [2/20/08]
  - University of Oxford, Complex Agent-Based Dynamic Networks (CABDyN) Seminar [10/30/07]
  - University of Southern California, Informal Nonlinear Dynamics Seminar, Department of Aerospace & Mechanical Engineering [9/06/07]
  - California Institute of Technology, Condensed Matter Theory Group Meeting [5/14/07]
  - California Institute of Technology, Undergraduate Math Club Seminar [4/04/07]
  - Louisiana Tech University, Mathematics Colloquium [1/09/07]
  - Loyola Marymount University, Mathematics Colloquium [11/13/06]
  - Claremont Colleges, Mathematics Colloquium [11/01/06]
- "A Network Analysis of Committee Assignments in the United States House of Representatives"
  - Georgia Institute of Technology, Applied and Computational Mathematics Colloquium, School of Mathematics [4/26/05]
- "Bose–Einstein Condensates in Optical Lattice and Superlattice Potentials" (and similar topics)
  - Arizona State University, Analysis/PDE Seminar, School of Mathematical & Statistical Sciences [3/25/10]
  - University of Durham, Atomic and Molecular Physics Research Seminar, Department of Physics [11/14/07]
  - UCLA, Applied Mathematics Colloquium, Department of Mathematics [10/11/06]
  - Niels Bohr Institute, Atomic Physics Seminar [5/17/06]
  - California Institute of Technology, Institute for Quantum Information Seminar [5/02/06]
  - California Institute of Technology, Condensed Matter Physics Seminar, Department of Physics [2/24/06]
  - University of Maryland at College Park, Applied Dynamics Seminar [2/09/06]
  - University of North Carolina at Chapel Hill, Applied Mathematics Colloquium, Department of Mathematics [12/02/05]
  - California Institute of Technology, SIAM Student Seminar, Department of Applied & Computational Mathematics [11/18/05]
  - University of Massachusetts at Amherst, Applied Analysis & Computation Seminar, Department of Mathematics & Statistics [10/18/05]
  - Georgia Institute of Technology, Nonlinear Science Seminar, School of Physics [8/26/05]
  - University of Sydney, School of Mathematics & Statistics [4/08/05]
  - McMaster University, Department of Mathematics [3/29/05]
  - UC Merced, School of Natural Sciences [3/18/05]
  - The Ohio State University, Department of Mathematics [2/18/05]
  - Southern Methodist University, Department of Mathematics [2/03/05]
  - Clemson University, Department of Mathematical Sciences [1/31/05]
  - UC Davis, Department of Mathematics [1/04/05]
  - Caltech, Department of Control and Dynamical Systems [1/29/04]
  - Georgia Institute of Technology, Center for Nonlinear Science (CNS) meeting, School of Physics [10/27/03]
  - Georgia Institute of Technology, Center for Dynamical Systems and Nonlinear Studies (CDSNS), School of Mathematics [10/20/03]
- "An Introduction to the Fermi–Pasta–Ulam Problem and Solitary Waves"
  - Georgia Institute of Technology, Center for Nonlinear Science (CNS) meeting, School of Physics, [11/29/04 and 12/06/04]
- "How Well Can Random Walkers Rank Football Teams?"
  - Cal Poly Pomona, Department of Mathematics and Statistics [6/03/04]
- "Periodic Orbits and Spectral Statistics of Quantum Graphs"
  - Georgia Institute of Technology, Combinatorics Seminar, School of Mathematics [11/02]
- "Mathematical Modelling of Bipolar Disorder"
  - Georgia Institute of Technology, CDSNS/ACE Lab Brown Bag Seminar, School of Mathematics [9/24/02]
- "Modeling Nanostructures with Quantum Billiards"
  - University of Illinois at Urbana Champaign, Department of Mechanical and Industrial Engineering [2/21/02]
- "Quantum Chaos in Vibrating Billiard Systems"
  - Mathematical Sciences Graduate Student Seminar, Cornell University [4/01]

        - Applied Math Lunch, University of Maryland at College Park [3/01]
        - Cornell Undergraduate Math Club Talk [4/00]
    - "A Historical Approach to Dynamical Systems Through Celestial Mechanics"
        - Mathematical Sciences Graduate Student Seminar, Cornell University [Fall 00]
        - Cornell University Math Club Talk [Fall 99]
    - "The Hopf Fibration and its Applications"
        - Center for Applied Mathematics (CAM) Student Talk, Cornell University [Fall 98]
    - Other
        - Performer, Ig Nobel "This is Improbable" Show, Mathematical Institute, University of Oxford [10/05/12]
- Poster Presentations
    - Several presentations at various universities and conferences [1997–2001]

TEACHING

- Lecturing and Seminar Courses, UCLA
    - 2025–2026 academic year
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Spring 2026]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Winter 2026]
        - Math 266E ("Applied Differential Equations") [Winter 2026]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Fall 2025]
        - Math 142 ("Mathematical Modeling") [Fall 2025]
    - 2024–2025 academic year
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Spring 2025]
        - Math 142 ("Mathematical Modeling") [Spring 2025]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Winter 2025]
        - Math 274A ("Asymptotic Methods") [Winter 2025]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Fall 2024]
        - Math 285J (Topics in Applied Mathematics; "Topological Data Analysis") [Fall 2024]
    - 2023–2024 academic year
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Spring 2024]
        - Math 168 ("Introduction to Networks") [Spring 2024]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Winter 2024]
        - Math 266B ("Applied Partial Differential Equations") [Winter 2024]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Fall 2023]
        - Math 260 ("Introduction to Applied Mathematics") [Fall 2023]
    - 2022–2023 academic year
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Spring 2023]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Winter 2023]
        - Math M148 ("Experience of Data Science") [Winter 2023]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Fall 2022]
        - Math 168 ("Introduction to Networks") [Fall 2022]
    - 2021–2022 academic year
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems") [Spring 2022]
        - Math 276 ("Topics in Network Science") [Spring 2022]
        - Math 290J ("Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems")

[Winter 2022]
    - Math 168 (“Introduction to Networks”) [Winter 2022]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Fall 2021]
- 2020–2021 academic year
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Spring 2021]
    - Math 285J (Topics in Applied Mathematics; “Mathematics and Social Systems”) [Spring 2021]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Winter 2021]
    - Math 266B (“Applied Partial Differential Equations”) [Winter 2021]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Fall 2020]
    - Math 168 (“Introduction to Networks”) [Fall 2020]
- 2019–2020 academic year
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Spring 2020]
    - Math 42 (“Data-Driven Modeling in Complex Systems: Life, The Universe, and Everything”) [Spring 2020]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Winter 2020]
    - Math 238B (“Dynamical Systems”) [Winter 2020]
    - Math 296J (“Applied Mathematics Colloquium”) [Fall 2019]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Fall 2019]
    - Math 266A (“Applied Ordinary Differential Equations”) [Fall 2019]
- 2018–2019 academic year
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Spring 2019]
    - Math 42 (“Data-Driven Modeling in Complex Systems: Life, The Universe, and Everything”) [Spring 2019]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Winter 2019]
    - Math 276 (“Topics in Network Science”) [Winter 2019]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Fall 2018]
    - Math 266A (“Applied Ordinary Differential Equations”) [Fall 2018]
- 2017–2018 academic year
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Spring 2018]
    - Math 168 (“Introduction to Networks”) [Spring 2018]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Winter 2018]
    - Math 276 (“Topics in Network Science”) [Winter 2018]
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Fall 2017]
    - Math 266A (“Applied Ordinary Differential Equations”) [Fall 2017]
- 2016–2017 academic year
    - Math 290J (“Participating Seminar: Current Literature in Applied Mathematics: Networks and Complex Systems”) [Spring 2017]
    - Math 191 (“Introduction to Networks”) [Spring 2017]
    - Math 285J (Topics in Applied Mathematics; “Topics in Network Science”) [Winter 2017]

- Lecturing, University of Oxford
    - 2015–2016 academic year
        - “Complex Systems” (no number) [Trinity 2016]
        - Maths C5.4 (“Networks”) [Hilary 2016]
    - 2014–2015 academic year
        - Maths C5.4 (“Networks”) [Hilary 2015]
    - 2013–2014 academic year
        - Maths C6.2b (“Networks”) [Hilary 2014]
    - 2012–2013 academic year
        - “Networks” (no number) [Trinity 2013]

        - Maths C6.2a (“Statistical Mechanics”) [Michaelmas 2012]
    - 2011–2012 academic year
        - “Networks” (no number) [Trinity 2012]
        - Maths B8b (“Nonlinear Systems”) [Hilary 2012]
        - Maths C6.2a (“Statistical Mechanics”) [Michaelmas 2011]
    - 2010–2011 academic year
        - Maths B8b (“Nonlinear Systems”) [Hilary 2011]
    - 2009–2010 academic year
        - Maths B8b (“Nonlinear Systems”) [Hilary 2010]
        - Maths C6.3a (“Perturbation Methods”) [Michaelmas 2009]
    - 2008–2009 academic year
        - Maths B5b [supp] (“Applied Partial Differential Equations: Supplementary Lectures”, half course) [Hilary 2009]
        - Maths C6.3a (“Perturbation Methods”) [Michaelmas 2008]
        - Maths B568a (“Introduction to Applied Mathematics”, half course) [Michaelmas 2008]
    - 2007–2008 academic year
        - Maths B5b (“Applied Partial Differential Equations: Supplementary Lectures”, half course) [Hilary 2008]
        - Maths C6.3a (“Perturbation Methods”) [Michaelmas 2007]
- Tutoring, University of Oxford (Somerville College)
    - Applied mathematics subjects for 1st year, 2nd year, and (on occasion) 3rd year students. Subjects include: Applications, Calculus, Calculus of Variations, Classical Mechanics, Constructive Mathematics, Differential Equations I and II, Dynamics, Electromagnetism, Fourier Series, Geometry, Graph Theory, Integral Transforms, Mathematical Ecology and Biology, Nonlinear Systems, Optimization, Partial Differential Equations, Quantum Theory, Special Relativity, Two-Variable and Three-Variable Calculus
    - Personal Tutor for numerous undergraduate students in the mathematical sciences (providing “pastoral guidance”)
        - Includes students in Mathematics, Mathematics & Statistics, Mathematics & Philosophy, Computer Science, Mathematics & Computer Science
    - College Advisor for numerous DPhil and Masters students in several different programs
- Design of New Courses
    - UCLA: Introduction to Data-Driven Mathematical Modeling [lower-division course; first taught in spring 2020]; Topics in Networks [graduate-level course; first taught in winter 2017]
    - University of Oxford: Networks [4th year undergraduate course; first taught in Hilary 2014 in that form; I designed and previously taught a variant of this course for the Masters program in Mathematical Modelling and Scientific Computation in Trinity 2012; adapted to an upper-division course at UCLA in spring 2017]
    - University of Oxford: Statistical Mechanics [4th year undergraduate course; first taught in Michaelmas 2011]
    - Georgia Institute of Technology: Introduction to Mathematical Modeling [advanced undergraduate course; taught in Spring 2004]
- Courses Taught, Georgia Institute of Technology
    - Math 2403 (“Introduction to Differential Equations”) [Spring 2005]
    - Math 6705 (“Modeling and Dynamics”) [Fall 2004]
    - Math 4803POR (“Introduction to Mathematical Modeling”) [Spring 2004]
    - Math 4320 (“Complex Analysis”) [Fall 2003]
    - Math 2401 (“Calculus III”—vector calculus) [Fall 2002]
- Teacher’s Assistant, Cornell University
    - Math 420 (Differential Equations and Dynamical Systems) [Spring 2002]
    - Math 615 (Mathematical Methods in Physics) [Fall 2001]
    - Mathematical Theoretical Biology Institute summer research program for undergraduates [Summers 2000–2002]
- Courses Taught, California Institute of Technology
    - Math 1d (Probability) [Spring 1997]
- Teacher’s Assistant, California Institute of Technology
    - Math 1c-practical track (Linear Algebra/Multivariable Calculus) [Spring 1998]
    - Math 1b-practical track (Differential Equations/Linear Algebra) [Winter 1998]
    - Math 2a-practical track (Matrix Theory/Statistics) [Fall 1997]
    - Math 1b-practical track (Differential Equations/Linear Algebra) [Winter 1997]
    - Math 1a (Calculus/Probability) [Fall 1996]

ORGANIZATION OF CONFERENCES, CONFERENCE SESSIONS, AND WORKSHOPS

- Organization of Long-Term Scientific Programs

- Organizer, Mathematics Research Community (MRC) on "Complex Social Systems", American Mathematical Society (with H. Z. Brooks, D. B. Cooney, M. Feng, and A. Volkening) [initial workshop 6/18/23–6/24/23; follow-up community-building]
- Lead Organizer, Mathematics Research Community (MRC) on "Network Science", American Mathematical Society (with A. Clauset and D. Kempe, and with assistance from D. Larremore) [initial workshop: 6/25/14–6/29/14; follow-up community-building]
- Member, Organizing Committee, Emphasis Semester on Dynamics of Biologically Inspired Networks, Mathematical Biosciences Institute (MBI), Columbus, OH, USA [Spring 2016]

- Organization of Conferences, Workshops, Short Courses, and Schools
  - Lead or Co-Lead Organizer
    - NetSciEd 2025 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, and S. Uzzo), Satellite Symposium on Network Science in Education [6/25]
    - Workshop on Metric Networks (with L. Böttcher), Frankfurt School of Finance & Management, Frankfurt, Germany [7/18/24–7/19/24]
    - NetSciEd 2024 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, and S. Uzzo), Satellite Symposium on Network Science in Education [6/24]
    - Institute for Pure and Applied Mathematics (IPAM) Workshop on Mathematical Approaches for Connectome Analysis (with G. Card, M. K. Chung, M. Costa, V. Jayaraman, A. Litwin-Kumar, M. Noorman, S. Romani, and E. Shlizerman) [2/12/24–2/16/24]
    - NetSciEd 2023 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, M. Stella, and S. Uzzo), Satellite Symposium on Network Science in Education [7/23]
    - NetSciEd 2022 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, M. Stella, and S. Uzzo), Satellite Symposium on Network Science in Education [7/22]
    - Applications of Topological Data Analysis to "Big Data" (with T. Emerson, S. Tymochko, and W. Zadrozny), workshop at IEEE BigData 2021 Conference [12/15/21]
    - NetSciEd 2021 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, M. Stella, and S. Uzzo), Satellite Symposium on Network Science in Education [6/28/21–6/29/21]
    - DSOFT/GSNP Short Course, "Introduction to Topological Data Analysis", 2021 American Physical Society (APS) March Meeting (cosponsored by Group on Statistical and Nonlinear Physics [GSNP] and Division on Soft Matter [DSOFT]) [3/14/21]
      - Slides available at https://zerodivzero.com/short_course/85f850bf03e340ed95587656a7786a3a/titles
    - American Mathematical Society (AMS) Short Course on "Mathematical and Computational Methods for Complex Social Systems" (with H. Z. Brooks, M. Feng, and A. Volkening), Joint Mathematics Meetings 2021 [JMM 2021] [1/03/21–1/05/21]
      - Videos of talks and panel discussions: https://www.youtube.com/channel/UC5nVrRSc89u-azKPtd8aROQ
      - Slides and code repositories: https://zerodivzero.com/short_course/aaac8c66007a4d23a7aa14857a3b778c/titles
    - Institute for Pure and Applied Mathematics (IPAM) Workshop on Mathematical Models in Understanding COVID-19 (with A. L. Bertozzi, J. C. Miller, and D. Schriger) [8/10/20–8/12/20]
    - NetSciEd 2020 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, M. Stella, and S. Uzzo), Satellite Symposium on Network Science in Education [10/27/20]
    - NetSciEd 2019 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, L. Sheetz, M. Stella, and S. Uzzo), Satellite Symposium on Network Science in Education, NetSci 2019 [5/19]
    - Workshop on Threshold Networks (with S. Coombes, Y. M. Lai, and R. Thul), Nottingham, UK [7/22/19–7/24/19]
    - Workshop on Granular and Particulate Networks [PARNET19] (with D. S. Bassett and K. E. Daniels), Max Planck Institute for the Physics of Complex Systems, Dresden, Germany [7/8/19–7/10/19]
    - SIAM Conference on Applications of Dynamical Systems 2019 [DS19] (with E. Spiller), Snowbird, UT, USA [5/19/19–5/23/19]
    - NetSciEd 2018 (with C. Cramer, R. Gera, E. Panagakou, H. Sayama, L. Sheetz, M. Stella, and S. Uzzo), Satellite Symposium on Network Science in Education, NetSci 2018 [6/18]
      - The proceedings are available online at the following website: https://osf.io/7v9xt/
    - NetSciEd 6 (with C. Cramer, R. Gera, H. Sayama, L. Sheetz, and S. Uzzo), Satellite Symposium on Network Science in Education, NetSci 2017 [6/17]
    - SIAM Workshop on Network Science 2017 [NS17] (with M. Girvan), Pittsburgh, PA, USA [7/13/17–7/14/17]
    - NetSciEd 5 (with C. Cramer, R. Gera, H. Sayama, L. Sheetz, and S. Uzzo), Satellite Symposium on Network Science in Education, NetSci 2016 [6/16]
    - Workshop on Generalized Network Structures and Dynamics, Emphasis Semester on Dynamics of Biologically Inspired Networks, Mathematical Biosciences Institute (MBI), Columbus, OH, USA [3/21/16–3/25/16]
    - Ada Lovelace Bicentenary: Celebrating Women in Computer Science, Somerville College, Oxford [10/16/15]
    - Workshop on Mathematics and Physics of Multilayer Complex Networks [MAPCOM15] (with A. Arenas), Max Planck Institute for the Physics of Complex Systems, Dresden, Germany [7/06/15–7/08/15]

- NetSciEd 4 (with C. Cramer, H. Sayama, L. Sheetz, and S. Uzzo), Satellite Symposium on Network Science in Education, NetSci 2015 [6/15]
- Workshop on Networks and Criminality, Mathematical Institute, University of Oxford [4/20/15–4/21/15]
- Workshop on Algebraic Topology: Computation, Data Analysis, and Applications (with P. Grindrod, H. A. Harrington, and U. Tillmann), Mathematical Institute, University of Oxford [2/24/15]
- Workshop on Time-Dependent and Multiplex Networks, Mathematical Institute, University of Oxford (with S. H. Lee) [7/08/13–7/09/13]
- Networks in Biology Workshop (with H. Byrne and R. Shipley), Mathematical Institute, University of Oxford [12/05/12]
- Oxford/Harvard Workshop on Networks and Statistics (with E. Airoldi and J. Blitzstein), Mathematical Institute, University of Oxford [5/20/10–5/21/10]

- Organizing Committee Membership
  - Advisory Board, WINQ Workshop on Complex Dynamical Networks, Nordita, Stockholm, Sweden [6/13/22–6/15/22]
  - Organizing Committee, 2020 SIAM Conference on the Mathematics of Data Science (MDS) [5/05/20–5/07/20] (note: conference cancelled due to COVID-19 pandemic, although select minisymposia took place online)
  - Organizing Committee ("President"), South California Applied Mathematics Symposium (SOCAMS) 2019, California Institute of Technology, Pasadena, CA, USA [4/27/19]
  - Topological Data Analysis, New Developments and Challenges [CAT 2015] (with P. Grindrod, H. A. Harrington, and U. Tillmann), Mathematical Institute, University of Oxford [6/19/15–6/20/15]
  - Complex Networks: Theory, Methods and Applications, Lake Como School of Advanced Studies [2015–2023; all years inclusive, with 2020 cancelled and 2021 skipped because of the COVID-19 pandemic; organizational duties began in 2014]
  - Ig Nobel "This is Improbable" Show, Mathematical Institute, University of Oxford [10/05/12]
  - Complex Networks: Transitions Workshop, SAMSI, North Carolina, USA [6/06/11–6/08/11]
  - Complex Networks: Workshop on Dynamics of Networks, SAMSI, North Carolina, USA [1/10/11–1/12/11]
  - Oxford Networks Day [9/28/09]
  - 6 Oxford SIAM Student Chapter Conferences [4/25/08, 2/03/09, 2/09/10, 2/09/11, 2/23/12, 2/15/13]
  - 3rd UK SIAM National Student Conference [5/28/14]
- Scientific Committee Membership
  - Scientific Advisory Committee, Isaac Newton Institute (INI) Satellite Programme on Maths of Human Behaviour: Modelling Sociality, Mobility and Protectionism [7/26–8/26]
  - Program Committee, 21st Workshop on Modelling and Mining Networks (WAW 2026) [6/15/26–6/19/26]
  - Program Committee, 2022 SIAM Workshop on Network Science (NS22) [9/13/22–9/15/22]
  - Program Committee, 2020 SIAM Workshop on Network Science (NS20) [7/09/20–7/10/20]
  - Advisory Committee, Dynamics Days US conference series [2018, 2021–2024]
  - Program Committee, 5th International Conference on Computational Social Science (IC2S2) [7/17/19–7/20/19]
  - Program Committee, NetSci 2019 [5/27/19–5/31/19]
  - Program Committee, 2019 SIAM Workshop on Network Science (NS19) [5/22/19–5/23/19]
  - Scientific Board, Mediterranean School of Complex Networks (MSCX) [2017–present]
  - Scientific Committee, Young Initiatives (YIs) [for satellites], Network Science Society [2018]
  - Program Committee, 2018 SIAM Workshop on Network Science (NS18) [7/12/18–7/13/18]
  - Program Committee, BIFI International Conference 2018: Complexity, Networks and Collective Behavior [2/6/18–2/8/18]
  - Program Committee, 4th Mediterranean School of Complex Networks (MSCX2017) [9/3/17–9/8/17]
  - Program Committee (section on Foundations of Complex Systems), Conference on Complex Systems (CCS) 2017 [9/17/17–9/22/17]
  - Program Committee, NetSci 2017 [6/19/17–6/23/17]
  - Program Committee, NetSciX 2016 [1/11/16–1/13/16]
  - Program Committee, 12th Workshop on Algorithms and Models for the Web Graph (WAW 2015), EURANDOM [12/10/15–12/11/15]
  - Program Committee, NetSci 2015 [6/1/15–6/5/15]
  - Senior Program Committee, 6th International Conference on Social Informatics (SocInfo 2014) [11/10/14–11/13/14]
  - Program Committee, SocioAware 2011: First International Workshop on Socio-Aware Networked Computing Systems (satellite workshop at 5th IEEE International Conference on Self-Adaptive and Self-Organizing Systems) [10/03/11]
  - Program Committee, NetMob 2010: Analysis of Mobile Phone Networks, Satellite Symposium of NetSci 2010 [5/11/10]
- Minisymposium Sessions Organized at Conferences
  - Focus Session on "Hyperuniformity and Soft Materials", 2025 APS Joint March and April Meeting (with K. E. Daniels

and R. Hurley) [3/25]
- Minisymposium on "Complex Weights in Networks and Data Science" (with L. Böttcher), 2024 SIAM Conference on Mathematics of Data Science [10/24]
- Minisymposium on "Mathematics of Complex Systems" (with H. Z. Brooks, A. P. Hoover, A. C. Schwarze, and A. Volkening), SIAM session, Joint Mathematics Meetings 2022 [JMM 2022] [4/22] (virtual due to COVID-19 omicron variant)
- Minisymposium on "Topological Data Analysis and Data-Driven Modeling in Complex Systems", 2020 SIAM Conference on Mathematics of Data Science (with H. Z. Brooks) [5/20] (note: the main conference was largely cancelled due to COVID-19 pandemic; we ran our minisymposium virtually on 5/05/20; the plenary talks and some other minisymposia also were held virtually)
- Minisymposium on "Bridging Network Science and Graph Theory", 2018 SIAM Conference on Applied Mathematics Education (with R. M. Gera and H. Sayama) [7/18]
- Organized Session on "Multilayer Networks", Sunbelt (XXXV) Social Networks Conference (with M. Magnani and L. Rossi) [6/15]
- Minisymposium on "Cascades on Networks", 2013 SIAM Conference on Applications of Dynamical Systems (with J. P. Gleeson) [5/13]
- Minisymposium on "Collective Behavior", 2011 SIAM Conference on Applications of Dynamical Systems (with E. M. Bollt) [5/11]
- Minisymposium on "Nonlinear Waves in Solids and Granular Media", 2010 SIAM Conference on Nonlinear Waves and Coherent Structures (with C. Daraio and P. G. Kevrekidis) [8/10]
- Minisymposium on "Waves in Nonlinear Lattices", 2009 SIAM Conference on Applications of Dynamical Systems (with P. G. Kevrekidis) [5/09]
- Minisymposium on "Nonlinear Waves in Periodic Media", 2008 SIAM Conference on Nonlinear Waves and Coherent Structures (with D. J. Frantzeskakis and P. G. Kevrekidis) [7/08]
- Minisymposium on "Mathematics and Social Networks", 2008 Conference of the European Consortium for Mathematics in Industry [7/08]
- Project NExT Session on "New Technologies for Faculty: Wikis, Discussion Boards, and Clickers" (with H. Zullo), Joint Mathematics Meetings 2008 [JMM 2008] [1/08]
- Minisymposium on "Complex Networks: Dynamics and Community Detection", 2007 SIAM Conference on Applications of Dynamical Systems (with P. J. Mucha) [5/07]
- Minisymposium on "Analysis, Computation, and Experiments in Bose–Einstein Condensation", 2006 SIAM Annual Meeting and 2006 SIAM Conference on Analysis of Partial Differential Equations (with P. G. Kevrekidis) [7/06]
- Minosymposium on "Theoretical Biology and Dynamical Systems", 2005 SIAM Annual Meeting (with C. Castillo-Chavez, C. Kribs Zaleta, B. Song, and A.-A. Yakubu) [7/05]
- Focus Session on "Solitons and Applications in the 50 Years since Fermi-Pasta-Ulam", 2005 APS March Meeting (with D. Campbell and N. Zabusky) [3/05]
- Minisymposium on "Nonlinear Waves and Pattern Formation in Biological Systems", 2004 SIAM Conference on Nonlinear Waves and Coherent Structures (with P. G. Kevrekidis) [10/04]
- Minisymposium on "Applications of Discrete and Continuous Dynamical Systems", 2004 SIAM Annual Meeting (with S. Wirkus) [7/04]
- Minisymposium on "Theoretical Biology and Nonlinear Dynamics" and "Applications of Nonlinear Oscillators", 2003 SIAM Annual Meeting (with S. Wirkus) [6/03]
- Minisymposium on "Applications of Forced and Coupled Nonlinear Oscillators", 2003 SIAM Conference on Applications of Dynamical Systems [5/03]
- Minisymposium on "Theoretical Biology and Nonlinear Dynamics", 2002 SIAM Annual Meeting (with S. Wirkus) [7/02]

ADDITIONAL SERVICE, MENTORING, AND OUTREACH

- Scientific Organizations
  - Vice Chair, SIAM Activity Group on Dynamical Systems [1/1/24–12/31/25]
  - Chair, SIAM Activity Group on Dynamical Systems [1/1/22–12/31/23]
  - Member, Directorate Advisory Committee (DAC); Physical and Computational Sciences Directorate; Pacific Northwest National Laboratory (PNNL) [3/21–5/25]
  - Member, Scientific Advisory Committee, Wallenberg Initiative in Networks and Quantum Information (WINQ), Nordic Institute for Theoretical Physics (NORDITA) [2/21–present]
  - Fellows Selection Committee, Society for Industrial and Applied Mathematics (SIAM) [7/31/20–7/30/22]
  - Selection Committee, J.D. Crawford Prize for recent work in dynamical systems, Society for Industrial and Applied Mathematics (SIAM) [2021 prize]

- Program Director, SIAM Activity Group on Dynamical Systems [1/1/18–12/31/19]
- Senior Editor of DSWeb (SIAM Activity Group on Dynamical Systems) [1/1/18–present]
- Manager, Twitter/X account of SIAM Activity Group on Dynamical Systems [1/1/16–present]
- Secretary (and DSWeb Co-Editor-in-Chief, jointly with D. M. Abrams), SIAM Activity Group on Dynamical Systems [1/1/16–12/31/17]
- Member, Education Committee, Society for Industrial and Applied Mathematics [3 terms; 1/1/13–12/31/21]
- Member, Subcommittee on Mathematics Across the Disciplines, Committee on the Undergraduate Program in Mathematics, Mathematical Association of America [2 terms; 1/1/09–1/15/15]

- Consulting on Research Grants of Individuals
  - Yu-Ru Lin, School of Computing and Information, University of Pittsburgh, "A Network Theory of Credence", U. S. Air Force Defense Research Sciences (AFOSR) Program [2023–present]
  - Clio Andris, School of City & Regional Planning, Georgia Institute of Technology, "CAREER: A Reesearch and Educational Framework for Incorporating Spatial Heterogeneity into Social Network Analysis", National Science Foundation [2021–2026]
- Instructor, 23rd European Consortium for Mathematics in Industry Modelling Week [8/09]
- Faculty Advisor and Senior Member (and founding faculty member): University of Oxford student chapter of SIAM [10/07–12/15]
- Senior Member, Oxford University Role Playing Game Society [11/08–9/16]
- General Supervisor (before research project chosen) for numerous students in the Masters programs in Mathematical Modelling and Scientific Computation (MMSC), Mathematical Foundations of Computer Science (MFoCS), Mathematical and Theoretical Physics (MTP), and for the Centre for Doctoral Training in Industrially Focussed Mathematical Modelling (INFoMM) [10/08–6/16]
- University and College Committees, Service, and Other Activities
  - UCLA
    - 2025–2026
      - Member, Fall 2025 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
      - Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
      - Member, Undergraduate Honors Committee, Department of Mathematics
      - Member, Faculty Advisory Board, Data Theory
      - Mentor, two teams of students in the Mathematical Contest in Modeling (MCM) [1/29/26–2/2/26]
    - 2024–2025
      - Chair, Spring 2025 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
      - Member, Fall 2024 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
      - Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
      - Member, Graduate Studies Committee, Department of Mathematics
      - Member, Undergraduate Honors Committee, Department of Mathematics
      - Member, Faculty Advisory Board, Data Theory
      - Mentor, one team of students in the Mathematical Contest in Modeling (MCM) [1/23/25–1/27/25]
    - 2023–2024
      - Organizer, REU on "Topological Data Analysis" for the UCLA Research Training Grant (RTG) in Geometry and Topology [Summer 2024]
      - Chair, Spring 2024 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
      - Member, Faculty Advisory Board, Data Theory
      - Chair, Fall 2023 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
      - Member (and Chair in Fall 2023), Colloquium Committee, Department of Mathematics
      - Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
    - 2022–2023
      - Member, Faculty Advisory Board, Data Theory
      - Judge, American Statistical Association (ASA) DataFest, UCLA [4/30/23]
      - Chair, Spring 2023 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
      - Member, Search Committee, Postdoctoral Scholar in Geometry & Topology (RTG Postdoc), Department of Mathematics
      - Member, Colloquium Committee, Department of Mathematics
      - Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
      - Unique member, Mathematical Contest in Modeling (MCM) Committee, Department of Mathematics
      - Chair, Fall 2022 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
    - 2021–2022
      - Member, Faculty Advisory Board, Data Theory

- Chair, Spring 2022 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
- Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
- Member, Colloquium Committee, Department of Mathematics
- Unique member, Mathematical Contest in Modeling (MCM) Committee, Department of Mathematics
- Member, Fall 2021 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
- Course Mentor, Data-Driven Modeling in Complex Systems: Life, The Universe, and Everything (Math 42)

▪ 2020–2021
- Member, Spring 2021 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
- Member, Management Committee, Data Theory Major, Department of Mathematics
- Member, Staff Search, Department of Mathematics
- Member, Search Committee, Social Justice Data Science Assistant Adjunct Professor
- Member, Teaching Committee, Department of Mathematics
- Chair, Fall 2020 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics

▪ 2019–2020
- Course Coordinator, Optimization (Math 164) and Networks (Math 168) [Spring 2020]
- Member, Ad Hoc Search Committee, Faculty Member in "Data Theory", Department of Mathematics and Department of Statistics
- Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
- Chair, Colloquium Committee, Department of Mathematics
- Member, Putnam Exam and Mathematical Contest in Modeling (MCM) Committee, Department of Mathematics
- Chair, Fall 2019 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics

▪ 2018–2019
- Chair, Fall 2018 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
- Member, Graduate Advisors Committee, Department of Mathematics
- Member, Staff Search, Department of Mathematics
- Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
- Member, Informal Working Group to Establish an Undergraduate Major in Data Science (ultimately called "Data Theory") jointly with Statistics, Department of Mathematics

▪ 2017–2018
- Member (as Referee), Spring 2018 Applied Differential Equations Qualifying Exam Committee, Department of Mathematics
- Member, Informal Working Group to Establish an Undergraduate Data Science (ultimately called "Data Theory") Major jointly with Statistics, Department of Mathematics
- Member, ad hoc CFM Postdoc Hiring Committee, Department of Mathematics
- Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
- Member, Graduate Admissions Committee, Department of Mathematics
- 2017–18 Scientific Teaching Fellow, UCLA Mobile Summer Institute (MoSI) on Scientific Teaching, organized by Center for Education Innovation and Learning in the Sciences (CEILS) [7/24/17–7/28/17]

▪ 2016–2017
- Member, ad hoc CFM Postdoc Hiring Committee, Department of Mathematics
- Member, Distinguished Lecture Series (DLS) Committee, Department of Mathematics
- Member, Undergraduate Studies Committee, Department of Mathematics

▪ University of Oxford
  ▪ Extra-Departmental
    - Member, Joint Supervisory Committee, Masters program in Mathematical and Theoretical Physics (MMathPhys, MSc) [10/15–8/16]
    - Member, Working Group to Establish a Masters program in Mathematical and Theoretical Physics (MMathPhys, MSc) [4/11–9/15]
    - Member, Systems Biology Doctoral Training Centre (DTC) Management Committee [10/11–8/16]
  ▪ Intra-Departmental
    - Hiring Committee, Departmental Lectureship in Mathematical Modelling [Spring 2014]
    - Mathematical Institute Teaching Committee [10/11–6/15]
    - Mathematical Institute Projects Committee [5/08–6/16]
    - Oxford Centre for Industrial and Applied Mathematics (OCIAM) Website Committee [1/08–6/09]

▪ Somerville College
  ▪ Member, Governing Body [10/07–9/16]
  ▪ Member, Education Committee [10/07–9/16]

        - Representative, Buildings Committee [10/15–9/16]
        - Hiring Committee, Associate Professorship (or Professorship) of Pure Mathematics [in Algebra (broadly defined)] in association with a Tutorial Fellowship in Somerville College [Winter 2014]
        - Representative, Web Working Group [9/11–9/12]
        - Representative, Finance Committee [5/11–9/14]
        - Mathematical, Physical, and Life Sciences (MPLS) Representative, Library Committee [10/08–6/12]
        - Outreach: Mathematics presentations for Study Day [2/11] and Family Day [9/13, 9/15], and Participation in several Open Days
        - Interviewer for Fulford Junior Research Fellowships [Spring 2008] and Mary Ewert Junior Research Fellowships [Spring 2013]
        - Undergraduate Admissions Interviews [2007–2015]
    - California Institute of Technology
        - Session Chair and Judge, Summer Undergraduate Research Fellowship (SURF) Seminar Day [several different years]
- Interviewing at University of Oxford
    - Interviews for Prospective DPhil Students in the Mathematical Institute as well as the Doctoral Training Centres (DTCs) in Life Sciences Interface (LSI) and Systems Biology
    - Interviews for Prospective Masters student in the program on the Mathematics and Foundations of Computer Science (MFoCS)
- Training Courses Taken at University of Oxford
    - Recruitment and Selection [2/12]
    - Undergraduate Admissions [Fall 2007]
- Outreach: UCLA
    - Exploring Your Universe, volunteer in booth "Disease Detectives: Stopping the Zombie Apocalypse with Mathematics" and also coordinator on the day for the Department of Mathematics [11/03/19]
- Outreach: University of Oxford
    - Participated in several Open Days for the Mathematical Institute
- Outreach: National and International
    - Co-organizer and Dramatic Reader in the panel "Improbable Research Dramatic Readings", 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA (with Geri Sullivan) [8/13/25–8/17/25]
    - Co-organizer and Emcee of the panel "Dramatic Readings of Improbable Research", 82nd World Science Fiction Convention [WorldCon82], Glasgow, Scotland (with Geri Sullivan) [8/08/24–8/12/24]
    - "The Mathematics of Networks", Children's Programme, 77th World Science Fiction Convention [WorldCon77], Dublin, Ireland [8/15/19–8/19/19]
    - Booth about Networks and Mathematics, Science Expo, March for Science Los Angeles (with M. P. Rombach) [4/22/17]
    - Member, Scientific Committee, Complex Forma Mentis (program for complex systems outreach) [2/23/17–present]
    - As part of the NetSciEd team (https://www.netscied.net/home), I helped write and design a brochure on "Network Literacy: Essential Concepts and Core Ideas" that describes basic network concepts for the general public (with C. Cramer, H. Sayama, L. Sheetz, and S. Uzzo) [posted online 3/12/15]
    - Designed and organized mathematics workshops on Network Science for students in Years 9–11 (ages 13–16), with the primary focus on Year 9 (both in Somerville College in Oxford and in visits to schools throughout the UK) [2012–2016]
    - "Networks: The Mathematics of Connectivity", Royal Institution Masterclass, University of Oxford [3/14/15, 1/30/16]
    - Participant (as a case study) in "Being a Professional Mathematician" project (www.beingamathematician.org) [2012]
    - "The Big Questions — 'Relationships' 3: Networks: The Science of Connections", Podcast, Oxford Sparks (http://www.oxfordsparks.ox.ac.uk/content/big-questions-relationships-3-networks-science-connections) [5/02/16]
- Seminar Organization (convener or chair of organizing committee)
    - UCLA
        - Mathematics Colloquium [9/19–6/20]
        - Applied Mathematics Colloquium [9/19–12/19]
    - University of Oxford
        - Organizer: Industrial and Applied Mathematics Seminar, Mathematical Institute [07/10–present]
    - Georgia Tech
        - Co-organizer: Center for Dynamical Systems and Nonlinear Studies Colloquium (with S.-N. Chow), School of Mathematics [Fall 2004–Spring 2005]
        - Organizer: Public lecture and book signing (at Georgia Tech) by Steve Strogatz [9/29/04]
        - Organizer: Research Horizons Seminar, School of Mathematics [Fall 2003–Spring 2004]
    - Cornell University
        - Founder: Mathematical Sciences Graduate Student Seminar [8/00]
        - Organizer: Mathematical Sciences Graduate Student Seminar [8/00–12/01]
        - Organizer: Bill Sears Club seminar series [8/99–12/99]
- Mentor, Mathematical and Theoretical Biology Institute (MTBI) summer REU program [2000–2002]

- Refereeing:
  - Refereed papers for the following journals: *Australasian Journal of Combinatorics*, *Bulletin of Mathematical Biology*, *Chaos*, *Communications of the ACM*, *Connections*, *Discrete and Continuous Dynamical Systems*, *European Journal of Applied Mathematics*, *The IMA Journal of Applied Mathematics*, *Information Sciences*, *International Journal of Bifurcation and Chaos*, *Journal of Complex Networks*, *Journal of Mathematical Physics*, *Journal of Nonlinear Science*, *Journal of Physics A: Mathematical and General*, *Journal of Physics B: Atomic Molecular and Optical Physics*, *Journal of Quantitative Analysis in Sports*, *Journal of Statistical Physics*, *Journal of Theoretical Biology*, *Mathematics and Computers in Simulation*, *Mathematical Biosciences and Engineering*, *Methodology and Computing in Applied Probability*, *Nature Human Behaviour*, *Nature Physics*, *Network Science*, *Physica A*, *Physica D*, *Physical Review A*, *Physical Review E*, *Physical Review Letters*, *Physical Review X*, *Physics Letters A*, *Physics Reports*, *PLoS One*, *Proceedings of the National Academy of Sciences of the United States of America*, *Science*, *Science Advances*, *SIAM Journal on Applied Dynamical Systems*, *SIAM Journal on Applied Mathematics*, *SIAM Journal on Matrix Analysis and Applications*, *SIAM Review*, *Social Networks*, *Symmetry Integrability and Geometry: Methods and Applications*
  - I have also provided quick impressions for other journals, such as *European Journal of Applied Mathematics*, *Journal of Nonlinear Science*, *Physical Review X*, and *Proceedings of the National Academy of Sciences of the United States of America*
  - Refereed books, book proposals, and book series proposals for the following publishers: Cambridge University Press, Imperial College Press, Oxford University Press, Princeton University Press, Springer-Verlag
  - Refereed papers for the following conferences: The 6th International AAAI Conference on Weblogs and Social Media (ICWSM-12) and the 2017 ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems (ACM SIGMETRICS '17)
  - Refereed grant proposals for the National Science Foundation (USA), National Institutes of Health [NIH] (USA), Army Research Office [ARO] (USA), the Royal Society of London (UK), the Knut and Alice Wallenberg Foundation via the Royal Swedish Academy of Sciences, the Engineering and Physical Sciences Research Council (UK), Leverhulme Trust (UK), and the Royal Society (UK)
  - Refereed a workshop proposal for the International Centre for Mathematical Sciences [ICMS] (Edinburgh, UK)
  - Refereed a long-term program proposal for the Isaac Newton Institute (INI) for Mathematical Sciences (Cambridge, UK)
  - Evaluated candidates for prizes for the London Mathematical Society [Anne Bennett Prize] (UK), University of Cambridge [Adams Prize] (UK), and The Royal Swedish Academy of Sciences [Göran Gustafsson Prize in Mathematics] (Sweden)
  - Internal and External Evaluations for hiring, promotion (to Distinguished Professor, Professor, or Associate Professor), tenure cases, and mid-term reviews for several universities in various different departments (including mathematics, applied mathematics, physics, computer science, information sciences, computational medicine and bioinformatics, mechanical engineering, communication, and business)
- Contributing Editor, Complexity Digest [4/01–12/03]
- Panel Moderation and Membership at Conferences and Other Venues
  - "By the Numbers: Mathematics in Science Fiction", 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA [8/13/25–8/17/25]
  - "The Future of Education Technology", 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA [8/13/25–8/17/25]
  - "Dueling Artists and Scientists", 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA [8/13/25–8/17/25]
  - Moderator, "Apocalypse Now", 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA [8/13/25–8/17/25]
  - "The Fun British English", 83rd World Science Fiction Convention [WorldCon83], Seattle, WA, USA [8/13/25–8/17/25]
  - Moderator, "Is Science "A History of Corrected Mistakes"?", 82nd World Science Fiction Convention [WorldCon82], Glasgow, Scotland [8/08/24–8/12/24]
  - Moderator, "Pointless Technology", 82nd World Science Fiction Convention [WorldCon82], Glasgow, Scotland [8/08/24–8/12/24]
  - Moderator, "Scientific Discoveries", 79th World Science Fiction Convention [WorldCon 79], Washington, D.C., USA [12/15/21–12/19/21]
  - Moderator, "The State of Machine Learning", 79th World Science Fiction Convention [WorldCon 79], Washington, D.C., USA [12/15/21–12/19/21]
  - "Selections from the Ig Nobel Awards", Arisia 2021 (Sci-Fi & Fantasy Convention) [1/15/21–1/18/21]
  - "Pandemic Myths and Facts", 78th World Science Fiction Convention [WorldCon78], Wellington, New Zealand [7/29/20–8/02/20]
  - Moderator, "Epidemics and Plagues in the Real World and in Fiction", 78th World Science Fiction Convention [WorldCon78], Wellington, New Zealand [7/29/20–8/02/20]
  - "Role of Mathematical Models in Public Health", EpiMEC research group, Centro de Investigación en Matemática Pura y Aplicada, Universidad de Costa Rica [7/16/20]

- "Improbable Research and the Ig Nobel Prizes", 77th World Science Fiction Convention [WorldCon77], Dublin, Ireland [8/15/19–8/19/19]
- Scientific Communication Panel, Workshop on Granular and Particulate Networks [PARNET19], Max Planck Institute for the Physics of Complex Systems, Dresden, Germany [7/8/19–7/10/19]
- Forward Looking Panel Discussion, 2011 SIAM Conference on Applications of Dynamical Systems [5/25/11]
- Project NExT Session on Designing Courses in Mathematical Modeling, Mathematical Associated of America (MAA) MathFest [8/04]

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Current: Society for Industrial and Applied Mathematics (SIAM); SIAM Activity Group on Dynamical Systems; SIAM Activity Group on Equity, Diversity, and Inclusion; American Mathematical Society (AMS), London Mathematical Society (LMS); American Physical Society (APS); APS Division on Statistical & Nonlinear Physics (DSNP); APS Division of Soft Matter Physics (DSOFT); International Network for Social Network Analysis (INSNA); Network Science Society (NSS); Complex Systems Society (CSS); Tau Beta Pi (engineering honor society); National Association of Mathematicians; Association for Women in Mathematics
- Former: Council on Undergraduate Research [CUR] (12/18–6/19); Mathematical Association of America (about 1996–2012); Sigma Xi (a Scientific Research Honor Society; about 1997–2011); Institute of Electrical and Electronic Engineers (one year in college); SIAM Activity Group on Nonlinear Waves and Coherent Structures [about 2004–2021]

ADDITIONAL EDITORIAL, JOURNALISTIC, AND WRITING EXPERIENCE

- Quora Top Writer [2016, 2017, 2018]
- Author and Contributor, *Improbable Research* blog [3/15–present]
- Co-Editor, *The California Tech* (university newspaper), California Institute of Technology [3/95–3/96]
  - Much later (during my postdoctoral years at Caltech), I was an informal assistant advisor for the newspaper [6/05–6/07]
- Writer, *The California Tech*, California Institute of Technology [9/94–6/98]
- Co-Editor, *The Totem* (university literary magazine), California Institute of Technology [9/96–6/98]
- Producer of my blog *Quantum Chaotic Thoughts* (http://masonporter.blogspot.co.uk) [10/05–present]
- Member of blog Susan Bourbaki Anthony (http://susanbourbaki.com), covering data analysis of societal issues [1016–2019]