Last Updated: March 21, 2024

Curriculum Vitae

Nishant Malik

School of Mathematics and Statistics
Rochester Institute of Technology
84 Lomb Memorial Drive, Rochester, NY 14623

Gosnell Hall-3348
+1-585-475-5439
nxmsma@rit.edu
https://nishant-malik.github.io

Research Interests

1. Developing methods for *Data-Driven Analysis and Modeling* of *Complex Systems* primarily using the theoretical frameworks of *Network Science*, *Nonlinear Dynamics* and *Applied Statistics*.
2. Mathematical and Computational *Modeling* of systems involving the interplay of *Networks*, *Nonlinear and Stochastic Dynamics*.

Academic Appointments

Rochester Institute of Technology, Rochester, NY
Assistant Professor, School of Mathematics and Statistics — 08/2018 – present
Program Allied Faculty, Chester F. Carlson Center for Imaging Science — 08/2020 – present

Dartmouth College, Hanover, NH
Instructor in Applied and Computational Mathematics, Department of Mathematics — 07/2015 – 08/2018

University of North Carolina, Chapel Hill, NC
Postdoctoral Research Associate in Applied Mathematics, Department of Mathematics — 12/2011 – 07/2015

Potsdam Institute for Climate Impact Research, Potsdam, Germany
Doctoral Researcher, Research Domain IV (Transdisciplinary Concepts and Methods) — 10/2008 – 12/2011

Education

PhD., Nonlinear Dynamics; *Summa Cum Laude (Highest distinction)* — 03/2012
University of Potsdam, Potsdam, Germany

M.Tech., Computational Techniques; *First division with distinction* — 07/2008
University of Hyderabad, Hyderabad, India

M.Sc., Physics, — 07/2004
University of Delhi, Delhi, India

B.Sc., Mathematics, Physics and Chemistry, — 07/2001
University of Delhi, Delhi, India

Awards/Honors

Carl Ramsauer Prize 2012: Awarded by the Berlin Physical Society (Physikalischen Gesellschaft zu Berlin) for an outstanding PhD thesis in the natural sciences.

Publications

PUBLICATION CLASSIFICATION KEY

General Areas: ■ Data Analysis | ▲ Mathematical and Computational Modeling

Methods: Dynamical Systems | Networks | ✿ Stochastic Processes | Applied Statistics/Machine Learning | Topology/Geometry

Application Areas: Earth | Social | Life

Articles in Review or Revision

(1) Giammarese, A.[†], Rana, K.[†], Bollt, E., **Malik, N** (2024): Tree-based Learning for High-Fidelity Prediction of Chaos. *arxiv: 2403.13836 (Under Revision)*. [■ ▲]

Articles Published in Refereed Journals

(2) Bhuyan, K.[†][⋆], Rana, K.[†][⋆], Ferrer, J., Cotton, F., Ozturk, U., Catani, F., **Malik, N** (2024): Landslide Topology Uncovers Failure Mechanisms. *To appear in Nature Communications.* [■ ▲]

(3) Giammarese, A.[‡], Brown, J.[‡], **Malik, N** (2024): Reconfiguration of Amazon's Connectivity in the Climate System. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 34, 013134. [■]

(4) James, A.[†], Emile-Geay, J., **Malik, N.**, Khider, D. (2024): Detecting paleoclimate transitions with Laplacian Eigenmaps for Recurrence Matrices (LERM). *Paleoceanography and Paleoclimatology*, 39, e2023PA004700. [■]

(5) Jacobs, I.[†], Ming L. C., Mong J., Emmanoil M., **Malik, N.**, (2023): In silico Antibody-Peptide Epitope prediction for Personalized cancer therapy *Frontiers in Applied Mathematics and Statistics*, 9, 2297-4687. [■ ▲]

(6) John, N.[†], **Malik, N.**, (2023): Automated discovery of analytical models for epidemic dynamics on coevolving networks. *Journal of Computational Science*, 67, 101968. [▲ ■]

(7) McDanold., J. S.[†], **Malik, N.**, (2023): Spatially Extended Radiant Heat Fire Model. *Physical Review E*, 107, 034133. [▲ ■ ✿]

(8) Rana, K.[†], **Malik, N.**, Ozturk, O. (2022): Landsifier v1.0: a Python Library to Estimate Likely Triggers of Mapped Landslides. *Natural Hazards and Earth System Sciences*, 2022, 1–26. [■ ▲]

(9) Rana, K.[†], Ozturk, U., **Malik, N.** (2021): Landslide Geometry Reveals its Trigger. *Geophysical Research Letters*, 48, e2020GL090848. Supporting Information (10 Pages) [■ ▲]

(10) **Malik, N.**, Spencer, D.[‡], Quang, Neo B. (2021): Power in the US Political Economy: A Network Analysis. *Journal of the Association for Information Science and Technology (JASIST)* , 1-13. Supporting Information (11 Pages) [■]

(11) **Malik, N.**, Ozturk, U. (2020): Rare Events in Complex Systems: Understanding and Prediction. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 30, 090401. [■ ▲]

[‡] Undergraduate or [†] graduate student. [⋆] Equal contribution.

(12) **Malik, N**. (2020): Uncovering Transitions in Paleoclimate Time Series and the Climate Driven Demise of an Ancient Civilization. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 30, 083108. [■]

(13) Barnett, I[⋆]., **Malik, N**[⋆]., Mucha, P., Onnela, J.P. (2019): EndNote: Feature-based classification of networks. *Network Science*, 7(3), 438-444. [■] Supporting Information (14 Pages)

(14) Lee, H.-W.[†], **Malik, N.**, Shi F., Mucha P. (2019): Social Clustering in Epidemic Spread on Coevolving Networks. *Physical Review E*, 99, 062301. [▲]

(15) Ozturk, U.[†], **Malik, N**., Cheung, K., Marwan, N., Kurths, J. (2019): A network-based comparative study of tropical and frontal storm rainfall over Japan. *Climate Dynamics* 53 (1-2), 521-532. [■]

(16) Lee, H.-W.[†], **Malik, N.**, Mucha P. (2018): Evolutionary prisoner's dilemma games coevolving on adaptive networks. *Journal of Complex Networks*, 6(1), 1-23. [▲]

(17) Masoliver Vila, M.[†], **Malik, N.**, Schöll, E., Zakharova, A. (2017): Coherence resonance in a network of FitzHugh-Nagumo systems: interplay of noise, time-delay and topology. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 27, 101102. [▲]

(18) McGranaghan, R. M., Mannucci A., Verkhoglyadova O., **Malik, N.** (2017): Finding multi-scale correlations in our geospace observational system: Network analysis of total electron content. *Journal of Geophysical Research: Space Physics*, 122. [■]

(19) **Malik, N**., Shi F., Lee H.-W.[†], Mucha, P. (2016): Transitivity reinforcement in the coevolving voter model. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 26, 123112. [▲]

(20) **Malik, N**., Bookhagen, B., Mucha, P. (2016): Spatiotemporal patterns and trends of Indian monsoonal rainfall extremes *Geophysical Research Letters* 43, 4, 1710 –1717. Supporting Information (16 Pages)

(21) **Malik, N**., Marwan, N., Zou, Y., Mucha, P., Kurths, J. (2014): Fluctuation of similarity (FLUS) to detect transitions between distinct dynamical regimes in short time series. *Physical Review E*, 89, 062908. [■]

(22) **Malik, N**., Mucha, P. (2013): Role of social environment and social clustering in spread of opinions in co-evolving networks. *Chaos: An Interdisciplinary Journal of Nonlinear Science* , 23, 043123. [▲]

(23) **Malik, N**., Zou, Y., Marwan, N., Kurths, J. (2012): Dynamical regimes and transitions in Plio-Pleistocene Asian monsoon. *Europhysics Letters*, 97,40009. [■]

(24) **Malik, N**., Bookhagen, B., Marwan, N., Kurths, J. (2012): Analysis of spatial and temporal extreme monsoonal rainfall over South Asia using complex networks. *Climate dynamics*, 39, 3-4, 971-987. [■]

(25) **Malik, N**., Marwan, N., Kurths, J. (2010): Spatial structures and directionalities in Monsoonal precipitation over South Asia. *Nonlinear Processes in Geophysics*, 17(5), 371–381. [■]

(26) **Malik, N**., B. Ashok, Balakrishnan, J. (2010): Noise-induced synchronization in bidirectionally coupled Type-I neurons. *European Physical Journal B*, 74, 177. [▲]

(27) **Malik, N**., B. Ashok, Balakrishnan, J. (2010): Complete synchronization in coupled Type-I neurons. *Pramana : Journal of Physics*, 74(2),189–205. [▲]

[‡] Undergraduate or [†] graduate student. [⋆] Equal contribution.

Other Publications: Conference/Expository Articles/Commentary

(28) McGranaghan, R. M., Mannucci A., Verkhoglyadova O., **Malik, N.** (2017): Gaining the most utility from our geospace observational system: Network analysis of total electron content as a means to understand space weather to the point of prediction. *2017 XXXIInd URSI GASS* [■]

(29) **Malik, N**., Shi, F. (2017): Adaptive Networks in Action: Opinion Formation, Epidemics and the Evolution of Cooperation. *SIAM Dynamical Systems Web*. [▲]

(30) **Malik, N**., Balakrishnan, J., B.Ashok (2008): Noise induced synchronization in coupled theta neuron. *Proceedings of the National Conference on Nonlinear Systems and Dynamics*, Physical Research Laboratory , Ahmadabad, India from Jan 03-05 ,2008) [▲]

Thesis

(31) **Malik, N** (2012): Extremes in events and dynamics : a nonlinear data analysis perspective on the past and present dynamics of the Indian summer monsoon. *PhD Thesis: Institute of Physics, University of Potsdam, Potsdam, Germany*.URN:nbn:de:kobv:517-opus-580169 [■]

(32) **Malik, N** (2008): Studies in synchronization phenomena in Physical and Biological systems. *M.Tech (Computational Techniques) Thesis: School of Physics, University of Hyderabad, Hyderabad, India* [▲]

Grants

- *Greater Austin Crime Commission / Kringen Analytics, LLC* (4/2022-8/2022): Machine Learning to Assess Staffing Ratios in Police Force. Award Amount: $25,000. [**Role: PI**].
- *NSF REU Site* (2023-2026): Extremal Graph Theory and Dynamical Systems. Award Number: 2243938; Award Amount: $323,992. [**Role: Key PersonaI**].
- *NSF REU Site* (2020-2023): Extremal Graph Theory and Dynamical Systems. Award Number: 1950189; Award Amount: $323,995. [**Role: Senior PersonaI**].
- *RIT College of Science DRIG Grant* (2019-2020): Data-driven modeling of complex systems. Award Amount: $14,000. [**Role: Sole PI**].
- *RIT Grant Writers' Boot Camp* (2019-2020): Integrating dynamical systems and machine learning to study paleoclimate data. Award Amount: $5,000. [**Role: Sole PI**].
- *RIT Faculty Education and Development (FEAD) Grant* (2021-2023): Coevolving Network Systems and the Opioid Crisis. Award Amount: $6,000. [**Role: Sole PI**].

Selected Presentations

Invited Talks (I.#) and Contributory Talks (C.#)

(I.40) *UPSTAT 2023 Conference*, 1-hr long tutorial, Rochester, NY — April 21, 2023

(I.39) *Boase Seminar Series in Hydrology and Water Resources Engineering, Department of Civil, Environmental and Architectural Engineering, University of Colorado*, Online (Boulder, CO) — February 22, 2023

(I.38) *Frontiers in Geoscience Lecture Series, Earth, and Environmental Sciences Division, Los Alamos National Lab*, Los Alamos, NM — November 22, 2022

(I.37) *Seminar of SFB 910, Institute of Theoretical Physics, TU Berlin,* Berlin, Germany — August 17, 2022

(I.36) *UP-STAT 2022: 10th Joint Conference of the Upstate Chapters of the American Statistical Association*, 2-hrs long tutorial Buffalo, NY — May 02, 2022

(I.35) *RIT Mathematical Modeling PhD Seminar*, Online (Rochester, NY) — Feburary 22, 2022

(I.34) *NC State Numerical Analysis Seminar*, Online (Raleigh, NC) — November 09, 2021

(I.33) *SIAM Conference on Discrete Mathematics, Mini-symposium on Dynamical Systems on Networks: Graph Theory and Machine Learning*, Online — July 21, 2021

(I.32) *SIAM Conference on Applications of Dynamical Systems, Mini symposium on Dynamical Systems on Networks: Stability and Applications*, Online — May 27, 2021

(I.31) *Clarkson Center for Complex Systems Science (C3S2) Seminar, Clarkson University*, Online (Potsdam, NY) — November 03, 2020

(I.30) *University of Western Australia: Complex Systems Seminars*, Online (Perth, Australia) — October 08, 2020

(I.29) *RIT's College and Careers Event for High School Students*, Two Online Sessions (Rochester, NY) — August 03-04, 2020

(I.28) *NERCCS 2020: Third Northeast Regional Conference on Complex Systems*, Online (Buffalo, NY) — April 03, 2020

(I.27) *Discrete and Computational Mathematics Seminar at RIT (DisCoMathS)*, Online (Rochester Institute of Technology, Rochester, NY) — March 25, 2020

(C.9) *Dynamics Days 2020*, Hartford, CT — January 04, 2020

(I.26) *School of Mathematical Sciences Colloquium*, Rochester Institute of Technology, Rochester, NY — November 25, 2019

(I.25) *Chapman Chair Lecture Series*, University of Alaska Fairbanks, AK — May 28, 2019

(C.8) *SIAM Conference on Applications of Dynamical systems*, Snowbird, UT — May 22, 2019

(I.24) *Applied Math Seminar*, University at Buffalo, NY — April 16, 2019

(I.23) *Center for Human-aware AI (CHAI) Seminar Series*, Rochester Institute of Technology, Rochester, NY — February 04, 2019

(I.22) *Center for Imaging Science Colloquium*, Rochester Institute of Technology, Rochester, NY — October 03, 2018

(I.21) *Department of Mathematics Seminar*, Bucknell University, Lewisburg, PA — February 09, 2018

(I.20) *Department of Mathematics Seminar*, University of Massachusetts, Dartmouth, MA — January 31, 2018

(I.19) *School of Mathematical Sciences Seminar*, Rochester Institute of Technology, Rochester, NY — January 29, 2018

(I.18) *Department of Mathematics Seminar*, Lafayette College, Easton, PA — January 24, 2018

(I.17) *Joint Mathematics Meetings:* AMS Special Session on Network Science, San Diego, CA — January 12, 2018

(I.16) *Department of Mathematics Seminar*, Tufts University, Medford, MA — December 20, 2017

(I.15) *Department of Mathematics and Statistics Seminar*, Haverford College, Haverford, PA — December 06, 2017

(I.14) *McGill Centre for Integrative Neuroscience (MCIN)*, Montreal Neurological Institute, McGill University, Montreal, Canada — November 23, 2017

(I.13) *Mathematics Colloquium*, University of Vermont, Burlington, VT — November 3, 2017

(I.12) *Fall 2017 David A. Walsh '67 Arts and Sciences Seminar Series*, Clarkson University, Potsdam, NY — October 20, 2017

(I.11) *Research Domain IV Seminar*, Potsdam Institute for Climate Impact Research , Potsdam, Germany — October 11, 2017

(I.10) *Department of Mathematics Seminar*, Amherst College, Amherst, MA — October 4, 2017

(I.9) *Department of Mathematics Seminar*, University of Auckland, Auckland, New Zealand — July 28, 2017

(C.7) *SIAM Workshop on Network Science*, Pittsburgh, PA — July 13, 2017

(C.6) *SIAM Conference on Applications of Dynamical Systems*, Snowbird, UT — May 21, 2017

(I.8) *Applied & Computational Mathematics Seminar*, Dartmouth College, Hanover, NH — November 15, 2016

(C.5) *SIAM Conference on Applications of Dynamical Systems*, Snowbird, UT — May 20, 2015

(I.7) *JP Onnela Lab Seminar, Department of Biostatistics*, Harvard T.H. Chan School of Public Health, Harvard University — December 5, 2014

(I.6) *Duke Network Analysis Center (DNAC) Seminar*, Duke University, Durham, NC — October 20, 2014

(I.5) *NetSci: International School and Conference on Network Science*, Satellite Symposium on Information, Self-Organizing Dynamics and Synchronization on Complex Networks Berkeley, CA — June 3, 2014

(C.4) *XXXIII Dynamics Days* , Georgia Tech, Atlanta, GA — January 5, 2014

(I.4) *8th Conference on Nonlinear Systems and Dynamics*, Indore, India — December 13, 2013

(I.3) *Applied Mathematics Seminar*, University of North Carolina-Chapel Hill, NC — November 22, 2013

(C.3) *SIAM Workshop on Network Science*, San Diego, CA — July 7, 2013

(C.2) *SIAM Conference on Applications of Dynamical Systems*, Snowbird, UT — May 21, 2013

(I.2) *Carl-Ramsauer Preis 2012 Presentation*, University of Potsdam, Potsdam, Germany — November 14, 2012

(I.1) *Nonlinear and Biomedical Physics Group Seminar*,
Department of Physics, Lancaster University, Lancaster, UK — August 22, 2011

(C.1) *European Geoscience Union General Assembly*, Vienna, Austria — April 4, 2011

Teaching & Mentoring Experience

COURSE CLASSIFICATION KEY

✱ New course I designed/introduced.

● Courses I have taught using **Active Learning (Flipped Classroom)** methods.

■ Courses I have taught using components of **Project Based Learning.**

Graduate Courses

Rochester Institute of Technology

- *Spring 2024* MATH 709: Complex Networks ✱ ■
- *Spring 2023* MATH 689 (Special Topics): Mathematical Data Science ✱ ■
- *Spring 2022* MATH 789 (Special Topics): Complex Networks ✱ ■
- *Spring 2021* MATH 731: Advanced Dynamical Systems ■
- *Spring 2020* MATH 789 (Special Topics): Complex Networks ✱ ■
- *Fall 2020* MATH 631: Dynamical Systems ■
- *Fall 2019* MATH 631: Dynamical Systems ■

Dartmouth College

- *Spring 2018* MATH 136: Applied Mathematics II ■

Humboldt University, Berlin, Germany

- *Winter 2010-2011* Nonlinear modeling and data analysis *(Conducted 90 minute hands-on sessions in a computer lab and tutorials once a week, and assisted main lectures)*

Undergraduate Courses

Rochester Institute of Technology

- *Fall 2023* MATH 181: Calculus I (*entry level course in Calculus*) ●
- *Fall 2022* MATH 182: Project-Based Calculus II (*entry level course in Calculus*) ●
- *Fall 2021* MATH 182: Project-Based Calculus II (*entry level course in Calculus*) ●
- *Spring 2021* MATH 251: Probability and Statistics I (*entry level course in Statistics*) ●
- *Spring 2019* MATH 182A: Calculus II (*entry level course in Calculus*) ●

Dartmouth College

- *Spring 2018* MATH 46: Intro. to Applied Mathematics (*upper level course for math majors*) ■
- *Winter 2018* MATH 3: Calculus (*entry level course in Calculus*) ●
- *Spring 2017* MATH 46: Intro. to Applied Mathematics (*upper level course for math majors*) ■
- *Winter 2017* MATH 3: Calculus (*entry level course in Calculus*) ●

- *Winter 2017* MATH 17: Complex Networks (Intro. to Math beyond Calculus) (*entry to upper level special topics course*) ✱ ■
- *Winter 2016* MATH 3: Calculus (*entry level course in Calculus*) ●
- *Spring 2016* MATH 46: Intro. to Applied Mathematics (*upper level course for math majors*) ■
- *Fall 2015* MATH 50: Intro. to Linear Models (*upper level course for data science majors*) ✱ ■

University of North Carolina at Chapel Hill

- *Summer 2014* MATH 547: Linear Algebra with Applications (*entry level course in linear algebra*)
- *Fall 2012* MATH 233: Multi-variable Calculus (*advanced course in calculus*)

Supervision of Graduate Research

Rochester Institute of Technology

Current Students

- **Jenna S. McDanold**[♣](2019–): Ph.D–Mathematical Modeling. *Data-Driven Modeling of Forest Fires. Coauthored Publications*: 1 published, 1 in preparation.
- **Adam M. Giammarese**[♣](2021–): Ph.D–Mathematical Modeling. *Nonlinear time series analysis. Coauthored Publications*: 1 published, 1 in review, 1 in preparation.
- **Jason Laurez** (2021–): Ph.D–Mathematical Modeling. *Recurrence Plot Analysis and Topological Data Analysis. Coauthored Publications*: 1 in preparation .
- **Wynette Vickers** (2023–): MS–Data Science. *Face Recognition.*
- **Swapnil Sagar** (2023–): MS–Data Science. *Voter model on static networks.*

Past Students

- **Kamal Rana**[♣](2019–2023): Ph.D–Imaging Science. *The Geometry and Topology of Landslides. Coauthored Publications*: 3 published, 2 in preparation.
- **Ivan Jacobs**[♣](2022) MS–Data Science. *Applying complex networks and deep learning on molecular structures to predict immune system reaction on cancer cells. Coauthored Publications*: 1 published.
- **Nicholas John**[♣](2021–2022) MS–Applied and Computational Mathematics *Data driven modeling of coevolving network systems. Coauthored Publications*: 1 published.
- **Asher Christner** (2023): MS–Applied and Computational Mathematics. *Landslide modeling. Coauthored Publications*: 1 preparation.
- **Manan Kapoor** (2022): MS–Applied and Computational Mathematics.*Landslide modeling. Coauthored Publications*: 1 preparation.
- **Guillermo Benjamín Grande** (summer 2022): MS–Applied and Computational Mathematics. *Disaster aid management analysis.*
- **Mahlika George**(2019–2020): MS–Data Science. *Analysis of clearance crime rates across the country.*
- **Himaja Mandla** (2019): MS–Imaging Science. *Climate networks and monsoon variability.*
- **Jen-Li Chen** (2019): MS–Applied Statistics (Capstone Project). *Extreme value distribution of global temperature.*

Cosupervision of students from Other Universities

- **Maria Masoliver Vila**[♣] (2016): M.Sc, Technische Universität Berlin and Freie Universität Berlin. *Role of network topology in noisy environments. Coauthored Publications*: 1 published
- **H.-W. Lee**[♣] (2016): Ph.D., University of North Carolina at Chapel Hill, NC. *Adaptive networks. Coauthored Publications*: 3 published.

[♣] Has published at least one paper as coauthor.

- **Ugur Ozturk**[♣] (2018): Ph.D., University of Potsdam, Potsdam, Germany, *Climate Networks. Coauthored Publications*: 1 published.

Supervision of Undergraduate Research

Rochester Institute of Technology

Caitlin Quinn (2023): *United States Police Department Network. MATH-495 (Undergraduate Research in Mathematical Sciences).* **Nidhi Baindur** (2022 and 2023): *Climate forecast through network analysis and machine learning. RIT's Emerson Summer Undergraduate Research Fellowship.* **Braden Yates** (2023): *Synchronization in adaptive network of theta neuron. Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; at the time student at Carnegie Mellon University.* **Isamar Solorio** (2023): *Synchronization in adaptive network of theta neuron. Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; at the time student at Washington State University.* •**Celia Rickson** (2023): *Network Analysis of San Francisco's infrastuture. RIT's Emerson Summer Undergraduate Research Fellowship.* •**Daniel Oleynikov** (2023): *Network's based validation of E3SM. RIT's Emerson Summer Undergraduate Research Fellowship.* •**Yutong Wu** (2022): *Analysis of Turnout Time Metric of the Los Angeles Fire Department (LAFD). In Collaboration with Justice & Security Strategies, Inc.* •**Luke Nearhood** (2021-2022): *Modeling opioid dynamics on networks. BS Physics Capstone.* •**Eunice Ledres** (2022): *A network analysis of the Arctic circulations. Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; at the time student at SUNY New Platz, NY.* •**Nicolas Folk** (2022): Paleoclimate time series analysis *Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; at the time student at St. John's University, NY.* •**Nicholas John**[♣] (2020): *Modeling Spread of Invasive Species Using Network Analysis. RIT's Emerson Summer Undergraduate Research Fellowship.* •**Gregory Nero** (2020): Modeling COVID dynamics on networks. *No specific program* •**Jakob Brown**[♣] (2020): *Stability of Climate Networks. Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; at the time student at Ithaca College, NY.* •**Adam M. Giammarese**[♣] (2020): Stability of Climate Networks. *Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; RIT student.* •**Gabriella Wolf** (2019): *Coevolving Network Model for the Diffusion of Opioid Dependence in a Population. Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; RIT student.* •**Trevor Lax** (2019): *Coevolving Network Model for the Diffusion of Opioid Dependence in a Population. Participant in NSF REU—Extremal Graph Theory and Dynamical Systems; at the time student at University of Evansville, IN.* •**Kesa Abbas** (2019): Networks-based analysis of climate change over the Arctic. *Presented poster at RIT's Undergraduate Research Symposium.*

Dartmouth College

•**Amanda Fritz** (2015-16)– Senior honors thesis: Opinion formation on clustered networks. *Won best senior thesis presentation prize.* •**Adan Rivas** (2015-16) – Two-term reading course: Analysis of climate data sets using networks. •**Ke Li, Min Hyung Kang, and Qi Wei** (2016) – Group project: Rumor Spreading in Social Networks. *Won second prize in Dartmouth undergrad poster session.* •**Jon Chu, Annika Roise, and Ethan Isaacson** (2017) – Group project: Solid-Fuel Rocket Dynamics. *Won third prize in Dartmouth undergrad poster session.* •**Brian Chekal, and Jason Cheal** (2018) – Group project: Spread of the Renaissance through Publication Networks *Won second prize in Dartmouth undergrad poster session.*

[♣] **Has published at least one paper as coauthor.**

University of North Carolina at Chapel Hill

•**David Spencer**[♣] (2014) – Network data analysis (Coauthored publication: 1) •**Phillip Maraveyias** (2012) – Neuronal oscillators •**Eli Bingham** (2012)– Climate networks.

Humboldt University, Berlin, Germany

•**Nils Haug** (2010) Bachelor thesis– Climate networks.

Other Academic Activities

Journal Refereeing

Chaos: An Interdisciplinary Journal of Nonlinear Science; Climate Dynamics; Entropy; Atmospheric and Solar-Terrestrial Physics; Nonlinear Processes in Geophysics; Computers and Geosciences; Nature; Dynamics of Atmospheres and Oceans, Physica A; Applied Network Science; Cognitive Neurodynamics.

Organizing

Editorial Board Member, *Currently*: Journal of Computational Science (Elsevier), and Chaos, Solitons & Fractals (Elsevier), *Past*: Complexity (Hindawi).

Minisymposium at the SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2019 [Part I] [Part II]
Title: Rare Events in Complex Systems. Co-organized with Ugur Ozturk, Potsdam Institute for Climate Impact Research and University of Potsdam, Germany.

Minisymposium at the SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2017 [Part I] [Part II]
Title: Network Topology and Dynamics in Complex Systems: Modeling and Data Analysis. Co-organized with Anna Zakharova, Technische Universität, Berlin.

Minisymposium at the SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2015 [Part I] [Part II]
Title: Complex Network Theory Based Approaches in the Analyses of Complex Systems and Data.

Member of the program committee of Third Northeast Regional Conference on Complex Systems (April 1-3, 2020), Buffalo, NY.

Member of the organizing committee of SIAM Workshop on Network Science (June 8, 2020). Toronto, Ontario, Canada.

Inclusive Excellence Liaison, College of Science, Rochester Institute of Technology

[♣] **Has published at least one paper as coauthor.**