Bhargav Ram Karamched

Contact Information	Love Building Department of Mathematics Florida State University 1017 Academic Way Room 317 Tallahassee, FL 32306-4510 USA	<i>E-mail:</i> bkaramc <i>Homepage:</i> math	hed <i>(at)</i> fsu.edu a.fsu.edu/~karamche	
Research Interests	Biomathematics, Stochastic Processes, Theoretical Biophysics, Complex Systems, Theoretical Bio- engineering, Celluluar Neuroscience			
Academic Appointments	Florida State University, Tallahassee	e, FL, USA		
	Assistant Professor of Biomathematic Graduate Faculty Member of Program Graduate Faculty Member of Program	s n in Molecular Biophysics n in Neuroscience	August 2020 - present August 2020 - present March 2022 - present	
	The University of Houston, Houston, TX, USA			
	Lecturer		January 2018 - July 2020	
Education	The University of Houston, Houston, TX, USA			
	Postdoctoral Fellow		June 2017 - July 2020	
	• Advisor: Krešimir Josić			
	The University of Utah, Salt Lake City, UT, USA			
	Ph. D., Mathematics, May 2017			
	Thesis Title: "Mathematical Models of Motor-Based Intracellular Transport"			
	 Advisor: Paul Bressloff GPA: 4.0 			
	The University of Oklahoma, Norman, Oklahoma, USA			
	B.S., Mathematics, May 2012			
	• <i>GPA:</i> 4.0			
	The University of Oklahoma, Norman, Oklahoma, USA			
	B.S., Biochemistry, May 2012<i>GPA:</i> 4.0			
Publications	 C. Ryzowicz, R. Bertram, and B. R. Karamched. Oscillations in Delayed Positive Feedback Systems. <i>Physical Chemistry Chemical Physics.</i> 26, 24861-24869 (2024). 			
	 S. Hartman, S. D. Ryan, and B. R. Karamched. Walk this Way: Modeling Foraging Ant Dynamics in Multiple Food Source Environments. <i>Journal of Mathematical Biology</i> 89, 41 (2024). 			
	• Featured in FSU Press Releas	se		

- S. Linn, S. D. Lawley, B. R. Karamched, Z. P. Kilpatrick, and K. Josić. Fast decision reflect biases; slow decision do not. *Physical Review E*. 110, 024305 (2024).
 - Featured in New Scientist Magazine
 - Featured in The Standard Uganda Magazine
 - Featured in FSU, CU-Boulder, and Utah Press Releases
- M. Stickler, W. Ott, Z. P. Kilpatrick, K. Josič, and B. R. Karamched. Impact of Correlated Information on Pioneering Decisions. *Physical Review Research*. 5, 033020 (2023).
- B. R. Karamched and C. E. Miles. Stochastic Switching of Delayed Feedback Suppresses Oscillations in Genetic Regulatory Systems. *Journal of Royal Society Interface*. 20: 20230059 (2023).
- F. Bai, R. Bertram, B. R. Karamched. A Mathematical Study of the Efficacy of Possible Negative Feedback Pathways Involved in Neuronal Polarization. *Journal of Theoretical Biology*. 111561 (2023).
- R. Godin, B. R. Karamched, S. D. Ryan. The Space Between Us: Modeling Spatial Heterogeneity in Synthetic Microbial Consortia Dynamics. *Biophysical Reports*. 100085 (2022).
 - Featured in FSU and Cleveland St. Press Releases
- B. R. Karamched, G. Hripcsak, R. L. Leibel, D. J. Albers, and W. Ott. Delay-Induced Uncertainty in the Glucose-Insulin System: Pathogenicity for Obesity and Type-2 Diabetes Mellitus. *Frontiers in Physiology*. 13:936101 (2022).
- F. Bai, R. Bertram, B. R. Karamched. A Closed-Loop Multi-Scale Model for Intrinsic Frequency-Dependent Regulation of Axonal Growth. *Mathematical Biosciences*. 344: 108768 (2022).
- J. J. Winkle, B. R. Karamched, M. R. Bennett, W. Ott, and K. Josić. Emergent Spatiotemporal Population Dynamics with Cell-Length Control of Synthetic Microbial Consortia. *PLoS Comput Biol.* 17(9): e1009381 (2021).
- 12. I. Kemler, **B. R. Karamched**, C. Neuhauser, D. Dingli. Quantitative Imaging and Dynamics of Tumor Therapy with Viruses. *The FEBS Journal.* (2021)
- 11. B. R. Karamched, G. Hripcsak, D. J. Albers, and W. Ott. Delay-Induced Uncertainty in a Paradigmatic Glucose-Insulin Model. *Chaos.* **31** 023142 (2021).
- B. R. Karamched, M. Stickler, B. Lindner, Z. P. Kilpatrick, W. Ott, and K. Josič. Heterogeneity Improves Speed and Accuracy in Social Networks. *Physical Review Letters* 125, 218302 (2020)
 - Editors' Suggestion for Physical Review Letters
 - Featured in *Physics Magazine*
 - Featured in *Physics Today*
 - Featured in Florida St. University and University of Colorado-Boulder Press Releases
 - Featured in the Denver Local News
- B. R. Karamched, S. Stolarczyk, Z. P. Kilpatrick, and K. Josić. Optimal Evidence Accumulation on Social Networks. SIAM Journal on Applied Dynamical Systems 19(3) 1884-1919 (2020)
- R. N. Alnahhas, J. J. Winkle, A. J. Hirning, B. R. Karamched, W. Ott, K. Josić, and M. R. Bennett. Spatiotemporal Dynamics of Synthetic Microbial Consortia in Microfluidic Devices. ACS Synthetic Biology 8: 2051-2058 (2019)
- B. R. Karamched, W. Ott, I. Timofeyev, R. N. Alnahhas, M. R. Bennett, and K. Josić. Moran Model of Spatial Alignment in Microbial Colonies. *Physica D: Nonlinear Phenom*ena.(2019)

	 P. C. Bressloff and B. R. Karamched. Doubly Stochastic Poiss Control. SIAM Journal on Applied Mathematics 78(2), 719-741 	on Model of Flagellar Length (2018)
	5. P. C. Bressloff, B. R. Karamched , S. D. Lawley, and E. Levier Presence of Stochastically Gated Absorption. <i>Physical Review E</i>	n. Diffusive Transport in the 96 (2) (2017).
	4. B. R. Karamched and P. C. Bressloff. Effects of Cell Geom Delivery. <i>Journal of Physics A: Mathematical and Theoretical</i> 56	etry on Reversible Vesicular 0 055601 (2017).
	• Highlight in Biological Modeling of <i>Journal of Physics A: I</i> for 2017	Mathematical and Theoretical
	3. P. C. Bressloff and B. R. Karamched . Model of reversible vesice Journal of Physics A: Mathematical and Theoretical 49 345602 (alar transport with exclusion. (2016)
	 P. C. Bressloff and B. R. Karamched. A Frequency-Depended Axonal Length Sensing. Frontiers in Cellular Neuroscience 9:282 	ent Decoding Mechanism for 1. (2015).
	 B. R. Karamched and P. C. Bressloff. Delayed Feedback Mode Biophysical Journal 108 2408-2419 (2015). 	el of Axonal Length Sensing.
Grants	 Dean's Travel Award, 2025-2026 \$2000 CRC Florida State University Seed Grant - Delay-Induced Uncertainty in Physiological Systems 2023-2025, \$96000 AMS-Simons Travel Award, 2021-2023, \$5000 CRC Florida State University First-Year Assistant Professor Award, Summer 2021 \$20,000 	
Honors and Awards	University of Utah Department of Mathematics Outstanding Graduate Student,'15-'16 Phi Beta Kappa '12 University of Oklahoma Henderson Scholar of the Year, '10 - '11 University of Oklahoma Henderson Freshman Scholar of the Year, '08 - '09 Oklahoma Regents Scholarship, University of Oklahoma, '08 - '12 Union High School Valedictorian (Rank 1 of 898), Tulsa, OK, '08	
Teaching Experience	Department of Mathematics, Florida State University Assistant Professor of Mathematics Teaching: F - Fall S - Spring Su - Summer	August 2020 - present
	 Elementary Partial Differential Equations I - F21, Su22 Calculus with Analytic Geometry III - F20,23 S21,22 Methods of Applied Mathematics I - F22,23 Applied Linear Algebra I - F24, S24,25 Biomath Projects - S24 YSP Nonlinear Dynamics - Su24 Computational Biology - F24 	
	1. Biomathematics Journal Club - F23, 24, S22	

2. Biomathematics Seminar - F22, S25

Department of Mathematics, University of Houston

Postdoctoral Fellow

January 2018 - July 2020

Teaching:

- 1. Discrete Mathematics Spring 2019
- 2. Transitions to Advanced Mathematics Spring 2018, Spring 2020 (online)

Department of Mathematics, University of Utah

Teaching Assistant

August 2012 - May 2017

Duties at various times have included leading lab exercises and teaching.

Teaching: Engineering Calculus I - Fall 2016 Honors Engineering Calculus I - Fall 2015 Engineering Calculus II - Fall 2013, Spring 2015 Honors Engineering Calculus II - Spring 2017 Differential Equations and Linear Algebra - Fall 2014 Vector Calculus and Partial Differential Equations - Spring 2016
Labs: Engineering Calculus I - Fall 2012 Engineering Calculus II - Spring 2013 Vector Calculus and Partial Differential Equations - Spring 2014

MENTORING Department of Mathematics, Florida State University August 2020 - present

- Ph. D. Students
 - Ongoing
 - 1. Zainab Dere Project: Spatiotemporal Dynamics of Viral Infection in Biofilms (with Nick Cogan)
 - 2. Christopher Ryzowicz Project: Stochasticity and Delays in Positive Feedback Systems
 - 3. Noel Milam Project: Dynamics of Leukemia Inititation and Progression (with Nick Cogan)
 - Graduated
 - 1. Fan Bai Neuronal Development: From Polarization to Axon Growth 2023 Current Position: Principal Product Development Engineer - The Timken Company - Canton, OH
- Undergraduate Students
 - 1. Stuti Guha Project: How Inter-Species Competition Affects Foraging Patterns in Ants
 - 2. Sean Hartman Project: How Local Interactions Affect Global Structure in Foraging Ants (Graduated Spring 2023)

Department of Mathematics, University of Houston

June 2018 - July 2020

- Ph. D. Students
 - 1. Megan Stickler Project: Decision-Making Dynamics on Networks

- 2. Deepjyoti Ghosh Project: Reliability Failure in Glucose-Insulin Dynamics: Theory and Clinical Studies
- Undergraduate Students
 - 1. Tammy Lam Project: Reservoir Computing for Chaotic Glucose-Insulin Oscillations
- High School Students
 - 1. Aprameya Sudarshan Generalizing the Two Brothers Problem
- LEADERSHIP ROLES 1. Secretary/Treasurer for SIAM Southeastern Atlantic Section 2024 present

Organization

- Minisymposium Biological Oscillations in Celebration of Richard Bertram's 60th Birthday SIAM Conference on the Applications of Dynamical Systems, May 11-15, 2025 Sheratown Denver Downtown, Denver, CO, USA Co-organizer: Nicholas Cogan
 - Minisymposium Insights from Stochasticity in Intracellular Processes SIAM Conference on the Life Sciences, June 10-13, 2024
 Hilton Portland Downtown, Portland, OR, USA Co-organizer: Youngmin Park
 - 3. Minisymposium Dynamics of Decisions and Behavior in Social Systems SIAM Conference on Dynamical Systems, May 14-18, 2023 Doubletree by Hilton Hotel, Portland, OR, USA Co-organizers: Krešimir Josić, Zachary Kilpatrick
 - Minisymposium Understanding Spatiotemporal Dynamics and Complex Systems in Multi-Scale Biological Processes
 SIAM Conference on the Life Sciences, July 10-14, 2022
 David L. Lawrence Convention Center, Pittsburgh, PA, USA
 Co-organizer: Gaoyang (Bridget) Fan
 - Minisymposium Modeling and Data Science in Quantitative Biology: Predictions and Descriptions SIAM Southeastern Atlantic Section Conference, September 18 - 19, 2021 Auburn University, Auburn, AL, USA
 - Minisymposium Lattice Models and Agent-Based Models in Biology: Linking Individual Properties to Population Properties SMB Annual Meeting, June 13-17, 2021 (Virtual)
 - Minisymposium Mechanisms Underlying Dynamical Processes in Cellular and Systems Physiology SIAM Conference on Dynamical Systems, May 23-27, 2021 (Virtual) Co-organizer: Gabriela Jaramillo
 - 8. Minisymposium Biological Oscillations: From Genes to Populations SIAM TX-LA Sectional Meeting, October 17, 2020 (Virtual) Hosted by Texas A&M University, College Station, TX, USA Co-organizer: William Ott
 - Minisymposium Biological Signaling in Cellular Collectives SIAM Conference on the Applications of Dynamical Systems, May 23, 2019 Snowbird Ski and Summer Resort, Snowbird, UT, USA Co-organizer: William Ott

1). Minisymposium - Dynamical Models of Individual and Collective Decision-Making SIAM Conference on Life Sciences, August 8, 2018 Radisson BLU Minneapolis Downtown Hotel, Minneapolis, MN, USA Co-organizers: Krešimir Josić, Zachary Kilpatrick
1	 Calculus Carnival University of Utah, November 21, 2013 Salt Lake City, UT, USA Experimented with alternative forms of educational methods to teach key calculus concepts.
Talks	 Modeling Foraging Ant Dynamics in Multiple Food Source Environments University of Iowa Mathematical Biology Seminar, March 31, 2025 (Virtual) The University of Iowa, Iowa City, IA, USA
	2. Formulation, Approximation, Reduction: A Journey through Stochastic Methods in Theoretical Biology Florida State University Biomathematics Seminar, December 4, 2024 Florida State University, Tallahassee, FL, USA
	3. Oscillations in Delayed Positive Feedback Systems University of Houston Networks Seminar, Septebmer 20, 2024 University of Houston, Houston, TX, USA
	 Mechanisms Underlying Spatiotemporal Patterning in Microbial Consortia: A Theoretical Analysis Special UMBC Biomath Seminar, June 25, 2024 University of Maryland, Baltimore County, Catonsville, MD, USA
	5. Modeling Spatial Heterogeneity in Synthetic Microbial Consortia Dynamics SIAM Conference on Nonlinear Waves and Coherent Structures, June 24-27, 2024 Lord Baltimore Hotel, Baltimore, MD, USA
	5. Stochastic Switching of Delayed Feedback Suppresses Oscillations in Genetic Reg- ulatory Systems SIAM Conference on the Life Sciences, June 10-13, 2024 Hilton Portland Downtown, Portland, OR, USA
	7. Stochasticity in Biological Systems OU Mathematics Colloquium, April 25, 2024 University of Oklahoma, Norman, OK, USA
	3. What is Biophysics? Featured Alumni Student Physics Seminar, April 24, 2024 University of Oklahoma, Norman, OK, USA
	A Possible Mechanism for Neuronal Polarization RIT Applied Mathematics Seminar, April 4, 2024 Rochester Institute of Technology, Rochester, NY, USA
1). Formulation, Approximation, Reduction: A Journey Through Techniques used in Stochastic Analysis of Biological Systems FSU Biomathematics Seminar, November 8, 2023 Florida State University, Tallahassee, FL, USA
1	 Stochastic Switching of Delayed Feedback Suppresses Oscillations in Genetic Reg- ulatory Systems SIAM TX-LA Sectional Meeting, November 3-5, 2023 The University of Louisiana-Lafayette, Lafayette, LA, USA
1	2. Stochastic Switching of Delayed Feedback Suppresses Oscillations in Genetic Reg- ulatory Systems

University of Florida Biomathematics Seminar, October 12, 2023 The University of Florida, Gainesville, FL, USA

13. Stochastic Switching of Delayed Feedback Suppresses Oscillations in Genetic Regulatory Systems

University of Iowa Mathematical Biology Seminar, September 25, 2023 (Virtual) The University of Iowa, Iowa City, IA, USA

14. How do Heterogeneity and Correlated Information Affect Decision-Making in Social Networks?

Annual Meeting of the Society for Mathematical Biology, July 17-21,2023 The Ohio State University, Columbus, OH, USA

- 15. Mechanisms Underlying Spatiotemporal Patterning in Microbial Collectives: A Mathematical Perspective Virginia Commonwealth University Biomath Seminar, January 20, 2023 (Virtual) Virginia Commonwealth University, Richmond, VA, USA
- The Mathematics of Neurite Polarization University of Kentucky Applied Mathematics Colloquium, October 20, 2022 University of Kentucky, Lexingon, KY, USA
- 17. Linking Individual Properties to Population Structure in Biological Systems Duke University Mathematical Biology Colloquium, September 23, 2022 (Virtual) Duke University, Durham, NC, USA
- Cells, Networks, and Engineering Life: A Journey through Biomathematics FSU Biomathematics Seminar, August 31, 2022 Florida State University, Tallahassee, FL, USA
- Linking Cell Shape to Population Structure in Synthetic Bacterial Collectives: A Theoretical Perspective SIAM Conference on Life Sciences, July 10-14, 2022 David L. Lawrence Convention Center, Pittsburgh, PA, USA
- Optimal Decision-Making in Social Networks West Virginia University Mathematics Colloquium, April 22, 2022 West Virginia University, Morgantown, WV, USA
- 21. Molecular Motors and Axons: A Mathematical Perspective on the Role Motors Play in Vesicle Delivery in Axons and Length Sensing of Axons Florida State University Neuroscience Colloquium, March 2, 2022 Florida State University, Tallahassee, FL, USA
- 22. Mechanisms Underlying Spatiotemporal Patterning in Microbial Collectives: A Model's Perspective Georgia Tech Mathematical Biology Seminar, February 23, 2022 Georgia Institute of Technology, Atlanta, FL, USA
- 23. Lattice Models in Synthetic Biology and Cancer: How simple models and help us understand complex spatiotemporal systems Florida State University Biomathematics Seminar, October 27 2021 Florida State University, Tallahassee, FL, USA
- Delay-Induced Uncertainty in a Paradigmatic Glucose-Insulin Model SIAM Southeastern Atlantic Section Conference, September 18-19, 2021 Auburn University, Auburn, AL, USA
- 25. Spatial Model of Oncolytic Virotherapy: Targeting Drug-Resistant Mutants SMB Annual Meeting, June 13-17, 2021 (Virtual) University of California-Riverside, Riverside, CA, USA

- Delay-Induced Uncertainty in a Paradigmatic Glucose-Insulin Model SIAM Conference on Applications of Dynamical Systems, May 23-27, 2021 (Virtual) Portland, OR, USA
- 27. Optimal Decision-Making in Social Networks University of California-Riverside Applied Math and PDE Seminar, March 10, 2021 (Virtual) University of California-Riverside, Riverside, CA, USA
- 28. Optimal Decision-Making in Social Networks Florida State University Scientific Computing Colloquium, March 3, 2021 (Virtual) Florida State University, Tallahassee, FL, USA
- 29. Controlling Emergent Spatiotemporal Patterns in Synthetic Consortia: A Modeling Perspective Cleveland State University Mathematics Colloquium, February 26, 2021 (Virtual) Cleveland State University, Cleveland, OH, USA
- Optimal Decision-Making in Social Networks
 University of New Mexico Mathematics Colloquium, February 22, 2021 (Virtual)
 University of New Mexico, Albuquerque, NM, USA
- 31. Controlling Emergent Spatiotemporal Patterns in Synthetic Consortia: A Modeling Perspective

University of Pennsylvania Center for Mathematical Biology Seminar, February 16, 2021 (Virtual)

University of Pennsylvania, Philadelphia, PA, USA

32. Bacterial Cell-Shape Modulation and Induced Population Dynamics of Synthetic Microbial Consortia SIAM TX-LA Sectional Meeting, October 17, 2020 (Virtual)

Texas A&M University, College Station, TX, USA

33. Bacterial Cell-Shape Modulation and Induced Population Dynamics of Synthetic Microbial Consortia

MBI Workshop on Mathematical and Computational Methods in Biology, May 5-7,2020 (Virtual)

Mathematical Biosciences Institute, Columbus, OH, USA

- 34. Binary Decisions of Large Cliques of Evidence Accumulators APS March Meeting, March 2-6, 2020 (Virtual) Denver, CO, USA
- 35. From Individuals to Populations: How features and interactions of individuals shape population dynamics Mathematics Colloquium, February, 3 2020 University of Maine, Orono, ME, USA
- 36. From Individuals to Populations: How features and interactions of individuals shape population dynamics Mathematics Colloquium, January 24, 2020 Florida State University, Tallahassee, FL, USA
- 37. Explaining and Controlling Spatiotemporal Patterns of Synthetic Microbial Consortia in Microfluidic Devices: A Model's Perspective Structural Biology/Biochemistry Seminar, January 23, 2020 Florida State University, Tallahassee, FL, USA
- 38. From Individuals to Populations: How features and interactions of individuals shape population dynamics Mathematics Colloquium, December 13, 2019 Clarkson University, Potsdam, NY, USA

- Evidence Accumulation and Decision-Making on Social Networks Networks Seminar, September 27, 2019 University of Houston, Houston, TX, USA
- Evidence Accumulation and Decision-Making on Social Networks Data Science Seminar, September 13, 2019 University of Houston, Houston, TX, USA
- 41. Moran Model of Spatial Alignment in Microbial Colonies SIAM Conference on Applications of Dynamical Systems, May 19-24, 2019 Snowbird Summer and Ski Resort, Snowbird, UT, USA
- Moran Model of Spatial Alignment in Microbial Colonies SIAM TX-LA Sectional Meeting, October 5-7, 2018 Louisiana State University, Baton Rouge, LA, USA
- 43. Evidence Accumulation and Decision-Making on Networks SIAM Conference on the Life Sciences, August 6-9, 2018 Radisson BLU Minneapolis Downtown, Minneapolis, MN, USA
- 44. Boundary-Driven Emergent Spatiotemporal Order in Growing Microbial Colonies Conference on Mathematical Approaches to Cell-Cell Communication and Collective Behaviours, July 9-13, 2018 Banff International Research Station, Banff, Alberta, Canada
- 45. Evidence Accumulation and Decision-Making on Networks Mathematical Neuroscience Workshop, February 28 - March 1, 2018 University of Colorado-Boulder, Boulder, CO, USA
- 46. Frequency Dependent Gene Expression for Axonal Length Sensing Mathematical Neuroscience Workshop, September 8, 2017 University of Colorado-Boulder, Boulder, CO, USA
- 47. Doubly Stochastic Poisson Model of Flagellar Length Control Annual Meeting of the Society for Mathematical Biology, July 17-21, 2017 University of Utah, Salt Lake City, UT, USA
- Effects of Cell Geometry on Reversible Vesicular Delivery SIAM Conference on Applications of Dynamical Systems, May 21-25, 2017 Snowbird Ski and Summer Resort, Snowbird, UT, USA
- Mathematical Models of Motor-Based Intracellular Transport Networks Group Meeting, April 12, 2017 University of Houston, Houston, TX, USA
- The Princess Problem Undergraduate Mathematics Colloquium, March 29, 2017 University of Utah, Salt Lake City, UT, USA
- 51. Motor-Based Delivery of Vesicles to Localized Cellular Targets Tim Elston Lab Seminar, November 30, 2016 University of North Carolina, Chapel Hill, NC, USA
- 52. Modeling Hard-Core Repulsion in Transport Processes Applied Math Group, November 3, 2016 University of Utah, Salt Lake City, UT, USA

1. A Mechanism for Axonal Length Sensing

Florida State University First Year Assistant Professor (FYAP) Workshop, September 10, 2021 (Virtual)

- 2. Boundary-Driven Emergent Spatiotemporal Order in Growing Microbial Colonies University of Houston Postdoc Symposium, July 20-21, 2018 UH Hilton Hotel, Houston, TX, USA
 - Winner! Best Poster
- Boundary-Driven Emergent Spatiotemporal Order in Growing Microbial Colonies Conference on Quantitative Biology, June 26-29, 2018 BioScience Research Collaborative, Houston, TX, USA
- 4. Evidence Accumulation and Decision-Making on Networks COSYNE 2018, March 1-4, 2018 Downtown Hilton Hotel, Denver, CO, USA
- Evidence Accumulation and Decision-Making on Networks Gulf Coast Consortium for Theoretical and Computational Neuroscience, January 26, 2018 BioScience Research Collaborative, Houston, TX, USA
- 6. Science Day

University of Utah, November 12, 2016 Salt Lake City, UT, USA Gave poster presentation to middle and high school students and encouraged them to pursue a career in science and mathematics.

7. A Model of Reversible Vesicular Transport with Exclusion

Spatially Distributed Stochastic Dynamical Systems in Biology Conference, June 20-24, 2016 Isaac Newton Institute for Mathematical Sciences, Cambridge, UK

8. Science Day

University of Utah, November 17, 2015 Salt Lake City, UT, USA Gave poster presentation to high school students and encouraged them to pursue a career in science and mathematics.

- A Frequency-Dependent Decoding Mechansim for Axonal Length Sensing SIAM Conference on Applications of Dynamical Systems, May 17-21, 2015 Snowbird Ski and Summer Resort, Snowbird, UT, USA
- Delayed Feedback Model of Axonal Length Control MBI Axonal Transport and Neuronal Mechanics Conference, November 3-7, 2014 The Ohio State University, Columbus, OH, USA

Professional Service

- Institutional Service for FSU
 - 1. Biomathematics Graduate Student Selection Committee 2024 present
 - 2. Chair of Mathematics Library Committee 2023 present
 - 3. Chair of IMB Specialized Faculty Evaluation Committee 2023
 - 4. IMB Specialized Faculty Evaluation Committee 2022 2024
 - 5. Mathematics Colloquium Committee 2022 2024
 - 6. Honor Guard College of Arts and Sciences Convocation May 2021
- Book Reviews
 - Goriely, Alain. The Mathematics and Mechanics of Biological Growth. Vol. 45. Springer, 2017.

- Reviewer for
 - 1. Physical Chemistry Chemical Physics
 - 2. Journal of Mathematical Biology
 - 3. Chaos
 - 4. Physica D: Nonlinear Phenomena
 - 5. ACS Synthetic Biology
 - 6. Physical Review E
 - 7. Mathematical Biosciences
 - 8. Mathematics and Computers in Simulation
 - 9. Physical Review Letters
 - 10. eLife
 - 11. SIAM Journal on Applied Dynamical Systems

Memberships

- 1. Society for Industrial and Applied Mathematics (SIAM) (2015-Present)
 - 2. Society for Mathematical Biology (SMB) (2017-Present)
 - 3. American Physical Society (APS) (2019-Present)
 - 4. American Mathematical Society (AMS) (2021 -Present)
- COMPUTER SKILLS Languages: Java, C++, Python, Matlab, Maple, Mathematica
 - Tools and Applications: LATEX, MS Office tools or equivalent
 - Operating Systems: Windows, OS X, Linux