

Elizabeth Newman | Curriculum Vitae

Department of Mathematics
Emory University
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pronouns: she/her/hers

Research Interests

numerical (multi)linear algebra, machine learning, deep learning, optimization, scientific computing

Professional Information

Tufts University, Department of Mathematics

Assistant Professor

Sep. 2025 – present

Emory University, Department of Mathematics

Assistant Professor

Aug. 2022 – Aug. 2025

Distinguished Visiting Assistant Professor in Scientific Computing

Jun. 2019 – Jul. 2022

Previous Positions

Tufts University

Research and Teaching Assistant

2014 – 2019

IBM TJ Watson Research Center

Visiting Scholar

Summer 2017, 2018

Education

Ph.D.	Tufts University, Department of Mathematics Thesis: <i>A Step in the Right Dimension: Tensor Algebra and Applications</i> Advisor: Dr. Misha Kilmer	2014 – 2019
M.S.	Tufts University, Department of Mathematics	2014 – 2016
B.S.	Haverford College, Department of Mathematics and Statistics Major: Mathematics, Minor: Statistics and Psychology Thesis: <i>Understanding Bruhat Order for Hyperbolic Coxeter Groups</i> Advisor: Dr. Elizabeth Miličević (née Beazley)	2010 – 2014

Scholarly Work

Submitted

- [S3] [Projected Tensor-Tensor Products for Efficient Computation of Optimal Multiway Data Representations](#) Oct. 2024
K. Keegan and E. Newman
- [S2] Multi-tensor AI/ML-derived mechanistically interpretable whole-genome/transcriptome predictors of patient survival in neuroblastoma tumors and blood Oct. 2024
O. Alter, E. Newman, D. P. Perry, S. P. Ponnappalli, J. W. Tsai
- [S1] MRI-based Auto-Segmentation in Pituitary Macro-adenomas Using Convolutional Neural Networks: Methodology, Results and Potential applications Oct. 2024
G. Pradilla, H. Sun, B. Patel, E. Newman, J.R. Barbero, E. Porto, A. Rodas, J. Maldonado, Y. Zohdy, N. Haque, M. Cosgrove, S. Lohana, L. Tariciotti, C. Reyes, T. Garzon-Muvdi, C. Solares

Journal Articles

- [J7] [Optimal Matrix-Mimetic Tensor Algebras via Variable Projection](#) Feb. 2024
E. Newman and K. Keegan
Accepted to SIAM Journal on Matrix Analysis
- [J6] [Stable Tensor Neural Networks for Efficient Deep Learning](#) May 2024
E. Newman, L. Horesh, H. Avron, and M. Kilmer
Frontiers in Big Data: Statistical Inference for Tensor Data
- [J5] [slimTrain – A Stochastic Approximation Method for Training Separable Deep Neural Networks](#) Aug. 2022
E. Newman, J. Chung, M. Chung, and L. Ruthotto
SIAM Journal on Scientific Computing
- [J4] [hessQuik: Fast Hessian Computation of Composite Functions](#) Apr. 2022
E. Newman and L. Ruthotto
Journal of Open Source Software
- [J3] [Tensor-Tensor Algebra for Optimal Representation and Compression of Multiway Data](#) July 2021
M. Kilmer, L. Horesh, H. Avron, and E. Newman
Proceedings of the National Academy of Sciences
- [J2] [Train Like a \(Var\)Pro: Efficient Training of Neural Networks with Variable Projection](#) Oct. 2021
E. Newman, L. Ruthotto, J. Hart, and B. van Bloemen Waanders
SIAM Journal on Mathematics of Data Science
- [J1] [Non-negative Tensor Patch Dictionary Approaches for Image Compression and Deblurring Applications](#) Oct. 2021
E. Newman and M. Kilmer
SIAM Journal on Imaging Sciences

Conference Proceedings

- [CP2] [AI/ML-derived mechanistically-interpretable whole-genome biomarkers of patient survival in pre-treatment primary neuroblastoma tumors and whole blood](#) 2024
O. Alter, E. Newman, S. Ponnappalli, and J. Tsai
American Society of Clinical Oncology
- [CP1] [Image Classification Using Local Tensor Singular Value Decompositions](#) 2017
E. Newman, M. Klimer, and L. Horesh
IEEE 7th International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)

Book Chapters

- [C1] [Image Reconstructions Using Sparse Dictionary Representations and Implicit, Non-negative Mappings](#) Jan. 2025
E. Newman, J. M. Solomon, and M. Chung
Inverse Problems on Large Scales: Mathematical Modelling and Computational Methods

Patents

- [P2] System and Method for Optimal Multidimensional Data Compression by Tensor-tensor Decomposition Mar. 2019
Klimer (Tufts), Horesh (IBM), Avron (Tel Aviv), and Newman (Tufts)
Patent reference P201807026US01
- [P1] Generating and Managing Deep Tensor Neural Networks Nov. 2018
Klimer (Tufts), Horesh (IBM), Avron (Tel Aviv), and Newman (Tufts)
Patent reference P201803885US01

Software

- [R9] [projected-products](#): Tensor-tensor products via orthogonal projections 2024
- [R8] [star-M-opt](#): Optimization of tensor-tensor products 2024
- [R7] [tmn](#): Lightweight repository for stable tensor neural networks 2024
- [R6] [DL4IP](#): Dictionary learning for inverse problems 2023
- [R5] [fast-n-fair](#): Fast adversarial training for fair machine learning 2023
- [R4] [hessQuik](#): Fast derivative computation of composite functions on GPUs 2022
- [R3] [slimTrain](#): Sampled Limited-Memory DNN Training 2022
- [R2] [tensor-fmri](#): Tensor-based approaches for fMRI classification 2021
- [R1] [Meganet.m](#): A fresh approach to deep learning written in MATLAB 2019

Preprints

- [PP2] [Stable Tensor Neural Networks for Rapid Deep Learning](#) Nov. 2018
E. Newman, L. Horesh, H. Avron, and M. Kilmer
Supplementary to published version in Frontiers
- [PP1] [Tensor-Tensor Products for Optimal Representation and Compression](#) Dec. 2019

M. E. Kilmer, L. Horesh, H. Avron, E. Newman
Supplementary to published version in PNAS

Advised Undergraduate Publications

- [A2] [Fast & Fair: Efficient Second-Order Robust Optimization for Fairness in Machine Learning](#) June 2024
H. Anh Vu, A. Minch, and A. Warren; advised by E. Newman
SIAM Undergraduate Research Online
- [A1] [A Tensor SVD-based Classification Algorithm Applied to fMRI Data](#) Aug. 2022
K. Keegan, T. Vishwanath, and Y. Xu; advised by E. Newman
SIAM Undergraduate Research Online
Third Place, The Undergraduate Statistics Project Competition

Funding and Awards

Grants

- [Multifidelity Multifidelity Training for Scientific Machine Learning](#) TBD
– TBD
Source: *Air Force Fiscal Year 2025 Young Investigator Program (YIP)*
PI(s): Elizabeth Newman
Co-PI(s):
Amount: \$450,000 (to PI)
- [Emory-Georgia Tech First Research Experience in Computational Mathematics](#) Sept. 2024
– Feb. 2025
Source: *SIAM EDI Change Agents*
PI(s): Elizabeth Newman (Emory), Elizabeth Qian (Georgia Tech)
Co-PI(s): —
Amount: \$2,500 (total for all PIs)
- Building open machine-learning benchmarks: improving pipelines for blended data and performance evaluation frameworks May 2024
– Aug. 2025
Source: *SANDIA National Laboratories LDRD*
PI(s): Amelia Henriksen (Sandia)
Co-PI(s): Miranda Mundt (Sandia), Tomas Babuska (Sandia), Andy Wilson (Sandia), Danny Dunlavy (Sandia), Elizabeth Newman (Emory)
Amount: \$140,000 (to Emory PI)
- [Learnable Tensor Algebras for Harnessing Implicit Correlations in Multiway Data](#) Sept. 2023
– Aug. 2026
Source: *NSF DMS-2309751*
PI(s): Elizabeth Newman
Co-PI(s): —
Amount: \$230,000 (to PI)

- AI-Assisted Social Justice in Tissue and Organ Biomanufacturing Jan. 2023
– Dec. 2023
Source: *Emory/Georgia Tech AI.Humanity with a Social Justice Lens*
PI(s): Saman Zonouz (Georgia Tech), Vahid Serpooshan (Emory, Georgia Tech)
Co-PI(s): Aaron Levine (Georgia Tech), Elizabeth Newman (Emory)
Amount: \$100,000 (total for all PIs)

Research Awards

- SIAM Activity Group on Computational Science and Engineering Best Paper Prize Mar. 2025
SIAM CSE Activity Group
- Stable Tensor Neural Networks for Efficient Deep Learning May 2024
Open Access Publishing Fund
- Best Poster Jun. 2022
XXI Householder Symposium on Numerical Linear Algebra

Travel Awards

- Postdoctoral Association Professional Development Award Jan. 2022
- SIAM Student Travel Award Feb. 2019
- Graduate Student Travel Fund Feb. 2019
- SIAM Student Travel Award May 2018
- Conference Student/Post-doc Travel Awards May 2018
- Graduate Student Travel Fund June 2018

Teaching Awards

- Distinguished Teaching Prize 2016 – 2017
Tufts University Department of Mathematics

Conferences, Workshops, and Invited Talks

Plenary Speaker

- [P3] [Householder Symposium XXII](#) (*Cornell University, NY*) Jun. 2025
- [P2] [SIAM Conference on Computational Science and Engineering](#) (*Fort Worth, TX*) Mar. 2025
- [P1] [Georgia Scientific Computing Symposium](#) (*Georgia State University, GA*) Feb. 2023

Workshop Presenter

[W10]	ICERM Stochastic and Randomized Algorithms in Scientific Computing: Foundations and Applications (<i>Providence, RI</i>)	TBD 2026
[W9]	NSF CompMath Meeting 2025 (<i>University of Utah, UT</i>)	Jun. 2025
[W8]	ICERM Computational Learning for Model Reduction (<i>Providence, RI</i>)	Jan. 2025
[W7]	NSF CompMath PI Meeting 2024 (<i>University of Washington, WA</i>)	Jul. 2024
[W6]	Workshop on Sparse Tensor Computations (<i>Chicago, IL</i>)	Oct. 2023
[W5]	Scientific Machine Learning for Complex Systems: Beyond Forward Simulation to Inference and Optimization (<i>Santa Fe, NM</i>)	Oct. 2022
[W4]	ICERM Spring 2020 Reunion Event (<i>Providence, RI</i>)	May 2022
[W3]	Rising Stars 2022 (<i>Albuquerque, NM</i>)	Apr. 2022
[W2]	Simons Institute: Workshop on Dynamics and Discretization: PDEs, Sampling, and Optimization (<i>Virtual, UC Berkley</i>)	Oct. 2021
[W1]	BIRS Workshop: Optimization under Uncertainty: Learning and Decision Making (<i>Virtual, </i>)	Feb. 2021

Tutorials

[T1]	Deep Learning Tutorial (<i>NC State</i>) <i>A crash course on neural networks from a computational math perspective and exploration of modern research opportunities for deep learning.</i>	Apr. 2023
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Invited Speaker

[I21]	Clemson Computational Math Seminar (<i>Clemson University, SC</i>)	Apr. 2025
[I20]	Florida State University (<i>postponed to Hurricane Helene</i>) (<i>Tallahassee, FL</i>)	Sept. 2024
[I19]	Worcester Polytechnical Institute (<i>Worcester, MA</i>)	Nov. 2023
[I18]	Colorado School of Mines (<i>Golden, CO</i>)	Nov. 2023
[I17]	Numerical Analysis Seminar (<i>NC State, NC</i>)	Apr. 2023
[I16]	One World MINDS Seminar (<i>Virtual, </i>)	Mar. 2023
[I15]	Seminar @ISPGGroup (<i>UC Louvain, Belgium</i>)	Mar. 2023
[I14]	Oxford Data Science Seminar (<i>Oxford University, England</i>)	Mar. 2023
[I13]	Center for Mathematics and Artificial Intelligence Colloquium (<i>George Mason, Virtual</i>)	Feb. 2023
[I12]	Data Enabled Science Seminar (<i>University of Houston, Virtual</i>)	Mar. 2022
[I11]	Center for Computing Research Seminar Series (<i>Sandia National Laboratories, Virtual</i>)	Nov. 2021
[I10]	Computational and Applied Mathematics Seminar (<i>UNC Charlotte, NC</i>)	Nov. 2021
[I9]	Applied Numerical Analysis Seminar (<i>Virginia Tech, VA</i>)	Oct. 2021
[I8]	Communications in NLA (<i>Virtual, </i>)	Nov. 2020
[I7]	Bi-College Math/Stat Colloquium (<i>Haverford College, PA</i>)	Dec. 2019
[I6]	Scientific Computing Seminar (<i>Emory University, GA</i>)	Sept. 2019
[I5]	Schlumberger Doll Research (<i>Cambridge, MA</i>)	May 2019

- [I4] SIAM Tufts Student Chapter (*Tufts University, MA*) Sept. 2018
- [I3] IBM TJ Watson Research Center (*Yorktown, NY*) Aug. 2018
- [I2] Computational and Applied Math Seminar (*Tufts University, MA*) Mar. 2018

Conference Presenter

- [C27] [The Third Joint SIAM/CAIMS Annual Meetings](#) (*Montreal, Canada*) Jul. 2025
- [C26] [The 26th Conference of the International Linear Algebra Society](#) (*Kaohsiung, Taiwan*) Jun. 2025
- [C25] [SIAM Conference on Computational Science and Engineering](#) (*Fort Worth, TX*) Mar. 2025
- [C24] [SIAM Conference on the Mathematics of Data Science](#) (*Atlanta, GA*) Oct. 2024
- [C23] [Modeling and Optimization: Theory and Applications](#) (*Lehigh University, PA*) Aug. 2024
- [C22] [SIAM Conference on Imaging Science](#) (*Atlanta, GA*) May 2024
- [C21] [ICMS Workshop on Big Data Inverse Problem](#) (*Edinburgh, Scotland*) May 2024
- [C20] [SIAM Conference on Applied Linear Algebra](#) (*Paris, France*) May 2024
- [C19] [SIAM Conference on Uncertainty Quantification](#) (*Trieste, Italy*) Feb. 2024
- [C18] [Joint Mathematics Meeting](#) (*San Francisco, CA*) Jan. 2024
- [C17] [AWM Research Symposium](#) (*Atlanta, GA*) Sept. 2023
- [C16] [10th International Congress on Industrial and Applied Mathematics](#) (*Tokyo, Japan*) Aug. 2023
- [C15] [SIAM Conference on Computational Science and Engineering](#) (*Amsterdam, The Netherlands*) Feb. 2023
- [C14] [SIAM Conference on Uncertainty Quantification](#) (*Atlanta, GA*) Apr. 2022
- [C13] [Joint Mathematics Meeting](#) (*Virtual,*) Apr. 2022
- [C12] [Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering, and Technology](#) (*Virtual,*) Sept. 2021
- [C11] [SIAM Conference on Optimization](#) (*Virtual,*) Jul. 2021
- [C10] [SIAM Annual Meeting](#) (*Virtual,*) Jul. 2021
- [C9] [SAMSI Workshop on Numerical Analysis for Data Science](#) (*Virtual,*) May 2021
- [C8] [SIAM Conference on Computational Science and Engineering](#) (*Virtual,*) Mar. 2021
- [C7] [SIAM Conference on Imaging Science](#) (*Virtual,*) Jul. 2020
- [C6] [SIAM Conference on Data Science](#) (*Virtual,*) May 2020
- [C5] [SIAM Southeastern Atlantic Section](#) (*UT Knoxville, TN*) Sept. 2019
- [C4] [SIAM Conference on Computational Science and Engineering](#) (*Spokane, WA*) Feb. 2019
- [C3] [SIAM Conference on Imaging Science](#) (*Bologna, Italy*) June 2018
- [C2] [SIAM Conference on Applied Linear Algebra](#) (*Hong Kong Baptist University, Hong Kong*) May 2018
- [C1] [15th Copper Mountain Conference on Iterative Methods](#) (*Copper Mountain, CO*) Mar. 2018

Workshop Attendee

[W4]	ICERM Connecting Higher-Order Statistics and Symmetric Tensors (<i>Providence, RI</i>)	Jan. 2024
[W3]	AFOSR Computational Math Annual Review (<i>Arlington, VA</i>)	Aug. 2023
[W2]	Emory University NSF CAREER Academy (<i>Atlanta, GA</i>)	June 2023
[W1]	BIRS Workshop: Scientific Machine Learning (<i>Banff, Canada</i>)	June 2023

Conference Attendee

[C1]	Georgia Scientific Computing Symposium (<i>University of Georgia, Virtual</i>)	Feb. 2021
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Conference and Workshop Organizer

[O2]	ICERM Simulation-Based Optimization with Applications (<i>Providence, RI</i>)	Apr. 2026
[O1]	Georgia Scientific Computing Symposium (<i>Atlanta, GA</i>)	Feb. 2024

Minisymposium Organizer

[O11]	The 26th Conference of the International Linear Algebra Society (<i>Kaohsiung, Taiwan</i>)	Jun. 2025
[O10]	SIAM Conference on Computational Science and Engineering (<i>Fort Worth, TX</i>)	Mar. 2025
[O9]	SIAM Conference on the Mathematics of Data Science (<i>Atlanta, GA</i>)	Oct. 2024
[O8]	SIAM Annual Meeting (<i>Virtual, WA</i>)	Jul. 2024
[O7]	SIAM Conference on Imaging Science (<i>Atlanta, GA</i>)	May 2024
[O6]	SIAM Conference on Optimization (<i>Seattle, WA</i>)	May 2023
[O5]	AMS Sectional Meeting (<i>Atlanta, GA</i>)	Mar. 2023
[O4]	Joint Mathematics Meeting (<i>Boston, MA</i>)	Jan. 2023
[O3]	SIAM Conference on Data Science (<i>San Diego, CA</i>)	Sept. 2022
[O2]	17th Copper Mountain Conference on Iterative Methods (<i>Virtual, </i>)	Apr. 2022
[O1]	SIAM Annual Meeting (<i>accepted, canceled due to COVID-19</i>) (<i>Virtual, </i>)	Jul. 2020

Conference and Workshop Panelist

Teaching

Graduate Courses

[T15]	MATH516: Numerical Analysis II (Emory University) <i>Spring 2025</i>
[T14]	MATH515: Numerical Analysis I (Emory University) <i>Fall 2024</i>
[T13]	MATH789: Introduction to Tensor Decompositions (Emory University) <i>Fall 2023</i>
[T12]	MATH789: Research Training Group Seminar (Emory University) <i>Fall 2022</i>

Undergraduate Courses

- [T12] MATH135: Partial Differential Equations (Tufts University)
Fall 2025
- [T11] MATH315: Numerical Analysis (Emory University)
Fall 2023, Spring 2022
- [T10] MATH221: Linear Algebra (Emory University)
Spring 2022, Fall 2020, Spring 2020, Fall 2019
- [T9] MATH347: Introduction to Nonlinear Optimization (Emory University)
Spring 2024, Fall 2021, Spring 2021
- [T8] MATH0034: Calculus II (Tufts University)
Spring 2016

Teaching Assistant

- [T7] MATH0042: Calculus III (Tufts University)
Spring 2019
- [T6] MATH0034: Calculus II (Tufts University)
Spring 2017
- [T5] MATH0128: Numerical Linear Algebra (Tufts University)
Spring 2019
- [T4] MATH0126: Numerical Analysis (Tufts University)
Fall 2018
- [T3] MATH0019: Math of Social Choice (Tufts University)
Fall 2015
- [T2] MATH0136: Analysis II (Tufts University)
Spring 2015
- [T1] MATH0135: Analysis I (Tufts University)
Fall 2014

Advisees

Postdoctoral Fellows

- [Dr. Chelsea Drum](#) Fall 2024 – present

Ph.D. Students

- [Yizhou \(Riley\) Chen](#) Summer 2024 – present
- [Katherine Keegan](#) Fall 2022 – present
DOE Computational Science Graduate Fellowship, Emory
Women in Natural Sciences Fellowship

Current Undergraduate Advisees

- [Eric Xu](#) Summer 2024 – present
[Department of Chemistry and Department of Mathematics](#)
 Project: Compression of Tensor Train Cores via Tucker Decomposition, and Applications to the Density Matrix Renormalization Group

Math Data Collection Initiative Advisees

Creator of initiative to give first- and second-year undergraduate students their first experience in computational math research. Students collect, preprocess, and visualize data, write and debug code based on tutorials, and learn about mathematical research.

- Pilot Run Spring 2024
 - Nia Jobson (*Project: Generative Modeling*)
 - Mia Sager (*Project: Fairness in Machine Learning*)
 - Nathaniel Schrader (*Project: Climate Modeling*)
 - Malia Walewski (*Project: Reinforcement Learning*)
 - Sam Wang (*Project: Climate Modeling*)

Independent Reading Advisees

Casual individual or group reading projects under particular theme.

- Machine Learning and Optimization Spring 2025
 - Space Lutterodt-Clotney (expected May 2027)
 - Quentin McCarthy (expected May 2028)
 - Meredith Teague (expected May 2027)

Former Advisees

- [Jafer Hasnain](#) 2023 – 2024
 Program: [Emory Honors Program \(Trevor Evans Award Winner\)](#)
 First Job: Research Associate, Harvard Business School
- [Rudy Nunez](#) 2023 – 2024
 Program: [Emory SIRE Program](#)
 First Job: Current senior at Emory University
- [Jonathan Valyou](#) 2021 – 2022
 Program: [Emory Honors Program and Emory SIRE Program](#)
 First Job: Ph.D Student in Applied and Computational Mathematics at Florida State University
- [Storm Chin](#) Spring 2022
 Program: [Spelman-Morehouse Directed Reading Program](#)
 First Job: Business Analyst at McKinsey & Company

- [Geoffrey Thorpe](#) Fall 2021
 Program: [Spelman-Morehouse Directed Reading Program](#)
 First Job: Pricing Analyst at Payroc

Emory REU Advisees

- [Fast & Fair: Efficient Training of Fair Neural Networks](#) Summer 2023
 - [Allen Minch](#) (*Brandeis University*)
 - [Hung Anh Vu](#) (*University of Maryland*)
 - [Annie Warren](#) (*University of Minnesota*)
- [A Tensor SVD-based Classification Algorithm Applied to fMRI Data](#) Summer 2021
 - [Vida John](#) (*Tessellations School*)
 - [Katherine Keegan](#) (*Mary Baldwin University*)
 - [Tanvi Vishwanath](#) (*Texas A & M*)
 - [Yihua Xu](#) (*Georgia Tech*)

Emory Ph.D Dissertation Committee

- [Alex Dunbar](#) *Department of Mathematics* Spring 2024
- [Benjamin Yellin](#) *Department of Mathematics* Spring 2024
- [Xingjian Li](#) *Department of Mathematics* Fall 2023

Emory Ph.D Qualifying Exam Committee

- [Riti Bahl](#) *Department of Mathematics* Spring 2025
- [Abigail Julian](#) *Department of Computer Science* Fall 2022

Emory Honors Thesis Committee

- [Tianyang Hu](#) *Department of Mathematics* Fall 2024
- [Joshua Sun](#) *Department of Computer Science* Spring 2025
- [Haoyang Ciu](#) *Department of Political Science* Fall 2024
- [Zoe Li](#) *Department of Mathematics* Spring 2024
- [Hung Ngo](#) *Department of Mathematics* Spring 2024
- [Yujia \(Judy\) Hao](#) *Department of Mathematics* Spring 2023
- [Ravij Lade](#) *Department of Economics* Spring 2023
- [Zirui \(Ray\) Chen](#) *Department of Neuroscience* Spring 2022
- [Xiaoyuan \(Sophy\) Huang](#) *Department of Computer Science* Spring 2022

Additional Professional and Teaching Experience

Emory University, NSF REU/RET Computational Mathematics for Data Science

Mentor	Summer 2023, 2021
Executive Board Member	Summer 2021

Spelman-Morehouse Directed Reading Program

Mentor	Spring 2022, Fall 2021
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Previous Positions

Mathnasium Sudbury	Instructor	2015 – 2019
Haverford College	Math Tutor	2012 – 2014
University of Minnesota	MAXIMA REU Participant	Summer 2013
Carnegie Mellon University	SUAMI REU Participant	Summer 2012

Service and Memberships

Professional Memberships

- Society for Industrial and Applied Mathematics Fall 2014 – present
- American Mathematical Society Fall 2014 – present
- Association for Women in Mathematics Fall 2014 – present

Committee Work

- Computational Mathematics for AI Tenure-Track Search Committee Member Fall 2022 – Spring 2023
- [Postdoctoral Council for Diversity](#) Member Spring 2021 – Fall 2021
- [Diversity, Equity, and Inclusion Committee](#) Member of Postdoctoral Subgroup Spring 2021 – Fall 2021

Funding Reviewer

- [National Science Foundation](#) Panelist
- [Department of Energy](#) Panelist
- [University Research Committee](#) Reviewer
- Emory University Postdoctoral Association Professional Development Award Reviewer

Departmental Service

- Math DEI Book Group Spring 2024
Creator and co-facilitator. Lead discussion on diversity, equity, and inclusion in mathematics based on Making Black Girls Count in Math Education by Dr. Nicole M. Joseph.
- [Mathematical and Interdisciplinary Contest in Modeling](#) Spring 2020
- [Graduate Student Council](#) Fall 2015 – Spring 2016
- [Organization of Graduate Students in Mathematics](#) Fall 2014 – Spring 2015

Outreach

- [Broader Engagement Guided Affinity Group, SIAM](#) Oct. 2024
Co-Leader of Guided Affinity Group on Machine Learning with [Dr. Abiy Tasissa](#) (Tufts University). The goal is to help students navigate SIAM conferences through regular check-ins before, during, and after the conference.
- [Math Superstars](#), Mary Lin Elementary School Mar. 2024
Presented on the mathematics of machine learning to students ranging from kindergarten to fifth grade.

Paper Reviewer

- [AIMS Inverse Problems and Imaging](#)
- [Begell House Online Journal of Machine Learning for Modeling and Computing](#)
- [Elsevier Applied Mathematical Modelling](#)
- [Elsevier Applied Mathematics and Computations](#)
- [Elsevier Linear Algebra and Its Applications](#)
- [IEEE Transactions on Signal Processing](#)
- [IEEE Transactions on Cybernetics](#)
- [IEEE Journal of Selected Topics in Signal Processing](#)
- [JMLR Transactions on Machine Learning Research](#)
- [MSML2020: Mathematical and Scientific Machine Learning Conference](#)
- [SIAM Journal on Scientific Computing](#)
- [SIAM Journal on Mathematics of Data Science](#)
- [SIAM Undergraduate Research Journal Online](#)
- [Springer Journal of Mathematical Imaging and Vision](#)
- [Springer BIT Numerical Mathematics](#)
- [Wiley Online Library Numerical Linear Algebra with Applications](#)

- [Association for Women in Mathematics \(AWM\)](#)

Miscellaneous

Haverford Varsity Women's Soccer and Softball Teams	2010 – 2014
All-Conference: 2011 – 2014	
Conference Honor Role: 2010 – 2014	