Jia Zhao

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Department of Mathematics
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RESEARCH INTEREST

- Data Science, Physics-informed and Data-driven Machine Learning and Deep Learning
- Applied and Computational Mathematics, and Mathematical Biology & Ecology
- Continuum, Kinetic, and Multiscale Theory of Multiphase Complex Fluids
- Modeling Cellular Dynamics, Biofilms, Biogels, Cell Membrane and Active Matter
- Numerical Methods for PDEs and Scientific Computing
- High-performance Computing Software Development in CPU + GPU Hybrid Architecture

EMPLOYMENT

The University of Alabama, Tuscaloosa, AL

- Tenure-track Assistant Professor at Department of Mathematics — Jan 2025 – Current

Binghamton University, Binghamton, NY

- Associate Professor (tenured) at Department of Mathematics and Statistics — Aug 2023 – Dec 2024

Utah State University (USU), Logan, UT, USA

- Associate Professor (early tenured) at Department of Mathematics and Statistics — Jul 2022 – Jul 2023
- Assistant Professor at Department of Mathematics and Statistics — Jul 2017 – Jun 2022

University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

- Postdoc at Department of Mathematics; Mentor: Greg Forest — Aug 2015 – Jul 2017

EDUCATION

University of South Carolina (UofSC), Columbia, SC, USA

- Ph.D. in Applied and Computational Mathematics; Advisor: Qi Wang — Aug 2015

Nankai University, Tianjin, China

- B.S. in Information and Computational Mathematics — Jul 2010

AWARDS

- 2022 Researcher of the Year, Department of Mathematics & Statistics, USU — 04/2022
- 2021 Researcher of the Year, Department of Mathematics & Statistics, USU — 04/2021
- Graduate Student Mentor of the Year, Department of Mathematics & Statistics, USU — 04/2021
- SIAM Early Career Travel Award For SIAM-CSE — 02/2021
- SIAM Early Career Travel Award For ICIAM — 07/2019
- Dean's Dissertation Fellowship, UofSC, $ 25,000 — Aug 2014 - May 2015

GRANTS

- **National Science Foundation**, GEO-2530564, Co-PI, $ 1.01M — Oct 2025–Sep 2028
  with PI: J. Frame and Co-PIs: F. Hu and Y. Zhang
- **National Science Foundation**, DMS-2513764, Single PI, $ 199,814 — Aug 2025–Jul 2028
  Program of Computational Mathematics
- **BU Research Foundation**, PI, $10,000 — Jun 2024–May 2025
  Interdisciplinary Collaborations Grant, with Co-PI: C. Cheng
- **NeuralMetrics.ai**, Single PI, $105,000 — Jan 2024–Dec 2024
  Leveraging quantum computing for large language models training
- **National Science Foundation**, DMS-2111479, Single PI, $ 200,000 — Sep 2021– Dec 2024
  Program of Computational Mathematics
- **NVIDIA**, Academic Hardware Award, total worth $14,000, Single PI, — Dec 2018, Mar 2022
  one Quadro P6000 GPU and three RTX A5000 GPUs
- **National Institute of Health**, R35-GM143194, Co-Investigator, $ 1.8M — Aug 2021– Jul 2026
  with Investigator Yu Huang and Co-Investigator Kevin Moon
- **National Science Foundation**, DMS-2114592 (Conference), Co-PI, $15,257 — Aug 2021– Jul 2022
  with PI Luis Gordillo and co-PI James Powell
- **Standard & Poor's Global Ratings**, Single PI, $95,000 — Sep 2020– Sep 2022
  Quantum algorithms for credit rating
- **National Institute of Health**, R15-GM132877, Co-Investigator, $ 435,000 — May 2019– May 2022
  with Investigator Yu Huang and Co-Investigator Todd Truscott

- **National Science Foundation**, DMS-1816783, PI, $ 150,000 — Jun 2018– May 2021
  Program of Mathematical Biology
- **Simons Foundation**, PI, $ 4,000 — Jul 2016– Jun 2018
  AMS Simons Travel Grant

GRADUATE STUDENTS ADVISING

- Md Obaidul Haque, PhD student — Jan 2025– Current
- Isaac Stamper, PhD student; job: Computational Biologist at MSK Cancer Center — Jan 2024– Sep 2024
- Zengyan Zhang, Ph.D.; first job: postdoc at PSU — Sep 2019– Aug 2024
- Benjamin Jones, MS, first job: scientist at National Security Agency — Aug 2021– May 2023
- Yili Zhang, MS, first job: research scientist at MathWorks — Aug 2020– Jun 2022
- Jarrod Mau, MS, first job: PhD program at Utah State University — Aug 2020– Jun 2022
- Guen Grosklos, Ph.D.; first job: postdoc at University of Montana — Apr 2018– May 2022
- Colby Wight, MS, First job: data scientist at PNNL — Sep 2018– May 2020

UNDERGRADUATE STUDENTS ADVISING

- Emily Liu, undergraduate — May 2024– Current
- Kaitlin Ho, undergraduate — May 2024– Current
- James Giuffre, undergraduate — May 2024– Current
- Zhiting Liang, undergraduate, recipient of BUPNUR grant — Jan 2024– May 2024
- Riley May, undergraduate, first job: graduate program at USU — Sep 2022–Jan 2023
- Manuel Santana, undergraduate student, CofS Researcher of the Year — Sep 2021–May 2022
- Benjamin Jones, undergraduate, recipient of the URCO grant — Aug 2019–May 2021
- Emily Blackburn, undergraduate, recipient of the College of Science Mini-grant — Jan 2018–Dec 2018

PUBLICATIONS

Below, △ denotes co-first authorship; * denotes corresponding author; ♣ denotes undergraduate student; ♠ denotes graduate student; ♡ denotes postdoc. I have 3250+ Google Scholar citations, a h-index 32+ and i10-index 46+. See my Google Scholar for a complete list of my publications.

- J. Mau♠ and **J. Zhao**. Discovery of governing equations with recursive deep neural networks. Communications on Applied Mathematics and Computation. Communications on Applied Mathematics and Computation, 7, 239-263, 2025.
- Q Hong, Z Zhang♠, and **J Zhao***. Auxiliary relaxation method to derive thermodynamically consistent phase field models with constraints and structure preserving numerical approximations, *Journal of Computational Physics*, 522, 113598, 2025.
- Z. Zhang♠ and **J. Zhao***. Structure-preserving reduced order models for reversible-irreversible thermodynamically consistent PDEs. *Journal of Computational Physics*, 521, 113562, 2025.
- J Zhang, X Guo, M Jiang, T Zhou, and **J Zhao***. Linear relaxation method with regularized energy reformulation for phase field models. *Journal of Computational Physics*, 515, 113225, 2024.
- G. Jones♠, R. Sims, and **J. Zhao***. Computational modeling of microalgal biofilm growth in heterogeneous rotating algal biofilm reactors (RABR) for wastewater treatment. *Applied Mathematical Modeling*, 131, 487-504 2024.
- Q. Hong, Y. Gong, and **J. Zhao***. A physics-informed structure-preserving numerical scheme for the phase-field hydrodynamic model of ternary fluid flows. Numer. Math. Theor. Meth. Appl., 16 (3), 565-596, 2023.
- M. Jiang and **J. Zhao***. Linear relaxation schemes for the Allen-Cahn-type and Cahn-Hilliard-type phase field models. Applied Mathematics Letters, 137:108477, 2023.
- Q. Hong, Y. Gong, and **J. Zhao***. Thermodynamically consistent hydrodynamic phase-field computational modeling for fluid-structure interaction with moving contact lines. Journal of Computational Physics, 112409, 2023.
- G. Jones♠, R. Sims, and **J. Zhao***. Experimental and theoretical investigations of rotating algae biofilm reactors (RABRs): Areal productivity, nutrient recovery, and energy efficiency. *Biotechnology and Bioengineering*, 120 (10), 2865-2879, 2023.
- J. Xu, **J. Zhao** and Y. Zhao*. Numerical Approximations of the Allen-Cahn-Ohta-Kawasaki (ACOK) Equation with Modified Physics Informed Neural Networks (PINNs). International Journal of Numerical Analysis and Modeling, 20 (5), 693-708, 2023.
- G. Grosklos♠ and **J. Zhao**. Chaos does not drive lower synchrony for intrinsically-induced population fluctuations. *Ecological Modeling*, 475, 110203, 2023.
- Z. Zhang♠, Y. Gong and **J. Zhao**. A remark on the invariant energy quadratization (IEQ) method for preserving the original energy dissipation laws. *Electronic Research Archive*, 30(2), 701-704, 2022.

- M. Jiang*, **J. Zhao** and Q. Wang. Linear energy stable numerical schemes for a general chemo-repulsive model. *Journal of Computational and Applied Mathematics*, 114436, 2022.
- **J. Zhao***. A general framework to derive linear, decoupled and energy-stable schemes for reversible irreversible thermodynamically consistent models, *Computers & Mathematics with Applications*, 110, 91-109, 2022.
- M. Jiang, Z. Zhang♠ and **J. Zhao***. Improving the accuracy and consistency of the scalar auxiliary variable method with relaxation. *Journal of Computational Physics*, 456, 110954, 2022.
- G. Jones♣, D. Ellis♣, Z. Zhang♠, **J. Zhao*** and R. Sims. Optimal control of algae biofilm growth in wastewater treatment using computational mathematical models, *Contemporary Research in Mathematical Biology*, World Scientific Press, 2022.
- M. Jiang and **J. Zhao***. Linear relaxation schemes for the Allen-Cahn-type and Cahn-Hilliard-type phase field models, *Applied Mathematics Letters*, 108477, 2022.
- L. Chen, Z. Zhang♠ and **J. Zhao***. A new family of second-order unconditionally energy stable numerical schemes for gradient flow models. *Communications in Computational Physics*, 30:1290-1322, 2021.
- C. L. Wight♠ and **J. Zhao***. Solving Allen-Cahn and Cahn-Hilliard equations using the adaptive physics informed neural networks, *Communications in Computational Physics*, 29 (3), 930-954, 2021.
- **J. Zhao***. A revisit of the energy quadratization method with a relaxation technique. *Applied Mathematics Letters*. 120:107331, 2021.
- **J. Zhao***. Discovering phase field models from image data with the pseudo-spectral physics informed neural networks. *Communications on Applied Mathematics and Computation*, 3(2), 357-369, 2021. (Special Section on Machine Learning for Scientific Computing)
- L. R. Quinones♡, **J. Zhao**, L. Gordillo. The effects of simple density-dependent prey diffusion and refuge in a predator-prey system, *Journal of Mathematical Analysis and Applications*, 498 (2), 124983, 2021.
- **J. Zhao*** and D. Han. Second-order decoupled energy-stable schemes for Cahn-Hilliard-Navier-Stokes equations, *Journal of Computational Physics*, 443, 110536, 2021.
- Y. Li, W. Yu, **J. Zhao** and Q. Wang*. Second order linear decoupled energy dissipation rate preserving schemes for the Cahn-Hilliard-Extended-Darcy model, *Journal of Computational Physics*, 444, 110561, 2021.
- W. Yu, Y. Li, **J. Zhao** and Q. Wang*. Second order linear thermodynamically consistent approximations to nonlocal phase field porous media models, *Computer Methods in Applied Mechanics and Engineering*, 386:114089, 2021.
- Q. Hong, Y. Gong, **J. Zhao** and Q. Wang*. Arbitrarily high order structure-preserving algorithms for the Allen-Cahn model with a nonlocal constraint, *Applied Numerical Mathematics*, 170, 321-339, 2021.
- Q. Hong, **J. Zhao** and Q. Wang*. Energy-production-rate preserving numerical approximations to network generating partial differential equations, *Computers & Mathematics with Applications*, 84, 148-165, 2021.
- C. Lei, Y. Wang, **J. Zhao**, K. Li, H. Jiang* and Q. Wang*. A Predicative Patient Specific Model for Human Albumin Based on Deep Neural Networks, *Computer Methods and Programs in Biomedicine*. 196:105555, 2020.
- S. Sun, J. Li, **J. Zhao** and Q. Wang*. Structure-Preserving Numerical Approximations to a Thermodynamically Consistent Non-isothermal Model of Binary Viscous Fluid Flows, *Journal of Scientific Computing*, 83:50, 2020.
- Y. Gong, **J. Zhao*** and Q. Wang. Arbitrarily High-order Unconditionally Energy Stable SAV Schemes for Gradient Flow Models. *Computer Physics Communications*. 249, 107033, 2020.
- L. Chen and **J. Zhao***. A novel second-order linear scheme for the Cahn-Hilliard-Navier-Stokes equations. *Journal of Computational Physics*, 423:109872, 2020.
- Y. Gong, **J. Zhao** and Q. Wang*. Arbitrarily high-order linear schemes for gradient flow models, *Journal of Computational Physics*. 419:109610, 2020.
- J. Zhang, **J. Zhao***, and J. R. Zhang. A Non-uniform Time-stepping Convex Splitting Scheme for the Time- fractional Cahn-Hilliard Equation. *Computers and Mathematics with Applications*. 80(5):837-850, 2020.
- Y. Gong, **J. Zhao***, and Q. Wang. Arbitrary high order energy stable schemes for gradient flow models based on energy quadratization, *SIAM Journal on Scientific Computing*, 42(1): B135-B156, 2020.
- J. Zhang, M. Jiang, Y. Gong and **J. Zhao***. Energy-stable predictor–corrector schemes for the Cahn-Hilliard equation. *Journal of Computational and Applied Mathematics*. 276: 112832, 2020.

- J. Zhang, **J. Zhao***, and Y. Gong. Error Analysis of Full-discrete Invariant Energy Quadratization Schemes for the Cahn-Hilliard Type Equation. *Journal of Computational and Applied Mathematics*. 372: 112719, 2020.
- K. Gasior△, **J. Zhao**△, G. McLaughlin, G. Forest, A. S. Gladfelter and J. Newby. Molecular competition and partial demixing leads to intra-droplet patterning in phase-separated biological condensates, *Physical Review E*, 99, 012411, 2019.
- L. Chen, J. Zhang, **J. Zhao***, W. Cao, H. Wang and J. Zhang. An accurate and efficient algorithm for the time-fractional molecular beam epitaxy model with slope selection. *Computer Physics Communications*, 245, 106842, 2019.
- X. Yang* and **J. Zhao**. Linear schemes with unconditional energy stabilities for the nonlocal Cahn-Hilliard phase field model, *Computer Physics Communications*, 235, 234-245, 2019.
- X. Yang* and **J. Zhao**. On Linear and Unconditionally Energy Stable Algorithms for Variable Mobility Cahn-Hilliard Equation with Logarithmic Flory-Huggins Potential. *Communications in Computational Physics*, 25, 703-728, 2019.
- Y. Zhao and J. Li and **J. Zhao** and Q. Wang*. A linear energy and entropy-production-rate preserving scheme for thermodynamically consistent crystal growth models. *Applied Mathematics Letters*, 98, 142-148, 2019.
- Y. Gong and **J. Zhao***. Energy-stable Runge-Kutta schemes for gradient flow models using the energy quadratization approach. *Applied Mathematics Letters*, 94, 224-231, 2019.
- L. Chen, **J. Zhao*** and Y. Gong. A novel second-order scheme for the Molecular Beam Epitaxy model with slope selection. *Communications in Computational Physics*, 25, 1071-1096, 2019.
- J. Li, **J. Zhao** and Q. Wang*. Structure preserving numerical approximations of thermodynamically consistent crystal growth models, *Journal of Computational Physics*, 382:202-220, 2019.
- **J. Zhao**, L. Chen*, and H. Wang. On power law scaling dynamics for time-fractional phase field models during coarsening. *Communications in Nonlinear Science and Numerical Simulation*, 70:257-270, 2019.
- H. Liu, A. Cheng, H. Wang* and **J. Zhao**. Time-fractional Allen-Cahn and Cahn-Hilliard phase-field models and their numerical investigation, *Computers and Mathematics with Applications*, 76(8):1876-1892, 2018.
- Y. Gong, **J. Zhao** and Q. Wang*. An energy stable algorithm for a quasi-incompressible hydrodynamic phase-field model of viscous fluid mixtures with variable densities and viscosities, *Computer Physics Communications*, 219:20-34, 2018.
- Y. Gong, **J. Zhao**, XG. Yang and Q. Wang*. Full discrete second-order linear schemes for hydrodynamic phase field models of viscous fluid flows with variable densities, *SIAM Journal on Scientific Computing*, 40(1):B138-B167, 2018.
- Y. Gong, **J. Zhao** and Q. Wang*. Second order fully-discrete energy stable methods on staggered grids for hydrodynamic phase field models on binary fluid mixtures. *SIAM Journal on Scientific Computing*, 40(2): B528-B553, 2018.
- X. Yang*, **J. Zhao** and X. He. Linear, second order and unconditionally energy stable schemes for the viscous Cahn-Hilliard equation with hyperbolic relaxation, *Journal of Computational and Applied Mathematics*, 343:80-97,2018.
- Y. Gong, **J. Zhao** and Q. Wang*. Linear second-order energy stable schemes for hydrodynamic models of binary mixtures based on a spatially pseudospectral approximation, *Advances in Computational Mathematics*, 44 (5),1573-1600, 2018.
- **J. Zhao**, X. Yang, Y. Gong, X. Zhao, XG. Yang, J. Li and Q. Wang*, A general strategy for numerical approximations of non-equilibrium models, Part I: thermodynamic systems, *International Journal of Numerical Analysis & Modeling*,15(6): 884-918, 2018.
- L. Chen, **J. Zhao*** and X. Yang. Stabilized linear schemes for the molecular beam epitaxy model with slope selection. *Applied Numerical Mathematics*, 310:77-97, 2018.
- X. Yang, Y. Gong, J. Li, **J. Zhao** and Q. Wang*. On hydrodynamic phase field models for binary fluid mixtures., *Theoretical and Computational Fluid Dynamics*, 32(5):537-560, 2018.
- **J. Zhao** and X. Yang, Y. Gong, and Q. Wang*. A novel linear, second order, unconditionally energy-stable scheme for a hydrodynamic **Q**-tensor model for liquid crystals. *Computer Methods in Applied Mechanics and Engineering,* 318:803-825, 2017.
- X. Yang*, **J Zhao***, Q. Wang and J. Shen. Numerical approximations of a three components Cahn-Hilliard phase-field model based on invariant energy quadratization method, *Mathematical Model and Methods in Applied Sciences*, 27:1993-2023, 2017.

- X. Yang*, **J. Zhao** and Q. Wang. Numerical approximations for the molecular beam epitaxial growth model based on the invariant energy quadratization method, *Journal of Computational Physics*, 333:104-127, 2017.
- **J. Zhao**, Q. Wang and X. Yang*. Numerical approximations for a phase field dendritic crystal growth model based on the invariant energy quadratization approach, *International Journal for Numerical Methods in Engineering*, 110(3):279-300, 2017.
- **J. Zhao**, H. Li, Q. Wang and X. Yang*. Decoupled energy stable schemes for a phase field model of three-phase incompressible viscous fluid flow, *Journal of Scientific Computing*, 70(3):1367-1389, 2017.
- **J. Zhao**, T. Zhang, and Q. Wang*. Modeling and simulation of bacterial biofilm treatment with applications to food science, *Nanotechnology in Food Science*, 235-256, John Wiley & Sons, 2017. (invited book chapter)
- **J. Zhao** and Q. Wang*. 3D numerical simulations of biofilm growth dynamics with quorum sensing in a flow cell. *Bulletin of Mathematical Biology*, 79(4):884-919, 2017.
- **J. Zhao**, Q. Wang and X. Yang*. Numerical approximations to a new phase field model for two phase flows of complex fluids, *Computer Methods in Applied Mechanics and Engineering*, 310:77-97, 2016.
- **J. Zhao**, X. Yang, J. Li and Q. Wang*. Energy stable numerical schemes for a hydrodynamic model of nematic liquid crystals, *SIAM Journal of Scientific Computing*, 38(5):3264-3290, 2016.
- **J. Zhao**, X. Yang, J. Shen and Q. Wang*. A decoupled energy stable scheme for a hydrodynamic phase-field model of mixtures of nematic liquid crystals and viscous fluids, *Journal of Computational Physics*, 305:539-556, 2016.
- M. Kapustina$^{\triangle}$, D. Tsygankov$^{\triangle}$, **J. Zhao**$^{\triangle}$, T. S. Wessler, A. Chen, X. Yang, N. Roach, T. C Elston, Q. Wang*, K. Jacobson* and M. G. Forest*. Modeling the excess cell surface stored in a complex morphology of bleb-like protrusions. *PLOS Computational Biology*, 12(3):e1004841, 2016.
- Y. Shen$^{\triangle}$, **J. Zhao**$^{\triangle}$, C. Fuenta-Nunez, Z. Wang, R. E. W. Hancock, J. Li, M. Haapasalo* and Q. Wang*. Experimental and theoretical investigation of multispecies oral biofilm resistance to Chlorhexidine treatment, *Scientific Reports*, 6:27537, 2016.
- **J. Zhao** and Q. Wang*. Semi-discrete energy-stable schemes for a tensor based hydrodynamic model of nematic liquid crystals flows, *Journal of Scientific Computing*, 68:1241-1266, 2016.
- **J. Zhao** and Q. Wang*. Modeling cytokinesis of eukaryotic cells driven by actomyosin contractile ring, *International Journal for Numerical Methods in Biomedical Engineering*, 32(12), 2016.
- **J. Zhao** and Q. Wang*. A 3D multiphase hydrodynamic model for cytokinesis of eukaryotic cells, *Communications in Computational Physics*, 19(03):663-681, 2016.
- **J. Zhao**, Y. Shen, M. Haapasalo, Z. Wang and Q. Wang*. A 3D numerical study of antimicrobial persistence in heterogeneous multi-species biofilms, *Journal of Theoretical Biology*, 392:83-98, 2016.
- **J. Zhao***, P. Seeluangsawat, and Q. Wang. Modeling antimicrobial tolerance and treatment of heterogeneous biofilms, *Mathematical Bioscience*, 282:1-15, 2016.

SELECTED SEMINAR TALKS

Department of Mathematics, SUNY at Buffalo, NY	Oct 2024
Department of Mechanical Engineering, SUNY at Binghamton, NY	Mar 2024
Department of Mathematics, University of Alabama, AL	Mar 2024
Department of Mathematics and Statistics, SUNY at Binghamton, NY	Nov 2022
Department of Mathematics, University of North Texas, TX	Mar 2022
Center for Computational Mathematics and Applications, Pen State University, PA	Feb 2022
Data-driven Discovery Seminar Series, Western Washington University, WA	Nov 2021
SciML Seminar, Texas A&M University, TX	Sep 2021
Department of Mathematics, Brigham Young University, UT	Nov 2020
Department of Mathematics, George Washington University, D.C.	Sep 2020
Department of Mathematics, University of Wyoming, WY (canceled)	Sep 2020
Department of Mathematics, Montana State University, MT	Nov 2019
Department of Mathematics, University of Utah, Salt Lake City, UT	Oct 2018
Department of Mathematics & Statistics, Idaho State University, ID	Feb 2018
Department of Mathematics, Brigham Young University, UT	Nov 2017
Interdisciplinary Research Forum, Ecology Center, Utah State University, UT	Oct 2017
Department of Biological Engineering, Utah State University, UT	Sep 2017
Department of Mathematical Sciences, Yeshiva University, NY	Mar 2017
Department of Mathematics and Statistics, Georgia State University, GA	Mar 2017
Department of Mathematics, University of Louisiana at Lafayette, LA	Feb 2017

- Department of Mathematics, University of Alabama, AL — Feb 2017

TEACHING EXPERIENCE

at University of Alabama

- MATH 359 Mathematical Theory of Data Science — Fall 2025
- MATH 537 Mathematical Foundations of Data Analytics and Programming — Spring 2025

at Binghamton University

- MATH 392 Scientific Computing with R; MATH 488A Linear Algebra for Statistics — Fall 2024
- MATH 372 Dynamical Systems; MATH 488A Linear Algebra for Statistics — Spring 2024
- MATH 304 Linear Algebra — Fall 2024

at Utah State University

- MATH 5810/6910 Mathematical Optimization — Spring 2023
- MATH 5810/6810 Numerical Methods for PDEs — Fall 2022
- MATH 5810/6910 Mathematical Optimization — Spring 2022
- MATH 2280 Ordinary Differential Equations; MATH 5810/6810 Scientific Computing — Fall 2021
- MATH 2280 Ordinary Differential Equations — Spring 2021
- MATH 6620 Finite Difference Methods for PDEs; MATH 2270 Linear Algebra — Fall 2020
- MATH 6610 Computational Linear Algebra; MATH 2270 Linear Algebra — Fall 2019
- MATH 5620 Numerical Solutions of DEs — Spring 2019
- MATH 2270 Linear Algebra; MATH 5810 Numerical PDEs — Fall 2018
- MATH 2270 Linear Algebra — Spring 2018

SELECTED PROFESSIONAL ACTIVITIES

Co-organizing Conferences

- 2nd SIAM Northern States Conference, Organizing Committee Chair — Mar 2023
- 1st SIAM Northern States Section Student Chapters Conference, Faculty Organizer — Oct 2020
- 1st SIAM Northern States Conference, Organizing Committee Member — Sep 2019
- 2nd SIAM Wasatch Student Chapters Conference, Faculty Organizer — Apr 2019

Selected Service

- Vice President (elected), SIAM Northern States Section — Nov 2018 – Jul 2023
- Faculty mentor for SIAM student chapter at USU — Sep 2017–Jun 2022