

DYLAN GREEN

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ACADEMIC APPOINTMENTS

Harold L. Dorwart Visiting Assistant Professor

July 2024 – Present

Trinity College

Department of Mathematics

EDUCATION

Ph.D., Mathematics, Dartmouth College

June 2024

Advisor: Professor Anne Gelb

M.A., Mathematics, Dartmouth College

June 2021

B.S., Mathematics and Physics, Trevecca Nazarene University

May 2019

Summa Cum Laude

REFEREED JOURNAL PUBLICATIONS

1. Green, D., Lindbloom, J., & Gelb, A. (*in preparation*). Empirical Bayesian Inference for Complex-Valued Signals Using Support-Informed Priors.
2. Green, D., Lindbloom, J., & Gelb, A. (2024). Complex-Valued Signal Recovery using the Bayesian LASSO. *arXiv preprint arXiv:2403.16992*.
3. Green, D., Jamora, J. R., & Gelb, A. (2023). Leveraging joint sparsity in 3D synthetic aperture radar imaging. *Applied Mathematics for Modern Challenges*, 1(1), 61-86.
4. Green, D., Gelb, A., & Luke, G. P. (2021). Sparsity-Based Recovery of Three-Dimensional Photoacoustic Images from Compressed Single-Shot Optical Detection. *Journal of Imaging*, 7(10), 201.

REFEREED CONFERENCE PROCEEDINGS

1. Dayton, S.* , Milledge, O.* , Nikitovic, J.* , Gelb, A., Green, D., & Viswanathan, A. (2024, June). Leveraging structural information for enhanced coherent change detection. In *Algorithms for Synthetic Aperture Radar Imagery XXXI* (Vol. 13032, pp. 103-112). SPIE.
2. Jamora, J. R., Green, D., Talley, A.* , & Curry, T.* (2023, June). Utilizing SAR imagery in three-dimensional neural radiance fields-based applications. In *Algorithms for Synthetic Aperture Radar Imagery XXX* (Vol. 12520, p. 1252002). SPIE.
3. Green, D., Gelb, A., Luke, G. P. (2021). Compressed Single-Shot Photoacoustic Image Reconstruction of a 3D Pressure Distribution. *Computational Optical Sensing and Imaging*. (pp. CM2E-5). Optical Society of America.

*Indicates undergraduate coauthor

AWARDS AND RECOGNITION

Guarini Graduate Teaching Award (2024)

Awarded annually to the graduate student in the Guarini School of Graduate and Advanced Studies who best exemplifies the qualities of a college educator.

Kenneth P. Bogart Teaching Award (2023)

Awarded annually to one fifth-year or rising fourth-year mathematics graduate student at Dartmouth College for dedication to and excellence in advancing the educational mission of the department.

SIAM Student Travel Award (UQ 2022, CSE 2023, IS 2024)

Awarded to students on the basis of scholarship and active participation to fund travel to SIAM conferences.

PRESENTATIONS

SIAM IS24 Leveraging Joint Sparsity Using Bayesian Methods in 3D SAR Imaging. Green and Gelb (2024)

SPIE Defense + Commercial Sensing Leveraging structural information for enhanced coherent change detection. Dayton, Milledge, Nikitovic, Gelb, Green, and Viswanathan (2024)

SPIE Defense + Commercial Sensing Utilizing SAR imagery in three-dimensional neural radiance fields-based applications. Jamora, Green, Talley, and Curry (2023)

SIAM CSE23 Hierarchical Bayesian 3D Synthetic Aperture Radar Reconstruction Using Joint Sparsity. Green, Gelb, and Jamora (2023)

AFOSR Electromagnetics Annual Portfolio Review Advances in Bayesian Inference techniques for SAR Image Recovery. Green, Gelb, Lindbloom, and Jamora (2023)

ATRC Summer Review Evaluation of Neural Radiance Fields in 3D SAR Reconstruction. Green, Jamora, Sudkamp, and Sotirelis (2022)

SIAM UQ22 SAR Image Formation Using Empirical Bayesian Inference With Joint Sparsity. Green, Gelb, and Scarnati (2022)

SIAM IS22 Empirical Bayesian Inference Using Joint Sparsity for SAR Image Formation. Green, Gelb, and Scarnati (2022)

OSA Imaging Conference Compressed Single-Shot Photoacoustic Image Reconstruction of a 3D Pressure Distribution. Green, Gelb, and Luke (2021)

TEACHING EXPERIENCE

Instructor

Department of Mathematics

September 2021 – June 2024

Dartmouth College

Taught, prepared lecture notes, created and graded homework and exams, maintained online resources, and held office hours for the following courses:

- Math 1 Introduction to Calculus
- Math 23 Differential Equations
- Math 76.02 Computational Inverse Problems

Teaching Assistant

Department of Mathematics

September 2019 – August 2021

Dartmouth College

Held multiple weekly tutoring sessions and graded midterm and final exams for the following courses:

- Math 9 Multivariable Calculus with Linear Algebra
- Math 11 Accelerated Multivariable Calculus

- Math 13 Calculus of Vector-Valued Functions
- Math 22 Linear Algebra with Applications
- Math 76.01 Topics in Applied Mathematics: Linear Programming

MENTORSHIP EXPERIENCE

Undergraduate Research Mentor

2021-2024

- Mentored undergraduate students weekly toward completing novel research
- Collaborated with faculty members toward the development of meaningful research projects for undergraduate students

Advising Course Final Projects

Summer 2023

- Guided undergraduate students toward the completion of final project reports and presentations in Math 76.02 Computational Inverse Problems
- Met with students and discussed their scholarly interests to help identify potential project ideas
- Helped students develop their coding and computational skills

PROFESSIONAL DEVELOPMENT

Future Faculty Teaching Series

January 2021 – March 2021

Dartmouth Center for the Advancement of Learning

Dartmouth College

- Received focused pedagogical training for educating students at the university level
- Learned methods of developing lesson plans, engaging students during lectures, and supporting students during their education