Melody Alsaker

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Education

- Ph.D. in Mathematics, Colorado State University, 2016
  Dissertation: *Computational Advancements in the D-bar Reconstruction Method for 2-D Electrical Impedance Tomography*
- M.S. in Mathematics, Colorado State University, 2012
  Thesis: *Automated Methods for Quantifying the Tortuosity of Microvascular Networks*
- B.S. in Applied and Computational Mathematics, South Dakota School of Mines and Technology, 2010

Academic Appointments

- Alphonse A. & Geraldine F. Arnold Distinguished Professor, Gonzaga University College of Arts and Sciences, Sept. 2022–present
- Associate Professor, Gonzaga University Department of Mathematics, Sept. 2021–present
- Assistant Professor, Gonzaga University Department of Mathematics, Sept. 2016–Aug. 2021
- Graduate Teaching and Research Assistant, Colorado State University Department of Mathematics, Aug. 2010–May 2016

Peer-Reviewed Publications

1. M. Alsaker, J.L. Mueller, A. Stahel, "A Multithreaded Real-time Solution for 2D EIT Reconstruction with the D-bar Algorithm," *Journal of Computational Science* Vol. 67, 101967, 2023.
2. M. Alsaker, B. Bladow*, S.E. Campbell*, and E.M. Kar*, "Automated Filtering in the Nonlinear Fourier Domain of Systematic Artifacts in 2D Electrical Impedance Tomography," *Inverse Problems & Imaging*, Vol. 16, Issue 3, 647–671, 2022. *Gonzaga Undergraduate Student
3. M. Alsaker, D. Cárdenas, S. Furuie, and J.L. Mueller, "Complementary use of Priors for Pulmonary Imaging with Electrical Impedance and Ultrasound Computed Tomography," *Journal of Computational and Applied Mathematics*, Vol. 395, 113591, 2021.
4. M.M. Mellenthin, J.L. Mueller, E.D.L.B. de Camargo, F.S. de Moura, T.B.R. Santos, R.G. Lima, S.J. Hamilton, P.A. Muller, and M. Alsaker, "The ACE1 Electrical Impedance Tomography System for Thoracic Imaging," *IEEE Transactions on Instrumentation & Measurement*, Vol. 68, Issue 9, 3137–3150, 2019.
5. M. Alsaker, J.L. Mueller, and R. Murthy, "Dynamic Optimized Priors for D-bar Reconstructions of Human Ventilation using Electrical Impedance Tomography," *Journal of Computational and Applied Mathematics*, Vol. 362, 276–294, 2019.
6. M. Alsaker and J.L. Mueller, "EIT Images of Human Inspiration and Expiration using a D-bar Method with Spatial Priors," *Applied Computational Electromagnetics Society (ACES) Journal*, Vol. 34, Issue 2, 325–330, 2019.

7. M. Alsaker and J.L. Mueller, "Use of an Optimized Spatial Prior in D-bar Reconstructions of EIT Tank Data," *Inverse Problems and Imaging,* Vol. 12, Issue 4, 883–901, 2018.
8. J.L. Mueller, P. Muller, M. Mellenthin, R. Murthy, M. Capps, M. Alsaker, R. Deterding, S. Sagel, E. DeBoer, "Estimating Regions of Air Trapping from Electrical Impedance Tomography Data," *Physiological Measurement,* Vol. 39, Issue 5, 05NT01, 2018.
9. P. Muller, J.L. Mueller, M. Mellenthin, R. Murthy, M. Capps, B.D. Wagner, M. Alsaker, R. Deterding, S.D. Sagel, J. Hoppe, "Evaluation of a Surrogate Measure of Pulmonary Function Derived from Electrical Impedance Tomography Data in Children with Cystic Fibrosis," *Physiological Measurement,* Vol. 39, Issue 4, 045008, 2018.
10. M. Alsaker and J.L. Mueller, "Spatial Priors in the D-bar Method for Human Thoracic Electrical Impedance Tomography Data," *2018 International Applied Computational Electromagnetics Society Symposium - Denver (ACES 2018)*, March 2018.
11. M. Alsaker, S.J. Hamilton, and A. Hauptmann, "A Direct D-bar Method for Partial Boundary Data Electrical Impedance Tomography with A Priori Information," *Inverse Problems and Imaging*, Vol. 11, Issue 3, 427–454, 2017.
12. S.J. Hamilton, J.L. Mueller, and M. Alsaker, "Incorporating a Spatial Prior into Nonlinear D-Bar EIT Imaging for Complex Admittivities," *IEEE Transactions on Medical Imaging*, Vol. 36, Issue 2, 457–466, 2017.
13. M. Alsaker and J.L. Mueller, "A D-bar Algorithm with A Priori Information for 2-D Electrical Impedance Tomography," *SIAM Journal on Imaging Sciences*, Vol. 9, Issue 4, 1619–1654, 2016.
14. M. Dodd (Alsaker) and J.L. Mueller, "A Real-time D-bar Algorithm for 2-D Electrical Impedance Tomography Data," *Inverse Problems and Imaging*, Vol. 8, Issue 4, 1013–1031, 2014.
15. M. Dodd (Alsaker) and J.L. Mueller, "Fast D-bar Reconstructions of Ventilation and Perfusion on a Pairwise Current Injection System," in *Proceedings of the 15th International Conference on Biomedical Applications of Electrical Impedance Tomography*, Ed. A. Adler and B. Grychtol, Ottawa: Carleton University, April 2014, p. 81.

Selected Professional Presentations

National and International Conferences: Invited Talks

- Machine Learned Priors for Nonsmooth Conductivities in D-bar Reconstructions of 2D EIT Data. Workshop: RNTW02 (Rich and non-linear tomography in medical imaging, materials and non destructive testing), Isaac Newton Institute for Mathematical Sciences, Cambridge University, Cambridge, UK, 28 March 2023.
- Ultrasound Data as a Prior in Thoracic Imaging with Electrical Impedance Tomography. Inverse Problems: Modelling and Simulation Conference, University of Malta, Malta, 25 May 2022.
- A Machine Learning Prior for Electrical Impedance Tomography. SIAM Conference on Imaging Science, Virtual, 25 March 2022.
- Pulmonary Imaging with Combined Ultrasound and Electrical Impedance Tomography Data. SIAM Annual Meeting. Virtual, 19 July 2021.
- Automated Artifact Filtering in the Scattering Regime for D-bar Reconstructions of 2D EIT Data. SIAM Conference on Computational Science and Engineering. Virtual, 4 March 2021.
- Incorporating Ultrasound Data into Direct EIT Reconstructions of 2D Thoracic Phantoms. Applied Inverse Problems Conference, Université Grenoble-Alpes, Grenoble, France, 11 July 2019.
- A D-bar Algorithm with A Priori Information for 2-D Electrical Impedance Imaging. Applied Inverse Problems Conference, University of Helsinki, Helsinki, Finland, 28 May 2015.

National and International Conferences: Talks Given as Session Organizer

- A Multithreaded Implementation of the D-bar Algorithm for 2D Functional EIT Imaging. 10th International Congress on Industrial and Applied Mathematics, Waseda University, Tokyo, Japan, 24 August 2023.
- Advancements in Spatial Resolution of D-bar Reconstructions for Human Thoracic Imaging. SIAM Conference on Computational Science and Engineering, Spokane, Washington, 28 February 2019.
- Nonlinear D-bar Reconstructions of 2D Human EIT Data with an Optimized Spatial Prior. SIAM Conference on Imaging Science, University of Bologna, Bologna, Italy, 6 June 2018.

National and International Conferences: Contributed Talks

- Electrical Impedance Tomography Imaging of Experimental Data Using a D-bar Method with an Optimized Prior. Joint Mathematics Meetings, Atlanta, Georgia, 4 January 2017.
- An a priori Method for 2-D D-bar Reconstructions of Conductivities. Joint Mathematics Meetings, Seattle, Washington, 8 January 2016.
- An Introduction to the Mathematics of Electrical Impedance Tomography. Joint Mathematics Meetings, Seattle, Washington, 8 January 2016.
- Fast D-bar Reconstructions of Ventilation and Perfusion on a Pairwise Current Injection System. 15th International Conference on Biomedical Applications of EIT, Gananoque, Ontario, Canada, 25 April 2014.

Regional Conferences: Invited Talks

- Real-time Electrical Impedance Tomography with a Multithreaded D-bar Algorithm. SIAM PNW Section Biennial Meeting, Western Washington University, Bellingham, Washington, 15 October 2023.
- D-bar Reconstructions with Prior Spatial Information for 2-D Human Thoracic EIT Data. SIAM Central States Section Meeting, Colorado State University, Fort Collins, Colorado, 1 October 2017.

Regional Conferences: Contributed Talks

- Going Backward: The Mathematics of Inverse Problems. MAA RMS Meeting, Colorado Mesa University, Grand Junction, Colorado, 9 April 2016.
- An Introduction to Electrical Impedance Tomography and the D-bar Algorithm. MAA RMS Meeting, Colorado College, Colorado Springs, Colorado, 18 April 2015.
- Real-Time Electrical Impedance Tomography Imaging with a Fast D-bar Algorithm. MAA RMS Meeting, University of Wyoming, Laramie, Wyoming, 29 March 2014.
- A Fast Implementation of the D-bar Algorithm for Electrical Impedance Tomography. SIAM Front Range Applied Mathematics Student Conference, University of Colorado - Denver, Colorado, 1 March 2014.
- An Introduction to Electrical Impedance Tomography. MAA RMS Meeting, Adams State University, Alamosa, Colorado, 26 April 2013.

Invited Seminar Talks

- Learned Spatial Priors for D-bar Reconstructions of 2D EIT Data. Joint Applied Math / Inverse Problems Seminar, Colorado State University, 10 November 2022.
- Advancements in Direct Methods for Electrical Impedance Tomography. Seminario Internacional de Matemática, Virtual, 28 January 2022.

- Recent Advances in D-bar Methods for Electrical Impedance Tomography. Arizona State University NSF Research Training Group Mathematics Seminar, Virtual, 4 October 2021.
- Mathematics and the Future of Biomedical Imaging. Oregon State University Mathematics Colloquium, Virtual, 17 May 2021.
- Computational Mathematics in Medical Imaging Applications. Mathematics Enthusiast Series Seminar, University of Washington-Tacoma, Virtual, 4 February 2021.
- Pulmonary Imaging using Electrical Impedance Tomography with a Low-Frequency Ultrasound Prior. Inverse Problems Seminar, Colorado State University, Fort Collins, Colorado, 21 November 2019.
- Improved D-bar Reconstructions of Human Ventilation from Electrical Impedance Tomography Data. Mathematics Colloquium, University of Montana, Missoula, Montana, 5 November 2018.
- Optimized a priori D-bar Reconstructions of Experimental 2-D EIT Data. Inverse Problems Seminar, University of Helsinki, Helsinki, Finland, 16 June 2017.
- D-bar Reconstruction Methods for Electrical Impedance Tomography: Background and Recent Advances. Mathematics Seminar, Bern University of Applied Sciences, Bern, Switzerland, 1 June 2017.
- An Introduction to Electrical Impedance Imaging. Mathematics Departmental Seminar, Bucknell University, Lewisburg, Pennsylvania, 2 February 2016.
- Applications and Mathematics of Electrical Impedance Tomography. Mathematics and Computer Science Departmental Seminar, Saint Mary's College, Notre Dame, Indiana, 29 January 2016.
- The Mathematics of Medical Imaging with Electrical Impedance Tomography. Mathematics Departmental Seminar, California State University Bakersfield, Bakersfield, California, 15 January 2016.
- The Inverse Conductivity Problem and Imaging Applications. Air Force Research Laboratory Materials State Awareness Branch / University of Dayton Research Institute Seminar, Wright-Patterson Air Force Base, Dayton, Ohio, 11 January 2016.
- Computational Advancements in the D-bar Method for EIT Reconstruction. Biomedical Engineering Seminar, University of Minnesota, Minneapolis, Minnesota, 23 November 2015.

Local and Departmental Talks

- Inventing the Future of Medical Imaging with Mathematics. Gonzaga University Math Seminar Series, Gonzaga University, 4 November 2021.
- Electric Imaging: Safer, Faster, More Refined. College of Arts and Sciences Dean's Research Forum, Gonzaga University, 20 September 2018.
- The Mathematics of Electrical Impedance Tomography: Basics and Beyond. Spokane Regional Mathematics Colloquium, Gonzaga University, 1 March 2017.
- 2-D Electrical Impedance Tomography using the D-bar Algorithm with a Priori Information. Inverse Problems Seminar, Colorado State University, 3 September 2015.

Teaching Experience

Gonzaga University

Regular Courses

MATH 454	Partial Differential Equations	Sp18, Sp20, Sp21, Sp22
MATH 362	Mathematics of Medical Imaging	Sp20
MATH 360/365	Math Seminar	Sp18, Sp19, Sp20, Sp22, Sp23

MATH 350	Numerical Methods	Sp19, Fa20, Fa21, Fa23
MATH 260	Ordinary Differential Equations	Sp17, Fa17, Sp18, Fa18
MATH 259	Calculus & Analytic Geometry III	Su17, Fa17, Fa18, Fa19, Fa20, Sp21, Fa21
MATH 258	Calculus & Analytic Geometry II	Fa23
MATH 157	Calculus & Analytic Geometry I	Fa16, Sp17
MATH 114	Mathematical Analysis-Business	Fa19, Sp23

Directed Readings and Independent Studies

MATH 490	Computational Imaging	Fa 23
MATH 490	Machine Learning for EIT	Sp21, Fa21
MATH 490	Mathematics of EIT Imaging	Fa19, Sp20, Fa20
MATH 490	Electrical Medical Imaging	Fa18, Sp19
MATH 290	Biomedical Modeling	Fa17
MATH 290	Mathematics of Biomedical Imaging	Fa17

Colorado State University

MATH 340	Ordinary Differential Equations	Fa15, Sp16
MATH 161	Calculus II for Physical Scientists	Fa14
MATH 160	Calculus I for Physical Scientists	Fa10, Sp11, Fa13

Service

Service to the University

University Committees (Gonzaga University)

- Member, Student Media Board, Fall 2018–Spring 2020, Fall 2023–Present
- CAS Member at-Large, Academic Council Assessment Committee, Fall 2023–Present
- Member, Commencement Awards Committee, Fall 2017–Spring 2019, Fall 2020–Spring 2021, Fall 2023–Present
- Member, Library Committee, Fall 2020–Spring 2021
- Member, Speakers Series Committee, Fall 2017–Spring 2020
- Member, Key Performance Indicator (KPI) Subcommittee for the IT Service Management/Project Management (ITSM/PPM) project, Fall 2019
- Member (Letter Drafter), Committee on Health Science Careers, Spring 2019–Summer 2019

Other University Service (Gonzaga University)

- Organizer, 2023 Arnold Lecture. Speaker: Dr. Eric Klavins (University of Washington), Programming Biology: A Matter of Life and Death, 21 March 2023
- Keynote Speaker, Gonzaga Academic Honors Convocation, 23 April 2019
- Panelist, Mission and Transition Panel, Student Orientation, 25 August 2018

Service to the Department

Departmental Committees (Gonzaga University Department of Mathematics)

- Member, Applied Math Committee, Spring 2017–Summer 2019, Fall 2023–Present
- Chair, Applied Math Committee, Fall 2019–Spring 2022
- Member, Dream Committee, Fall 2021–Spring 2022
- Member, UR/Independent Study/Thesis Compensation Committee, Fall 2021–Spring 2022
- Member, Concentrations Subcommittee of the Applied Math Committee, Spring 2021–Spring 2022
- Member, Major Assessment Committee, Fall 2016–Spring 2018, Fall 2021–Spring 2022
- Member, Student Research Committee, Fall 2020–Spring 2022
- Member, Applied Linear Algebra Committee, Spring 2021
- Member, MATH 260 Course Description Review Committee, Fall 2020
- Member, MATH 454 Course Description Review Committee, Fall 2020
- Member, Colloquium Committee, Fall 2019–Spring 2020
- Member, Mathematics Department Hiring Committee, Fall 2018–Spring 2019
- Member, Mathematics Department Lecturer Hiring Committee, Spring 2018
- Member, Mathematics Department Hiring Committee, Fall 2017–Spring 2018
- Member, Calculus Committee, Fall 2016–Fall 2018

Other Departmental Service (Gonzaga University Department of Mathematics)

- Represented the Math Department at the GEL Weekend Parent Social, April 2023
- Represented the Math Department with a presentation at Fall Family Weekend, October 2021
- Represented the Math Department with a presentation at GEL Weekend, April 2021
- Organizer, *Building Community in STEM* student support sessions, Spring 2021
- Presenter, Math Department Teaching Workshop, December 2020
- Panelist, Mathematics Graduate School Panel Session, November 2020
- Represented the Math Department with a presentation at Fall Family Weekend, October 2019

Service to the Profession

Service as a Peer Reviewer

- *Applied Mathematics for Modern Challenges*, 2023
- *Biomedical Physics & Engineering Express*, 2023
- *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2022
- *Physics in Medicine and Biology*, 2022
- *Bioengineered*, 2022
- *Physiological Measurement*, 2022
- *IEEE Sensors*, 2022
- *Physiological Measurement*, 2021
- *Mathematics in Engineering*, 2021
- *IEEE Transactions on Medical Imaging*, 2020 (2nd paper for this journal in 2020)

- *IEEE Transactions on Medical Imaging*, 2020
- *Inverse Problems in Science & Engineering*, 2020
- I*EEE Transactions on Biomedical Engineering*, 2020
- *IEEE Transactions on Computational Imaging*, 2020
- *IEEE Transactions on Medical Imaging*, 2019
- *Inverse Problems in Science & Engineering*, 2019
- *Measurement Science and Technology*, 2019
- *SIAM Journal on Applied Mathematics*, 2019
- *Inverse Problems and Imaging*, 2018
- *IEEE Transactions on Medical Imaging*, 2018
- *BioMedical Engineering OnLine*, 2017
- *Journal of Inverse and Ill-posed Problems*, 2017

Sessions Organized

- Co-organizier, 2-part minisymposium: "Recent Advancements in Electrical Impedance Tomography," International Congress on Industrial and Applied Mathematics, Tokyo, Japan, 24 August 2023 (upcoming)
- Co-organizer, minisymposium: "Inverse Problems in Medical Imaging," SIAM Conference on Computational Science and Engineering, Spokane, Washington, 28 February 2019
- Co-organizer, 3-part minisymposium: "Advances in Reconstruction Methods for Electrical Impedance Tomography," SIAM Conference on Imaging Science, Bologna, Italy, 6 June 2018

Other Service to the Profession

- Faculty Mentor to Graduate Students, Association for Women in Mathematics, SIAM CSE2019 Conference, Spokane, Washington, February 2019

Student Research Mentoring

Undergraduate Research Advisees by Semester and Project

- Fall 2023: Nick Linthacum. Studying Deep Learning techniques applied to the D-bar Algorithm for EIT. Funded by the McDonald Work Award.
- Spring 2023: Nick Linthacum. Studying Deep Learning techniques applied to the D-bar Algorithm for EIT. Funded by the McDonald Work Award.
- Fall 2022: Nick Linthacum. Studying Deep Learning techniques applied to the D-bar Algorithm for EIT. Funded by the McDonald Work Award
- Spring 2022: Leo Winiecki, Nick Linthacum. Studying Deep Learning techniques applied to the D-bar Algorithm for EIT. Funded by the McDonald Work Award
- Fall 2021: Leo Winiecki, Nick Linthacum. Studying Deep Learning techniques applied to the D-bar Algorithm for EIT. Funded by the McDonald Work Award
- Spring 2021: Maureen Barrett, Scott Campbell, Ciara Patterson, Leo Winiecki. Studying Deep Learning techniques applied to the D-bar Algorithm for EIT
- Fall 2020: Maureen Barrett, Austin Biondi, Ciara Patterson, Leo Winiecki. Studying D-bar reconstruction of human thoracic EIT data. Funded by the McDonald Work Award

- Fall 2020: Scott Campbell. Studying artifact removal in D-bar reconstructions of human thoracic EIT data. Funded by the McDonald Work Award
- Summer 2020: Scott Campbell. Studying artifact removal in D-bar reconstructions of human thoracic EIT data
- Summer 2020: Fisher Ng. Performing a comparison study between D-bar methods and iterative techniques for EIT reconstruction. Funded by the Morris Fellowship
- Fall 2019–Spring 2020 Benjamin Bladow, Scott Campbell, and Fisher Ng. Studying artifact removal in D-bar reconstructions of human thoracic EIT data. Funded by the McDonald Work Award and the Gonzaga Research Council
- Spring 2019: Emma Kar and Benjamin Bladow. Studying D-bar reconstruction of human thoracic EIT data. Funded by the McDonald Work Award
- Fall 2018: Emma Kar, Benjamin Bladow, and Erick Holguin. Studying the D-bar reconstruction method for electrical impedance tomography. Funded by the McDonald Work Award
- Summer 2018: Benjamin Bladow and Erick Holguin. Studying the D-bar reconstruction method for electrical impedance tomography
- Fall 2017: Reid Whitson. Studying the modeling of oncolytic viruses with systems of differential equations. Funded by the McDonald Work Award
- Fall 2017: Sean Cassatt. Studying the mathematics of biomedical imaging. Funded by the McDonald Work Award

Student Presentations

- Nick Linthacum: The Mathematics of Electrical Impedance Tomography. Math 365 Seminar Course, Gonzaga University, 28 April 2023.
- Fisher Ng: A Comparison Study of Reconstruction Methods for Electrical Impedance Tomography. Fall Family Weekend Undergraduate Research Showcase, Morris Fellows Session, Gonzaga University, 10 October 2020
- Scott Campbell and Fisher Ng: Medical Imaging with Electrical Impedance Tomography, Part I. Data Science and Image Analysis Conference of the Pacific Northwest, Washington State University, Pullman, Washington, 1 March 2020
- Benjamin Bladow: Medical Imaging with Electrical Impedance Tomography, Part II. Data Science and Image Analysis Conference of the Pacific Northwest, Washington State University, Pullman, Washington, 1 March 2020
- Benjamin Bladow: Optimized a priori D-bar Reconstructions of 2-D EIT Data with Artifact Filtering, EIT Lab Seminar, Colorado State University, Fort Collins, Colorado, 22 November 2019
- Scott Campbell: D-Bar Methods for EIT & Research Overview of Scaled Scattering Transforms, EIT Lab Seminar, Colorado State University, Fort Collins, Colorado, 22 November 2019
- Benjamin Bladow: Medical Imaging with Electrical Impedance Tomography, Part I of II: Background, MAA PNW Section Meeting, University of Portland, 13 April 2019
- Emma Kar: Medical Imaging with Electrical Impedance Tomography, Part II of II: Recent Advances, MAA PNW Section Meeting, University of Portland, 13 April 2019
- Emma Kar and Benjamin Bladow: Mathematics Seminar, Gonzaga University, 26 April 2019
- Reid Whitson: Modeling Oncolytic Virus Spread, Math Club Meeting, Gonzaga University, 29 Nov. 2017

Selected Honors & Awards

- McDonald Work Award: $2,903 for undergraduate student research in electrical impedance tomography, Gonzaga University, Fall 2023
- McDonald Work Award: $5,443, for undergraduate student research in electrical impedance tomography, Gonzaga University, Fall 2022
- Alphonse A. & Geraldine F. Arnold Distinguished Professorship (Endowed Chair), Gonzaga University College of Arts and Sciences, Awarded April 2022 for the period Fall 2022–Spring 2025
- McDonald Work Award: $4,368, for undergraduate student research in electrical impedance tomography, Gonzaga University, Fall 2021
- Outstanding Recent Graduate Award, awarded by the South Dakota School of Mines & Technology "to honor graduates who have achieved exemplary career progress and recognition within ten years of their graduation," Fall 2020
- McDonald Work Award: $4,212, for undergraduate student research in electrical impedance tomography, Gonzaga University, Fall 2020
- Morris Fellowship (faculty mentor): $2,500 stipend for GU undergraduate Fisher Ng, plus $1,500 honorarium, to fund the project "A Comparison Study of Reconstruction Methods for Electrical Impedance Tomography," Gonzaga University, Summer 2020
- McDonald Work Award: $3,825, for undergraduate student research in electrical impedance tomography, Gonzaga University, Fall 2019
- Gonzaga Research Council Award: $1,700, for funding of the research proposal *Computational Research in Electrical Impedance Tomography*, Summer 2019
- McDonald Work Award: $4,407, for undergraduate student research in electrical impedance tomography, Gonzaga University, Fall 2018
- Faculty Award for Professional Contributions for tenure-track faculty, Gonzaga University, Spring 2018
- McDonald Work Award: $825, for undergraduate student research in biomedical modeling, Gonzaga University, Fall 2017
- Outstanding Graduate Teaching Assistant Award, Colorado State University Department of Mathematics, Spring 2016
- Graduated *summa cum laude* from South Dakota School of Mines & Technology, May 2010

Professional Memberships

- Inverse Problems International Society
- Finnish Inverse Problems Society
- Tau Beta Pi Engineering Honor Society