NANCY F. GLENN

VP for Research and Economic Development, Professor of Geosciences, Boise State University
LinkedIn Google Scholar

Dr. Glenn has extensive research operations and management experience, from legislative engagement and managing the research enterprise at Boise State to serving as an active researcher. Dr. Glenn is an inclusive leader with an entrepreneurial approach and is passionate about supporting research and creative activity and supporting faculty in their scholarly journey. She is adept at navigating challenging situations, including personnel and budgets. She conceives, communicates, executes, and delivers.

EDUCATION

Ph.D.	2000	University of Nevada, Reno, Geo-Engineering
M.S.	1996	University of California, Berkeley, Civil Engineering
B.S.	1994	University of Nevada, Reno, Geological Engineering

Licensed Professor Engineer, #14023, Idaho

Administrative Training
Homeward Bound Global Leadership Initiative, Cohort 5, 2019-2021
Basic Mediation Skills, 3 credit course (DISPUT 400), Boise State University, 2019
Leadership Pathways, Boise State University's Provost's Office, 2018-2019
Chair Professional Development Training, Boise State University Provost's Office, 2015-2016, 2018-2019
Chairing the Academic Department, A Workshop, American Council on Education, 2010

PROFESSIONAL EXPERIENCE

Vice President for Research and Economic Development (VPRED), Boise State University, June 2022-present
(**Interim Vice President for Research and Economic Development**, June 2021-May 2022)

Report to the President, work closely with university VPs, and have 5 direct reporting offices, including the Offices of Sponsored Programs, Research Compliance, Research Development, Technology Transfer and Economic Development. Oversee Boise State's partnership with DOE Idaho National Laboratory. Oversee reporting for research centers and institutes. Oversee and/or partner with the Energy Policy Institute, Institute for Pervasive Cybersecurity, Professor of the Practice, Communications & Marketing, Advancement, Research Computing, and faculty directors. ~ 100 staff and ~$14M operating budget. ~7-10% year-over-year growth in sponsored project awards.

Primary areas of responsibilities include working as a team to oversee the research enterprise, providing comprehensive support for researchers during all phases of the research endeavor, managing the federal relations portfolio, managing the university's IP portfolio, facilitating relationships with industry for

commercialization, leading outreach aimed at fostering economic development, collaborating with VPs and Academic Deans for strategic opportunities and enterprise functions, leading involvement in EPSCoR (Established Program to Stimulate Competitive Research); and serve as Boise State's statewide representative on Higher Education Research Council (HERC), EPSCoR Committee, and Leadership in Nuclear Energy (LINE) commission (appointed by Governor).

Example Accomplishments and Outcomes
- Strengthening research infrastructure
  - Enabled systems improvements, including new AI-based processes and industry best practices across division, and provided data and dashboards to Deans and faculty to improve tracking and forecasting of expenditures. Outcomes of transparency and ability to strategically align budget with research initiatives.
  - Hired a Director of Tech Transfer, revamped IP/commercialization approach to grow partnerships, improved rubric for IP filing decisions and to enhance transparency. Received $6M Accelerating Research Translation award to expand tech transfer and community engagement. Outcomes include growth of tech transfer office to realize existing technologies, grow new, and provide education and training.
  - Set target goals to expand Office of Research Compliance to support growing animal programs. Hired first full-time campus veterinarian to expand vivarium use and achieved AAALAC certification.
  - Developed research security strategy, implemented new policies and processes, with outcome of increased awareness across campus and new research data security capacity for sponsored projects.
- Developing and executing strategy
  - Revised DRED strategic plan with outcome of transparency on focused projects and initiatives, while maintaining our core service responsibilities.
  - Revised University strategic plan to align with new R1 goals and socialized plan with campus partners for widespread campus acceptance.
  - Enabled and deployed team for Grand Challenges. Outcomes include new interdisciplinary teams and cooperative agreement model for campus.
  - Liaise with University Advancement for Grand Challenges, industry, and research opportunities for an outcome of shared targeted alignment and sustainability.
- Growing research and creative activity
  - Established Center for Research & Creative Activity. Outcomes of enhanced researcher support and professional development for improved culture, connectedness, growth in award wins. Outcome of Project Management Initiative, a shared service and now a national model.
  - Developed faculty support structure for participation in statewide EPSCoR. Enhanced engagement and teamwork, deeper partnerships and awards.
  - Lead partnership with DOE Idaho National Laboratory with outcome of new strategic areas in Advanced Manufacturing and Materials and Secure and Resilient Energy Systems.
- Integrating research and learning experience
  - Partner with Provost's office to financially support Vertically Integrated Projects (VIP), a teacher-scholar and experiential learning model. 250 undergraduate researchers in FY25.
  - Increased awareness of importance of undergraduate research to campus via new funding opportunities, pathways, and celebration.
- Government and industry relations
  - Lead Federal Initiatives program for key strategic areas. Outcomes in FY24 are $4M for

advanced manufacturing, enabling interdisciplinary group.
- o Enabling new 'open for business' atmosphere through industry networking and IP modifications, campus / industry activities. Outcomes include 4 new master agreements and/or sponsored awards.
- o Developed strong partnerships via AFRL and DEPSCoR, resulting in new awards and student opportunities.

Sr Advisor, Research Advancement and Strategic Initiatives, Division of Research and Economic Development, Boise State University, July 2020 – June 2021

Reported to VPR and Dean of College of Arts and Sciences (COAS), provided leadership for select initiatives.

Accomplishments and Outcomes
- Led Federal Initiatives program with outcome of awarded FY20 ($1M) and FY21 ($6M). Prepared/submitted $4M request for FY22.
- Led new Grand Challenges (GC) initiative with outcome of new funding, strategic plan based on faculty cohort feedback and best practices from other universities with GC
- Co-led with Dean, faculty design group of potential new schools, providing foundation for new School for the Digital Future. Additional outcomes included design of new interdisciplinary and experiential learning programs, engagement hub, and research centers.

School Executive Group & School Management Committee for Surveying and Geospatial Engineering (SAGE), School of Civil & Environmental Engineering (CVEN), University of New South Wales (UNSW), October 2019 – June 2020

Provided leadership for academic and administrative operations for 8 faculty and staff, including personnel assignments, allocation of space, funds and equipment; represented all matters of curriculum at undergraduate and graduate levels, academic and research infrastructure, and budgets. School research and teaching budget is $100M AUS. Represented group with alumni and industry including activities in the greater Sydney Central Business District.

Accomplishments and Outcomes
- Developed shared model for resource allocation, resulting in unanimous group support.
- Co-developed and facilitated Practice of Work interdisciplinary program with sciences, engineering, arts and humanities, and industry. Outcomes included new technological solutions for EY and NSW Dept of Planning and Government, new course curriculum.
- Facilitated Engineering Design & Innovation (2000 student enrollment) for SAGE. Outcomes include a DIY design for drones and new curriculum for hybrid capstone design.

Interim Chair, Department of Civil Engineering, Boise State University, 2018-2019

Led a department of 9 faculty, staff. Primary portfolio covers faculty personnel, research advancement, undergraduate and graduate curriculum (including ABET and assessments), industry advisory liaison and relations, and Dean's executive committee. Facilitated engagement between department and units across campus to improve efficiency by sharing information and building consensus.

Accomplishments and Outcomes

- Mentored early-career faculty with outcome of sustained research productivity
- Created faculty development plans for associate professors with desire to be promoted to full
- Established new strategic goal setting for all faculty and department overall, increased transparency
- Developed model to increase department graduate student funding
- Developed and/or revised budget, workload, and committee policies, streamlined for efficiency
- Strengthened involvement of Industry Advisory Committee, new capstone opportunities
- Fostered shared governance and faculty and staff voices, increased inclusivity

Federal Relations Liaison, Division of Research and Economic Development, Boise State University, 2017-2019

Reporting to the VPR, educated/mentored faculty on opportunities and portfolio development, solicited research ideas, established connections and partnerships. Worked directly with our government relations representative in Washington DC. Strategically identified short- and long-term targeted opportunities for the research enterprise, and executed on these.

Accomplishments and Outcomes
- Secured $1.5M in FY18 and $6.6M in FY19, submitted requests for FY20. Outcomes of partnerships with INL
- Received agency endorsement and (new) strong agency – faculty partnerships
- Developed a campus process for faculty to engage with the federal initiative opportunity

Vice President, Board of Directors, Boise State University Research Foundation, 2015-2019

Served as Vice President since the founding in 2015, helped draft policy, worked with general counsel for tax-exempt status, identified areas of research strength along with branding and IP licensing.

Accomplishments and Outcomes
- Assisted in founding the Boise State University Research Foundation
- Helped identify several initiatives under the Research Foundation umbrella (e.g. Equine and Health)
- Assisted in developing IP brokerage opportunities

Co-Founding Director, Human-Environment Systems (HES) Research Center, College of Innovation and Design, Boise State University, 2014-2018

Along with a colleague, conceived of idea to develop HES, as an outgrowth of an NSF project. Received administrative approval to develop HES and establish 6 new tenure-track faculty positions. Recruited and hired the cluster. Developed new tenure & promotion and workload policies. Mentored early-career faculty. Developed partnerships with existing and new academic programs on campus to ensure access by HES graduate students. Oversaw faculty personnel matters, curriculum, budget, and space.

Accomplishments and Outcomes
- Hired 6 early-career faculty who have 2 of the top 3 most-highly cited papers at Boise State. Faculty outcomes also include 30+ new community partnerships.
- Developed progressive tenure and promotion, and workload policies to promote and incentivize team science, interdisciplinarity, values-based work
- New model for campus
  - Demonstrated how an interdisciplinary unit can operate successfully outside traditional

academic structure
- o Themes of tenure and promotion policies have been adopted in other campus units

Founding Director, Boise Center Aerospace Laboratory, Dept Geosciences, Idaho State University (through 2013) and Boise State University (to 2019, 2020-present)

Established and direct research lab, mentor early-career staff and faculty, and undergraduate and graduate students. Diverse research partnerships with federal agencies and industry.

Accomplishments and Outcomes
- Established expertise in remote sensing of the environment
  - o Published over 100 peer reviewed journal articles
  - o Foundational work in imaging spectroscopy and lidar for dryland environments, influencing use of remote sensing in land management for BLM and USFS
- Built research infrastructure for remote sensing
  - o Secured over $40M in funding
  - o 90% of personnel and students supported on external funding
  - o Advised/mentored 30+ graduate students, 10 post-doctoral researchers, and 11 undergraduate researchers in remote sensing science, now active academics and scientists in agencies
  - o Expanded campus remote sensing infrastructure including field equipment training and support

Lead Scientist, Idaho NSF EPSCoR Water Resources in a Changing Climate, 2012-2013

Led science team (50+ researchers) in strategic directions associated with water resources in Idaho/ western US. Served as co-PI of $25M (from NSF) + $5M (from State of Idaho) project. Reported to the Project Advisory Board, coordinated scientific meetings and scientific project management.

Accomplishments and Outcomes
- Facilitated conflict resolution and project management, resulting in well-coordinated, engaged, and healthy network of 400 participants (K12 teachers to university faculty)
- Developed new statewide faculty mentoring program for 6 new faculty hires
- Built strong partnership with NSF program managers and Project Advisory Board, resulting in two successful site visits from NSF

Joint Appointment, Idaho National Laboratory (INL) Department of Energy, 2011-2017

The joint appointment consisted of liaising between DOE and Idaho State University Office of Research (2011-2013) and Boise State University Division of Research and Economic Development (2013-2017) on research initiatives related to remote sensing and data science.

Accomplishments and Outcomes
- Secured $5M in funding to establish geophysics and remote sensing areas within INL/ISU
- Hired and mentored 3 staff scientists and post-doctoral researchers, now working at DOE
- Developed a strategic plan in remote sensing and data science for INL
- Developed shared equipment agreement still in existence and used by over 50 students across state

Co-Chair, Dept Geosciences, Idaho State University, 2008-2010

Served as co-chair in a department of 13 faculty and 4 staff. Duties were explicitly in budget and research management and my co-chair administered personnel and curriculum aspects. Developed teamwork and communication skills, while navigating a significant statewide budget reduction.

Accomplishments and Outcomes
- Managed budget for three campuses (Pocatello, Idaho Falls, Boise)
- Developed innovative solutions to minimize impacts from significant statewide budget reduction, grew research activity by over 30% at the two branch campuses
- Effectively served as co-chair across three campuses, 3+ hours away
- Created and gained approval for a new PhD program in Geosciences and a graduate certificate program in geospatial technology (advised/graduated first female PhD student)

ACADEMIC POSITIONS

2013-2019, 2020-, Professor, Dept Geosciences, Boise State University
2019-2020, Professor, Civil & Environmental Engineering, UNSW
2010-2013, Research Professor (tenured), Dept Geosciences, Idaho State University
2005-2010, Associate Research Professor (tenured), Dept of Geosciences, Idaho State University
2000-2005, Assistant Research Professor, Dept of Geosciences, Idaho State University

CONSULTING

1996-1997, Staff Geotechnical Engineer, GeoEngineers Inc., Redmond, WA, 1996-1997

AWARDS

Idaho Business Review 2007 Accomplished Under 40
Idaho State University Outstanding Researcher 2007-2008
University of Nevada Reno Outstanding PhD Candidate, 1999
UC Berkeley Outstanding Graduate Student Instructor, Civil & Environmental Engineering, 1996

SELECT NATIONAL PROFESSIONAL SERVICE

2020-2022, NASA Surface Biology & Geology Research & Applications Lead Team
2018-2020, American Geophysical Union, Audit Committee
2017-2024, NASA Headquarters Earth Science Advisory Committee
2016-2019, Treasurer and Board of Directors, UNAVCO, Inc., NSF Facility

POPULAR MEDIA/OUTREACH

"GLOBE Observer Why Observe?: Tree Height" video and commentary, NASA Goddard Media Studios, 2020

Year 3 of the Trees Around the GLOBE Student Research Campaign: The importance of tree and vegetation research to help us understand our changing planet, Why Measure Tree Height?" interview, video, and webinar NASA, 2020

"Women in Ecology" interview, National Science Foundation NEON, 2020

EarthData, Who uses NASA earth science data?, Interview, NASA, 2017

GRANTS AWARDED

Dr. Glenn's research has been supported with over $40M in external funding, including from a range of federal agencies including NSF, NASA, USDA, DoD, DHS, DOE, BLM, USGS, BoR. PIs listed in order below.

Semiannual SPRUCE Experiment TLS Assessments and Their Interpretation, Glenn, N., Spaete, L., DOE ORNL, $654,000, 3/1/2016-12/31/2026

Developing Remote Sensing Tools for Rangeland Vegetation Inventory and Assessment, Glenn, N.F., USDA ARS, $200,000, 8/13/2018 - 9/30/2023

EAGER: Collaborative Research: Promoting Diverse and Inclusive Leadership in the Geosciences (GOLD-EN), Pierce, J., Llewellyn, D., Glenn, N., Souza, T., $265,000, NSF, 9/15/2020-8/31/2022

Improving Snow Remote Sensing Measurements with SnowEx: Modeling and Quantification of Hydrologic Fluxes Across Forest Canopy and Topographic Gradients, Glenn, N.F., McNamara, J., Tennant, C., Hiemstra, C., NASA, $288,856, 5/22/2018 - 5/21/2023

Acquisition and Distribution of Lidar for Regions in Northern Idaho, Glenn, N.F., Enterkine, J., US Department of Homeland Security, $545,000, 10/1/2021-09/30/2022

Fine Fuels Management to Improve Wyoming Big Sagebrush Plant Communities, Arispe, S., Hulet, A., Glenn, N.F., Perryman, B., USDA NIFA (Oregon State University's subcontract to Boise State is $80,990), 9/15/2019-8/31/2022

Collaborative Proposal: EarthCube RCN: Connecting the Earth Science and Cyberinfrastructure Communities to Advance the Analysis of High Resolution Topography Data, Glenn, N.F., NSF, $50,000, 8/15/2017 - 7/31/2020

Incorporate Remote Sensing of Shrub and Grasslands as a Primary Input into an Ecosystem Demographic Model (ED2), Glenn, N.F., USFS, $56,324, 10/1/2017-9/30/2019

Acquisition of a Field Spectroradiometer, Glenn, N.F., Flores, A., Pierce, J., NSF, $74,937, 8/1/2017-7/31/2018

Evaluation of Spatial Trends in Biomass and LAI in Heterogeneous Tree-Shrub Ecotones, Glenn, N.F., NASA NESSF17 for PhD Student Nayani Ilangakoon, $134,929, 9/1/2017-8/31/2020

Remote Sensing of Alfalfa Seed Crop Bloom, Glenn, N.F., Jaiprakash, J. (Industry Partner), Idaho Global Entrepreneurial Mission, $194,000, 1/1/2017-11/30/2019

Cooperating Technical Partners, Lidar for Portneuf and Blackfoot Watersheds, Bear Lake Region, and Big Wood River Region Mapping Activity, Glenn, N.F., FEMA, $954,098, 10/1/2016-09/30/2019

A Web-based Site Suitability and Visualization Tool to Support Idaho's Growing Wine Industry, Flores, A., Glenn N.F., Idaho Department of Agriculture, $140,000, 10/1/2015-9/30/2017

Multi-hazard Risk Assessment and Ecosystem Restoration in Idaho: Nez Perce Tribe, Nez Perce County, and Clearwater Watershed, Glenn, N.F., Tompkins, A., Ames, L., McDaniel, R., USGS, $244,000 (plus ~$700,000 of partnership funding) 10/01/2016-09/30/2017

Lidar remote sensing to measure fire prone invasive weed distribution and plant community structure along elevation gradients in dryland systems (Student: Ann Marie Raymondi), NASA ASTAR MUREP Fellowship, Glenn, N., $100,000, 9/1/2015-08/31/2016

Workshops-NEON: Training in Scientific Discoveries with NEON's AOP, Glenn, N., Flores, L., NSF, $100,000, 11/1/2015-11/30/2017

Adaptive Management Monitoring, Spaete, L., Glenn, N., DOE Mountain Home AFB, $107,000, 09/1/2015-09/30/2019

Modeling the long-term effects of fuel reduction and seeding treatments on fuel loads and fire regimes in the Great Basin, Joint Fire Sciences Program, $268,810, 11/2015-9/2019

Integrating TLS and ALS to Describe Riparian Vegetation Structure, Glenn, N., Spaete, L., Bureau of Reclamation and Sound Science LLC, $45,592, 6/1/2015-9/30/2015

Monitoring Earth's Hydrosphere: Integrating Remote Sensing, Modeling, and Verification, Flores, L., Glenn, N., McNamara, J., Marshall, HP, $1,479,990, 10/1/2014-9/30/2017

Scalable Vegetation Structure for Ecosystem Modeling in the Western US, Glenn, N., Flores, L., Mitchell, J, Ustin, S., NASA Terrestrial Ecology, $748,000, 1/1/2014-12/31/2016

Birds of Prey Remote Sensing, Glenn, N., BLM, $69,460, 10/01/2014 – 09/30/2017

INL Joint Appointment, Glenn, N., DOE, $54,167, 10/01/2014-9/30/2015; $20,757, 10/1/2015-09/30/2016

Quantifying and predicting fuels and the effects of reduction treatments along successional and invasion gradients in sagebrush habitats, 10/01/11-09/30/14, Shinneman, D., Pilliod, D., Arkle, R., Glenn, N., $546,723, Joint Fire Science Program, ($73,137 to ISU via subcontract from USGS)

BCAL MapWindow Virtual Watersheds, 10/1/10-09/30/15, $487,500, Glenn, N., Ames, D., NOAA

Orchard Training Area Impacts Mapping and Cave Visualization, Glenn, N., Idaho Military Division, $17,000, 9/1/2013 – 12/31/2013

Orchard Training Area Vegetation and Cave Mapping, Glenn, N., Idaho Military Division, $89,000, 10/01/2012 – 09/30/2014

Collaborative Research: Making Point Clouds Useful to Earth Scientists, Glenn, N., $219,000 ($320,000 total), NSF, 9/01/2012 – 08/31/2015

LiDAR Remote Sensing of Snake River and Priest Lake, Glenn, N., $142,000, IDWR/FEMA, 10/1/2011-5/1/ 2012

Water Resources in a Changing Climate, 9/1/2008-12/1/2013, Baxter, C., Crosby, B., Germino, M., Ames, D., Finney, B., Thackray, G, Glenn, N. (ISU PIs), NSF Idaho EPSCoR ($15M to State of Idaho) (Glenn's portion: $65,000 for outreach, $234,750 for CI, $155,583 for Lead Scientist)

BCAL MapWindow Watershed Modeling LiDAR, 09/30/2009-10/1/2013, $340,650, Ames, D., Glenn, N., NOAA

Collaborative Research: Cyberinfrastructure Development for the Western Consortium of Idaho, Nevada, and New Mexico, 10/1/2009-8/1/2013, $2M to Idaho from NSF EPSCoR; (Glenn, N., Ames, D., for Idaho State University's portion ($387,200 over 3 years))

Remote Sensing Strategic Planning: Joint Appointment, January 2011-September 2013, $193,565, Glenn, N., Idaho National Laboratory

Remote Sensing Strategic Planning: BCAL Support, January 2011-September 2012, $70,095, Glenn, N., Idaho National Laboratory

Faculty Staff Exchange: Post-doctoral Researcher, October 2010-September 2011, $48,250, Glenn, N., Idaho National Laboratory

UAV and hyperspectral remote sensing, April 2009-September 2011, $41,000, Glenn, N., DOE INL

CESU Rapid Carbon Assessment, June 2011-October 2011, Glenn, N., $11,297, USDA NRCS

Upgrade of Computing Equipment in the Digital Mapping Laboratory, Idaho State University, $75,000, August 2009-2010, Crosby, B., Ames, D., Glenn, N., Welhan, J., NSF

Fusion of remotely sensed data sources for modeling eolian soil transport, July 2007 – May 2011, $360,515, Glenn, N., Germino, M., Department of Defense

Hyperspectral and Lidar landscape modeling, Oct 2006-Sept 2010, $462,120, Glenn, N., NOAA

Evaluating Invasive Species and Habitat Quality in The Owyhee Uplands With Remote Sensing, September 2007-August 2011, $27,000, Glenn, N., BLM

Rangeland Fire and Erosion, August 2008-July 2010, $159,000, Germino, M., Glenn, N., BLM
Development of a Geospatial Outreach Program – Boise Center Aerospace Laboratory, October 2005 – September 2010, $475,900, Glenn, N., Ames, D., NOAA.

Quantifying Basalt Rock Outcrops in NRCS Soil Map Units Using Landsat-5 Data, September 2007-December 2008, $23,500, Glenn, N., USDA NRCS

Implementation of Remote Sensing Techniques for Invasive Species Management, August 2006-September 2009, $43,459, Glenn, N., USDA NRCS.

Eolian transport and remote sensing, INRA SSGP Doctoral Fellow Program, Fall 2006-Spring 2008, $50,000, Glenn, N., funding for Joel Sankey, PhD in Engineering and Applied Sciences

Hyperspectral remote sensing, INRA SSGP Doctoral Fellow Program, Fall 2007-Spring 2009, $50,000, Glenn, N., funding for Jessica Mitchell, PhD in Engineering and Applied Sciences

Creation of a New Learning Community by Integration of Breeze, WebCT, Distance Learning and Smart Screens at ISU, July 1, 2006-June 30, 2007, Glenn, N., Ames, D., Hughes, S., $59,556, Idaho SBOE.

Pacific NorthWest Regional Collaboratory (PNWRC) Rangeland Monitoring FY06, October 2006 – August 2007, $53,800, Glenn, N., Battelle Memorial Institute, Pacific Northwest Division.

Boise Center Aerospace Laboratory, October 2004 – September 2007, $494,739, Glenn, N., Ames, D., Hughes, S., Weber, K., NOAA.

Landscape Data Fusion and Assessment: Improved Feature Extraction using Multivariate Stacking, Year 3, July 2005 – June 2006, $53,427, Glenn, N., Battelle Memorial Institute, Pacific Northwest Division.

Detection, Prediction, Impact, and Management of Invasive Plants Using GIS, June 2002- May 2005, $1,500,000, Weber, K., Glenn, N.F., Germino, M., NASA Goddard, NAG5-2301.

Development and Implementation of Remote Sensing Techniques to Monitor Invasive Plant Species in the State of Idaho, October 2001 – March 2005, $801,695, Pettingill, J., Glenn, N.F. (ISU PI), Weber, K., Prather, T., Lass, L., NASA Stennis, NAG13-02029

Synthetic Aperture Radar Analysis of Multi-scale Geologic and Environmental Processes in Idaho and the Intermountain West, Aug 2001-July 2004, $575,000, Thackray, G.D., Hughes, S.S., Glenn, N.F., Rodgers D.W., NASA EPSCoR, NCC5-577. Two year extension, August 2004 – July 2006, with additional $377,445.

Landscape Data Fusion and Assessment: Improved Feature Extraction using Multivariate Stacking, Year 2, May 2004 – May 2005, $49,252, House, E., Glenn, N.F., Windholz, T., Weber, K., Battelle Memorial Institute, Pacific Northwest Division.

NativeView Connections, March 2004 – February 2005, $25,000, Glenn, N., Hughes, S., Idaho Space Grant Consortium, from NASA Workforce Development Program.

Selenium Information System Project (SISP), July 2004 – September 2005, $68,537, Weber, K., Windholz, T., Glenn, N., Bechtel BWXT ID LLC.

Student Outreach and Training for Long-term Environmental Studies in Remote Sensing with INEEL, December 2001-September 2004, $105,646, Inouye, R., Glenn, N.F., Bechtel BWXT ID LLC

Landscape Data Fusion and Assessment: Improved Feature Extraction using Multivariate Stacking, March 2003– 2004, $102,224, House, E., Glenn, N.F., Windholz, T., Weber, K., Battelle Memorial Institute, PNW

Wildfire Effects on Rangeland Ecosystems, Livestock Grazing in ID, 2001- 2004, $500,000, Weber, K., Glenn, N.F., Holmer, R., Link, P., Minshall, W., Maschner, H., Peterson, C., NASA Goddard, NAG5-10982

GeoSTAC, Aug 2002–July 2003, $30,174, Hughes, S., Glenn, N., NASA EPSCoR, Idaho Space Grant

Postdoctoral Researcher in Remote Sensing at Idaho State University, August 2002 – July 2003, $15,000, Glenn, N., NASA EPSCoR, Idaho Space Grant Consortium

Application of the SEBAL methodology for estimating evapotranspiration and consumptive use of water through remote sensing, May 2002 – December 2003, $37,340, Glenn, N.F., Hughes, S.S., Idaho Department of Water Resources

Development of a selenium information system, December 2001 – September 2002, $20,000, Glenn, N.F. and Co-PI: Weber, K.T., Bechtel BWXT ID LLC

Modeling landslide hazards and sediment transport after wildfires with remote sensing: Yellowjacket Creek drainage, Lemhi County, ID, June 2001–Feb 2002, $10,000, Glenn, N.F., NASA Idaho Space Grant

RESEARCH PUBLICATIONS, PRODUCTS, PRESENTATIONS

Dr. Glenn has authored >100 peer-reviewed journal articles, majority with student authors. She has a Google h-index of 45 and Web of Science h-index of 32 (February 2023).

Peer-reviewed Journal Articles (*student author)

111. Thiruchittampalam S, Banerjee BP, Glenn NF, Raval S (2025) Evaluating segmentation methods for UAV-Based Spoil Pile Delineation. *Scientific Reports* 15:10305. https://doi.org/10.1038/s41598-024-77616-y

110. Wilder, B.A., Enterkine, J., Hoppinen,· Z., Adebisi, N., Marshall, H.P., O'Neel, S., Van Der Weide, T., Kinoshita, A.M., Glenn, N.F., 2025, Modeling snow optical properties from single wavelength airborne lidar in steep forested terrain. *Frontiers in Earth Science*.

109. Enterkine, J., Hojatimalekshah, A., Vermillion, M., Van Der Weide, T., Arispe, S.A., Price, W.J., Hulet, A. and Glenn, N.F., 2025. Voxel Volumes and Biomass: Estimating Vegetation Volume and Litter Accumulation of Exotic Annual Grasses Using Automated Ultra-High-Resolution SfM and Advanced Classification Techniques. *Ecology and Evolution*, *15*(1), p.e70883. 10.1002/ece3.70883.

108. Thiruchittampalam, S., Banarjee, B.P., Glenn, N.F., McQuillan, A., Raval, S., 2024, Granular characterisation of coal spoil dump using unmanned aerial vehicle data to enhance stability analysis, Journal of Rock Mechanics and Geotechnical Engineering, 10.1016/j.jrmge.2024.09.044.

107. Wilder, B. A., Meyer, J., Enterkine, J., and Glenn, N. F., 2024, Improved snow property retrievals by solving for topography in the inversion of at-sensor radiance measurements, The Cryosphere, 18, 5015–5029, https://doi.org/10.5194/tc-18-5015-2024.

106. Huang, T., Olsoy, P.J., Glenn, N.F., Cattau, M.E., Roser, A.V., Boehm, A., Clark, P.E., Quantifying rangeland fractional cover in the Northern Great Basin sagebrush steppe communities using high-resolution unoccupied aerial systems (UAS) imagery. Landscape Ecology **39**, 196 (2024). https://doi.org/10.1007/s10980-024-01983-0.

105. Wilder, B.A., Lee, C.M., Chlus, A., Marshall, H.P., Brandt, J, Kinoshita, A.M., Enterkine, J., Van Der Weide, T., Glenn, N.F., 2024, Fast retrieval of snow surface properties from spaceborne imaging spectroscopy measurements through dimensionality reduction using k-means spectral clustering, J-STARS, 10.1109/JSTARS.2024.3386834.

104. Thiruchittampalam, S., Shanmugalingam, K., Banarjee, B. P., Glenn, N. F., & Raval, S., 2024, Comparative analysis of traditional and transfer learning algorithms for coal spoil classification via close-range imagery. Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards, 1–18. https://doi.org/10.1080/17499518.2024.2422490

103. Thiruchittampalam, S., Banarjee, B.P., Glenn, N.F., Raval, S., 2024, Geotechnical Characterisation of Coal Spoil Piles Using High-Resolution Optical and Multispectral Data: A Machine Learning Approach, Engineering Geology, https://doi.org/10.1016/j.enggeo.2024.107406.

102. Enterkine, J., Caughlin, T.T., Dashti, H., Glenn, N.F., 2024, Applied soft and fuzzy classification in a patchwork semi-arid ecosystem: stitching together classification techniques to preserve ecologically-meaningful information, Remote Sensing of Environment, https://doi.org/10.1016/j.rse.2023.113853.

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Dashti, H., Poley A., Glenn, N.F., Ilangakoon, N., Spaete, L, Roberts, D., Enterkine, J., Flores, A.N., Ustin, S.L., Mitchell, J.J., 2019, Data for Vegetation Maps for Reynolds Creek Experimental Watershed (RCEW) for the Year 2015 [Data set]. 10.18122/bcal_data.5.boisestate

Shankar, R.*, Ilangakoon, N., Orenstein, A., Ciaglia, F., Glenn, N.F., Olschanowsky, C., 2019, AdaptLidarTools: A Full-Waveform Lidar Processing Suite, 15th eScience 2019 International Conference Paper (peer-reviewed), IEEE.

Mitchell, J.J., Glenn, N.F., Dahlin, K.M., Ilangakoon, N*, Dashti, H*, Maloney, M.C.*, "Integrating Hyperspectral and LiDAR Data in the Study of Vegetation", *Hyperspectral Remote Sensing of Vegetation (Second Edition, Four Volume-set). Volume I Title: Fundamentals, Sensor Systems, Spectral Libraries, and Data Mining for Vegetation. Eds.* Thenkabail, P.S., Lyon, G.J., and Huete, A. 2018. CRC Press, Pp. 449.

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Sadegh, M., Pierce, J, AghaKouchak, A., Glenn, N. F., Curl, C., 2018, Will clean air fade away?, Eos, 99, https://doi.org/10.1029/2018EO090735. Published on 16 January 2018.

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Li, A., Will, R.*, Glenn, N.F., Benner S, Spaete, L.P, Spatial pattern of soil organic carbon acquired from hyperspectral imagery at Reynolds Creek Critical zone observatory (RC-CZO), 2016, 8th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Los Angeles, CA, 2016, pp. 1-5. doi: 10.1109/WHISPERS.2016.8071812.

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Shrestha, R. and Glenn, N.F.. (2016). 2007 Lidar-Derived Digital Elevation Model, Canopy Height Model and Vegetation Cover Model Data Sets for Reynolds Creek Experimental Watershed, Southwestern Idaho [Data set]. Boise, ID: . http://doi.org/10.18122/B27C77

Spaete, L.P.; Glenn, N.F.; and Baun, CW. (2016). Morley Nelson Snake River Birds of Prey National Conservation Area 2013 RapidEye 7m Landcover Classification [Data set]. Boise, ID: . http://dx.doi.org/10.18122/B21592

Li, A.; Glenn, N.F.; Olsoy, P.J.; Mitchell, J.J.; and Shrestha, R. (2015). Aboveground Biomass Estimates of Sagebrush Using Terrestrial and Airborne LiDAR Data in a Dryland Ecosystem (Data Set) [Data set]. Boise, ID: . http://dx.doi.org/10.18122/B2WC74

Ilangakoon, N.*, N. Glenn, and L. Spaete. 2017. LiDAR Data, DEM, and Maximum Vegetation Height Product from Southern Idaho, 2014. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1532

Glenn, N.F., L.P. Spaete, R. Shrestha, A. Li, N. Ilangakoon, J. Mitchell, S.L. Ustin, Y. Qi, H. Dashti, and K. Finan. 2017. Shrubland Species Cover, Biometric, Carbon and Nitrogen Data, Southern Idaho, 2014. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1503

Invited Talks *(select, most recent in last 5 years, from more than 300 presentations, 2000-2022)*
Glenn, N.F., Ilangakoon, N, Dashti, H, Mitchell, J., Spaete, L, Goulden, T., Krause, K., Enterkine, J., Poley, A., Assessing functional diversity in a dryland ecosystem using full waveform lidar, hyperspectral, and time series remote sensing, AGU, Washington DC, 2018

Glenn, N.F., Ilangakoon, N., ASO's full waveform lidar for assessing vegetation structure and function in Reynolds Creek Experimental Watershed and Grand Mesa, NASA ASO JPL, Mammoth Lakes, CA, 2018

Uhlmann, Z., Glenn, N.F., Spaete, L.P, Hiemstra, C., Tennant, C, McNamara, J., 2018, Resolving the Influence of Forest-Canopy Structure on Snow Depth Distributions with Terrestrial Laser Scanning, IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium, Valencia, 2018

Glenn, N.F., Ilangakoon, N., Dashti, H., Estimation of LAI in a Heterogeneous Semi-arid Ecosystem using Full Waveform Lidar, AGU, New Orleans, 2017

Glenn, N.F., Ilangakoon, N, Dashti, H, Mitchell, J., Maloney, M., Ustin, S., Qi, Y., Spaete, L, Will, R., Benner, S, Pandit, K., Flores, L., Remote Sensing in Drylands: From Leaf to Landscape, ESA, PDX 2017

Dashti, H., Ilangakoon, N., Glenn, N.F., Mitchell, J.J., Ustin, S., Spaete, L., Estimating Leaf Area Index in Shrublands With Imaging Spectroscopy: Statistical and Physical Models, HyspIRI Annual Meeting, CalTech, CA 2016

TEACHING

Classroom Instruction (number of students)

Engineering Design & Innovation, ENGG1000, UNSW Faculty Lead Surveying and Geospatial Engineering, Term 1, 2020 (2000)

Practice of Work, Work Integrated Learning, CDEV3000, UNSW Faculty Advisor, Summer 2020 (20)

Geosciences 681 Selected Topics in Remote Sensing: Calibration, Spring 2019 (7)

Geography 361/561 Remote Sensing & Image Processing, Fall 2018 (24)

Geography 361/561 Remote Sensing & Image Processing, Fall 2017 (15)

Geosciences 661 Advanced Image Processing Spring 2017 (6)

Geography 361/561 Remote Sensing & Image Processing, Fall 2016 (15)

Geosciences 661 Advanced Image Processing Spring 2016 (4)

Geography 361/561 Remote Sensing & Image Processing, Fall 2015 (12)

Geography 361/561 Remote Sensing & Image Processing, Online Course, Summer 2015 (8)

Geography 361/561 Remote Sensing & Image Processing, Online Course, Spring 2014 (8)

Geography 361/561 Remote Sensing & Image Processing, Fall 2014 (30)

Geosciences 581 Selected Topics in Remote Sensing Fall 2014 (5)

Geosciences 661 Advanced Image Processing Spring 2014 (4)

Geology 4409/5509 Remote Sensing (Tri-campus course)
- Spring 2012, 40 students, Boise (12), Pocatello (14), Idaho Falls (11)
- Spring 2011, 37 students, Boise (9), Pocatello (16), Idaho Falls (12)
- Spring 2010, 30 students, Boise (12), Pocatello (12), Idaho Falls (6)
- Spring 2009, 26 students, Boise (8), Pocatello (17), Idaho Falls (1)
- Spring 2008, 19 students, Boise (4), Pocatello (8), Idaho Falls (7)
- Spring 2007, 24 students, Boise (5), Pocatello (10), Idaho Falls (9)
- Spring 2006, 24 students, Boise (4), Pocatello (13), Idaho Falls (7)
- Spring 2005, 12 students, Boise (1), Pocatello (11)
- Spring 2001, 13 students, Pocatello
- Fall 2001, 14 students, Pocatello (developed new course)

Geology 6609 Advanced Image Processing (Tri-campus course)
- Fall 2012, 7 students, Boise (5), Pocatello (4), Moscow (2) (enrolled students from ISU, Boise State University, and University of Idaho)
- Fall 2010, 7 students, Boise (3), Pocatello (2), Idaho Falls (2)
- Fall 2008, 2 students, Pocatello (1), Boise (1)
- Fall 2007, 2 students, Pocatello (2)
- Fall 2006, 5 students, Boise (2), Pocatello (1), Idaho Falls (2) (developed new upper graduate student level course)

Geology 5599 Lidar and Image Processing (Tri-campus course)
- Fall 2011, 7 students, Boise (3), Idaho Falls (4) (developed new upper level graduate student level course)
- Fall 2012, 10 students, Boise (1 UI, 2 BSU, 1 ISU), Pocatello (4), Moscow (2 UI)

Geology 6606 Geostatistics (Tri-campus course)
- Spring 2012, 20 students, Boise (4), Pocatello (12), Idaho Falls (4)

Geology Field Camp
- Summer 2007, 21 students, 3 days
- Summer 2006, 21 students, 3 days
- Summer 2005, 21 students, 3 days

- Summer 2004, 7 – 21 students, 2 - 4 days

Research Experiences Offered to Students *(beyond formal advising)*
- 2019 – Undergraduate – Danielle Marquette
- 2018-2019 - Undergraduate - Vera Skomarokha
- 2016-2018 – Undergraduate - Silvia Perritte
- 2018 – 2021 - Undergraduate - Kate Carter-Cram (Graduated as a Boise State Top Ten Scholar)
- 2015 –2016 – Undergraduates - Rick Raymondi, Maren Watkins, Christina Beeson
- Summer 2015 – Undergraduate - Maren Watkins, Soraya (Catherine) Yazdanpour
- Summer 2014 – Undergraduates - William Carter, Timothy Phero
- 2013 – Graduate - Mike Griffel, Post-baccalaureate Geotech Certificate, Geol 648, Remote sensing fire
- 2012 – Graduates -Michael Overton, M.S. GIScience, Geol 648, 2 credits, LiDAR programming; Mike Griffel, Post-baccalaureate Geotech Certificate, Geol 648, Remote sensing fire
- 2011 – Undergraduate and graduate -Andrew Farias, B.S. Geomatics, Geol 582, 3 credits, *LiDAR remote sensing;* Mike Griffel, Post-baccalaureate Geotech Certificate, *Coordinated internship with Idaho Department of Water Resources*
- 2009 – Undergraduate - Ashley Hayes, B.S. Geology, Geol 582, 3 credits, *Remote sensing*
- 2007-2011 – Undergraduate - Carol Moore, B.S. EES, Mapping rock outcrops with remote sensing. This research has resulted in one publication to date, a $20,000 grant award, and an **undergraduate research award** for Carol by the Cooperative Ecosystems Studies Unit (CESU); undergraduate research also supported by Idaho NSF and NASA EPSCoR
- 2007 – Graduate -Brian Davis, Post-baccalaureate Geotechnology Certificate, Geol 648, 2 credits, *Mapping invasive species with remote sensing*
- 2006 – Undergraduate - Carol Moore, B.S. Geology, Geol 482, 2 credits, *Determining rock outcrops with remote sensing in Clark County for NRCS soil surveys*
- 2006 – Graduate - Randy Lee, INL, MS GIS, Geol 648, 3 credits, *Development of spectral and spatial techniques for elevation models for hydrology*
- 2003 – Undergraduate - Chad Gentry, B.S. Biology, Geol 482, 1 credit, *Remote sensing*
- 2002 – Graduates - Jeremy Shive, M.S. Biology, Geol 648, 1 credit, *Development of hyperspectral remote sensing techniques;* Tanya Johnson, B.S. Anthropology, Geol 482, 3 credits, *Remote sensing of archaeological sites in the Eastern Snake River Plain*
- 2002 – Graduate - Ben McMahan, M.S. Anthropology, Geol 648,1 credit, *Multitemporal stacking to simulate hyperspectral imaging*

Internship Experiences Offered to Students
- Kate Carter-Cram, Sage International High School, Summer 2014-2017
- Parker Moore, Meridian High School Junior, Fall 2011
- Scott Miller, BS Geology, internship at NOAA-Boulder with Dr. Bob Zamora, Summer 2007
- Jackie Langille, BS Geology, internship at NOAA-Boulder with Dr. Bob Zamora, Summer 2006, *Correlation of Precipitation and Soil Water Content to Rising River Levels*
- Allan Anselmo, MS GIS, internship at NOAA-Boulder with Dr. Bob Zamora, Summer 2005, *Programming for Soil Moisture*

Graduate Students
Primary advisor:
- Titus Nyarko Nde, PhD Computing, current
- James Hada, MS Geosciences, current

- Tao, Huang, PhD EEB, current
- Brent Wilder, PhD Geosciences, current
- Angela Seibert, MS Geosciences, Red Castle Resources
- Ahmad Hojatimalekshah, PhD Computing, Northwest Management, Inc
- Jake Graham, PhD Geosciences, DDM Imports
- Hamid Dashti, PhD Geosciences, U Wisconsin
- Nayani Ilangakoon, PhD Geosciences, UC Boulder
- Monica Vermillion, MS Geophysics, USFS
- Anna Roser, MS Biology, Black Sage Consulting
- Ann Marie Raymondi, MS Biology, BLM
- Josh Enterkine, MS Geosciences, Boise State University
- Megan Gallagher, MS Geophysics, Harris Geospatial
- Zach Uhlmann, MS Geosciences, Environmental Consulting
- Andrew Poley, MS Geophysics, MTRI
- Shital Dhakal, MS Hydrology, City of Pittsburgh, CA
- Alex Boehm, MS GISci, USDA ARS
- Randy Lee, Non-thesis MS GISci, DOE INL Scientist
- Kyle Anderson, MS GISci, Bitter Root Land Trust
- Jacob Tibbits, MS in GISci (non-thesis), BLM
- Peter Olsoy, MS GISci, Post-doc
- Amberle Keith, Non-thesis MS GISci
- Denise Jensen, Non-thesis MS GISci
- Catherine Zajanc, Non-thesis MS GISci
- Jayson Murgoitio, MS GISci, BLM
- Sam Gould, MS GISci, Weld County
- Jed Gregory, Non-thesis MS GISci, BLM
- Jessica Mitchell, MS, PhD, University of Montana
- Joel Sankey, PhD, USGS
- Sara Ehinger, MS GISci, USFS
- Jill Norton, MS GISci, Power Engineers
- Charles Finley, MS GISci, Idaho Power
- Nagendra Singh, MS Geology, Oak Ridge National Lab
- Jacob Mundt, MS Geology, Weld County
- Diane Sprague-Wheeler, MS Geology, USFS

Secondary advisor/Committee Member:
- Tao Huang, PhD Ecology, Evolution, and Behavior (EEB)
- Joel Gongora, PhD Geophysics
- Andrew Hedrick, PhD Geophysics
- Lucy Gelb, MS Hydrology
- Megan Maksimowicz, MS Hydrology
- Ryan Will, MS Hydrology
- Chris Stanberry, MS Hydrology
- Stephanie Coates, MS Biology
- Katelyn Watson, PhD Geosciences
- Elizabeth Ronar, MS Hydrology
- Chris Tennant, PhD Geosciences,

- Theo Barnhart, MS Geology
- Teva Veluppillia, Non-thesis MS GISci
- Robert Beazer, PhD EAS
- Danny Anderson, PhD EAS
- Yang Cao, PhD EAS
- Kacy Krieger, MS Geology
- Pam Bond, MS GISci
- Carl Rudeen, MS GISci
- Amber Hoover, MS Biology
- Brian Marchionni, MS GISci
- Jeyakanthan Veluppillai, MS GISci
- Christopher Michaelis, MS GISci
- Bettie Keetch, MS Natural Sciences
- Zach Lifton, MS Geology
- Ryan Baum, MS GISci
- Stephen Dorsch, MS Geology
- Jen Carr Merrill, MS Geology

Served as Graduate Faculty Representative (GFR) for 13 MS Counseling, 4 PhD Counseling, 1 MS Education, 4 MS Speech Language Pathology, and 1 MS Biology Students

Committee Member for Other Universities:
- Jeff Reeder, M.S., University of Idaho Ecohydraulics, December 2012
- Rohan Benjankar, Ph.D., University of Idaho Ecohydraulics, Summer 2009
- Joel Homan, MS Hydrology, Boise State University, Spring 2008

Post-doctoral Scientists and Research Professors
- Dr. Karun Pandit, Post-doc, 2016-2019
- Dr. Aihua Li, Post-doc, 2012 - 2017
- Dr. Rupesh Shrestha, Post-doc, 2010-2015
- Dr. Jessica Mitchell, Post-doc, 2012 – 2013
- Dr. Teki Sankey, Research Assistant Professor, 2008-2012
- Dr. Cheng Wang, Post-doc, Remote Sensing, 2007- 2009
- Dr. David Streutker, Post-doc, Physics, 2003- 2006
- Dr. Mohamed Aly, Post-doc, Geology, 2006 – 2008
- Dr. Ahmed Said, Research Assistant Professor, Hydrology, 2006- 2008
- Dr. John Chadwick, Post-doc, Geology, 2002 –2005

Student Awards
- Nayani Ilangakaoon, Evaluation of Spatial Trends in Biomass and LAI in Heterogeneous Tree-Shrub Ecotones, NASA NESSF17 for PhD $134,929, 9/1/2017-8/31/2020
- Monica Vermillion, Awardee of the 2019 Dean Olmstead Memorial Scholarship, as awarded by the Rocky Mountain Chapter of SSPI, $1,000, 2019
- Hamid Dashti, Boise State University Graduate Student Showcase, College of Innovation and Design Award, 2019

- Ann Marie Raymondi, 2016, 2nd Place Student Poster Award, Great Basin Native Plant Project and Society for Ecological Restoration Great Basin Chapter's 2016 annual meeting, Boise, ID.
- Shital Dhakal, 2014, 2nd Place Student Poster Award, SERNW-GB Regional Conference on Collaborative Restoration, Redmond, OR.
- Carol Moore, 2011, Undergraduate student, Best Poster Award, Using 3D visualizations for environmental outreach. EPSCoR Third Annual Western Tri-State Consortium Meeting, April 2011, Santa Ana Pueblo, NM.
- Joel Sankey, 2010, Outstanding PhD Student, Idaho State University
- Jacob Tibbits - INRA First Prize Student Poster Award, 2007 for: Tibbits, J., Theau, J., Glenn, N., Weber, K.), October 2007. The use of Remote Sensing and GIS to Model Rangeland Health Characteristics. INRA-BSU Environmental Sensing Symposium, Boise, ID.
- Jessica Mitchell - INRA Second Prize Student Poster Award, 2007 for: Mitchell, J., Glenn, N., October 2007. Matched Filter Abundance Estimates in Mixture Tuned Matched Filtered Classifications of Leafy Spurge. INRA-BSU Environmental Sensing Symposium, Boise, ID.
- Carol Moore, Undergraduate Student Researcher Award, Great Basin Cooperative Ecosystems Studies Unit, 2008 Reno, NV, CESU Annual Meeting
- Yardenia Martinez (University of Houston) - Society of Exploration Geophysics Best Student Poster Paper for Martinez, Y., Khan, S., Link, P., Glenn, N., Mapping geology and structure using multispectral and hyperspectral data and evaluating topographic correction methods: Case study, Salmon River Mountains of east-central Idaho, 2005 SEG Annual Meeting

Hosted Workshops (Select)

August 2018, EarthCube Research Coordination Network Workshop - Advancing the Analysis of High Resolution Topography (A2 HRT), 50 participants, August 21-24, 2018, Broomfield, CO; Hosted with two other faculty.

October 2017, Full-waveform lidar analysis, SilviLaser Conference, Blacksburg, VA, 25 students for 1 day. Lead host.

November 2016 and 2017, Morley Nelson Snake River Birds of Prey National Conservation Area Science Working Group, Annual Symposium, organized and hosted at Boise State University for 125 participants. Lead host.

September 2016, Topographic, geomorphic, and vegetation analysis with lidar, Boise State University, NSF-NEON, 25 students for 3 days. Lead host.

August 2016, Mapping Species, Composition (foliar chemistry) and Soil Properties with Spectroscopy, Boise State University, NSF-NEON, 25 students for 3 days. Lead host.

March 2015, LiDAR Derived DEMs applied to Landslide, Fault, Earthuake Rupture, and Landscape Changes, National Autonomous University of Mexico, Mexico City, Mexico; in coordination with OpenTopography, 25 students for 2 days. One of several instructors.

SERVICE (Select)

International
- Czech Globe, Hosted visiting scientists at BSU and provided workshop in Czech Republic (May-June 2014)

University
- Lead, Search Committee for Human-Environment Systems Cluster Hire, 2014-2017
- Lead, Cyberinfrastructure NSF Idaho EPSCoR, 2013-2016
- Tenure & Promotion Committee, College of Arts & Sciences, 2015-2017
- Undergraduate Curriculum Council, 2015-2016
- Search Committee, Materials Science & Engineering, 2014-2015

Department
- Department liaison for undergraduate curriculum council and college promotion & tenure
- E-campus training and course development
- Search committee, GIS Lecturer, 2017

Community Service
- Established the Idaho Lidar Consortium (ILC), a website and collaboration tool to share lidar remote sensing data and reduce acquisition costs for State of Idaho. The ILC has been awarded over $5M in funding for lidar data for the State of Idaho in the past 5 years.

Professional
Editorial Roles
- Editorial Board (Subject Matter Editor) for Ecological Applications, 2017-
- Associate Editor, JGR Biogeosciences Special Issue on Imaging Spectroscopy, 2021-
- Co-Editor, Frontiers Special Issue on Remote Sensing of Invasive Species, 2016-2018
- Editor, Remote Sensing Special Issue on Geological Remote Sensing, 2013

Committee Roles
- Committee Member on Evolving the Geodetic Infrastructure to Meet New Scientific Needs, National Academies of Sciences, Engineering & Medicine, 2018-2020
- User Working Group, NASA's Oak Ridge National Laboratory, Distributed Active Archive Center for Biogeochemical Dynamics, 2014-2019
- Panel Member, Algorithm Theoretical Basis Documents (ATBD) for NASA's ICESat-2, 2014-2015
- Member, NASA's Terrestrial Ecology, Carbon Cycle, Land Use and Biodiversity, 2014-2015
- Chair, Morley Nelson Snake River Birds of Prey National Conservation Area Science Working Group, 2015-2018
- Chair, Coordinating Committee, Great Basin Research and Management Partnership, 2014 -2016
- Chair and Committee Member, UNAVCO (NSF) Terrestrial Imaging Geodesy Working Group, 2013-2016
- Advisory Board Member, OpenTopography (NSF), 2010-2019