

DIEP DAO

University of Colorado - Colorado Springs
Department of Geography and Environmental Studies
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Education

Ph.D. (2013) University of North Carolina at Charlotte, USA, Geography & Urban Regional Analysis
M.Sc. (2005) University of Calgary, Canada, Geomatics Engineering
B.E. (2002) University of New South Wales, Australia, Geomatics Engineering

Additional Workshops and Training

Summer Doctoral Teaching Associates Initiative Certificate, UNC-Charlotte (2010)
Canvas Training, UCCS (2018)
Grant Writing Training, UCCS (2018-present)

Professional Experience

2016 - present Assistant Professor of GIScience, Department of Geography and Environmental Studies, University of Colorado – Colorado Springs, USA

2016 - present Faculty Affiliates, UCCS Global Intercultural Research Center (GLINT)

2020 - present Faculty Affiliates, UCCS Gerontology Center

2020 - present Colorado Springs Silver Key Senior Services, OIT Department, Volunteer

2013 -2016 Assistant Professor of GIScience, Department of Geography, University of Montana, USA

2010/5-6 Instructor, Department of Geography and Earth Sciences, University of North Carolina at Charlotte, USA

2008-2013 Research Assistant, Department of Geography and Earth Sciences, University of North Carolina at Charlotte, USA

2005-2007 Research Scientist, Co-ordination Center for Space Technology Applications, Vietnamese Academy of Science and Technology (VAST), Hanoi, Vietnam

2003-2005 Research Assistant, Department of Geomatics Engineering, University of Calgary, Canada

2002-2003 Research Assistant, Environmental Remote Sensing Laboratory, Institute of Geography, Vietnam National Centre for Natural Science and Technology, Hanoi, Vietnam

2001-2002 Internship, Department of Geomatics Engineering, University of New South Wales, Australia

Refereed Publications

(*students)

1. Cleland Z. *, K.A. Dao, and T.H.D. Dao. (2023, In press). Detecting Changes in Spatial Characteristics of Colorado Human-caused Wildfires Using Apriori-based Frequent Itemset Mining. *International Journal of Computers, Environment, and Urban System (CEUS)*.
2. Dao, T.H.D. and J-C. Thill. (2022). Metric, Topological, and Syntactic Accessibility in Three-Dimensional Urban Networked Spaces: Modeling Options and Visualization. *ISPRS International Journal of Geo-Information*, 2022, 11, 467. <https://doi.org/10.3390/ijgi11090467>.
3. Dao, T.H.D. and J-C. Thill. (2021). CrimeScape: Analysis of Socio-spatial Associations of Urban Residential Motor Vehicle Theft. *Social Science Research* (101): 102618, ISSN 0049-089X, <https://doi.org/10.1016/j.ssresearch.2021.102618>.
4. Dao, T.H.D., Ravesloot, C., Greiman, L., Hargrove, T. (2019). Mining Spatial Associations between Daily Activities and Health using EMA-GPS Data. *Transactions in Geographical Information Sciences* (23): 515–537. DOI: 10.1111/tgis.12539.
5. Dao, T.H.D. (2018). Rule Learning for Spatial Data Mining. *The Geographic Information Science & Technology Body of Knowledge* (1st Quarter 2018 Edition), John P. Wilson (ed.). DOI: 10.22224/gistbok/2018.1.3
6. Dao, T.H.D., and J-C. Thill. (2017). Indoor Three-dimensional Accessibility Auditing for Computer-aided Architectural Design. *Transactions in Geographic Information Sciences* 2017:1-23.
7. Dao T.H.D. and J-C. Thill. (2016). The SpatialARMED Framework: Handling Complex Spatial Components in Spatial Association Rule Mining. *Geographical Analysis* 48(3): 248-274.
8. Zhou, Y., T.H.D. Dao, J-C. Thill, and E. Delmelle. (2015). Enhanced 3D Visualization Techniques in Support of Indoor Location Planning. *Journal of Computer, Environment, and Urban System* 50, 15-29.
9. Dao T.H.D., Y. Zhou, J-C. Thill, and E. Delmelle. (2011). Spatio-temporal Location Modeling in a 3D Indoor Environment: the Case of AEDs as Emergency Medical Devices. *International Journal of Geographical Information Science* 26 (3), 469-494.
10. Thill J-C., T.H.D. Dao, and Y. Zhou. (2011). Traveling in the Three-dimensional City: Applications in Route Planning, Accessibility Assessment, Location Analysis and Beyond. *Journal of Transport Geography* 19 (3), 405-421.
11. Dao T.H.D., P. Alves, and G. Lachapelle. (2004). Performance Evaluation of Multiple Reference Station of GPS RTK for a Medium Scaled Network. *Journal of Global Positioning Systems* 3 (1), 173-182.
12. Lachapelle G., H. Kuusniemi, T.H.D. Dao, G. MacGougan, and M.E. Cannon. (2004). HSGPS Signal Analysis and Performance under Various Indoor Conditions. *Journal of Navigation* 51 (1), 29-43.
13. Dao D., C. Rizos, and J. Wang. (2002). Location-based Services: Technical and Business Issues. *Journal of GPS Solutions* 6, 169-178.

Books and Book Chapters

1. Dao, T.H.D. and C. Gibbes. (2020). The Making of a Megaregion: Regional Development and the Landscapes of Colorado's Front Range Urban Corridor. *Denver and the Rocky Mountain West*. American Association of Geographers.

2. Dao, T.H.D. and J-C. Thill. (2017). Detecting Attribute-based Homogeneous Patches Using Spatial Clustering: A Comparison Test. W. Popovich, M. Schrenk, J-C Thill, C. Claramunt, and T. Wang (Eds.) *Lecture notes in Geoinformation & Cartography: New Frontiers in Information Fusion and Intelligent GIS: From Maritime to Land-based Research*. Springer-Verlag. 37-54.
3. Dao, T.H.D. (2012). Global Satellite Positioning System and Applications. In K.A. Dao (Eds) *Experimental Methods in Modern Physics*. Vietnam Education Publication House, 512-570. (in Vietnamese)
4. Tran M.T., and THD. Dao. (2006). *The Global Positioning Systems: Theory and Applications*. Hanoi, Vietnam: Vietnamese Educational Publication. (200 page book in Vietnamese).

Research Reports

(*students)

1. Dao, T.H.D., Barboza, G. (2021) Making Colorado Springs a Safer and Healthier Place to Grow Older. Department of Geography and Environmental Studies, UCCS; UCCS Gerontology Center; Colorado Springs Silver Key Senior Assistance.
<https://geography.uccs.edu/portal/apps/Cascade/index.html?appid=6bb1d2e46d9848da8c45600eef3dc270>
2. Wright, T*. and Dao, T.H.D. (2020). Gentrification and its Effects on Changes in Neighborhood Socio-Economic Characteristics and Crime Patterns for The City of Denver, Colorado from 1990 to 2015. UCCS. <https://ges-gislab.maps.arcgis.com/apps/MapJournal/index.html?appid=e82385ae650a444a820a6065403c1d3e>

Publications under Review or in Preparation

(*students)

1. Havlick, D. and T.H.D. Dao. (Under revision). The Volume and Allocation of Militarized Airspace in the United States. *Transactions of the Institute of British Geographers...*
2. Dao, T.H.D., Dao, K.A., Barris*, M., Greiman, L. (Under revision). Coordinates to places: A real challenge to human activity analytics and a case study using Geographical EMA data. *Transactions in Geographical Information Sciences.*

Conference Proceeding Papers and Presentations

Refereed

- 1.
2. Dao, T.H.D., C. Ravesloot, L. Greiman, T. Hargrove. (2019). Mining Spatial Associations between Daily Activities and Health using GEMA Data. *ESRI User Conference Research Paper Session*, San Diego July 4-8.
3. Dao, T.H.D., and J-C. Thill. (2012). A Comprehensive Framework for Spatial Association Rule Mining. *In Proceedings of the 7th International Conference on Geographic Information Science. Columbus, OH, USA.* (GIScience 2012 International Conference Student Award).

Non-referred (* work with students)

4. Randall, T.L. and Dao, T.H.D. (2023). Examining Neighborhood Disparities for Urban Trail Access: A GIS Workflow to Prioritize Recreational Trail Development in Colorado Springs, Colorado. *American Association of Geographers Annual Meeting*, Denver CO, March 23-27, 2023.

5. Dao, T.H.D., J-C. Thill, and R. Brame (2019) Mining for Spatial Associations in Urban Residential Motor Vehicle Theft Analysis. *American Association of Geographers Annual Meeting*, Washington DC, April 2019.
6. Dao, T.H.D., Barries, M.*, Ravesloot, C., Greiman, L., and Hargrove, H. (2018) Mining Spatiotemporal Patterns Linking Daily Mobility With Health Status. *American Association of Geographers Annual Meeting*, New Orleans, April 4-6, 2018.
7. Dao, T.H.D., C. Ravesloot, L. Greiman, and T. Hargrove. (2016). Linking Daily Travel Mobility and Pain Experience Using GPS Tracking Data and Ecological Momentary Assessment Technique. *American Association of Geographers Annual Meeting*, San-Francisco, LA, March 31-April 3, 2016.
8. McKay, K.H., C. Sanders, and THD. Dao. (2015). "Show Business" or "Essential"? Stmms in Remote Nepal, *In Proceedings of the American Anthropological Association Annual Meeting*, Chicago, IL, November 17-22, 2015.
9. Sanders, C., K.H. McKay, and THD. Dao. (2015). Social Support Amid a Health-Seeking Transition in Himalayan Nepal", *In Proceedings of the American Anthropological Association Annual Meeting*, Chicago, IL, November 17-22, 2015.
10. Thill J-C., and THD. Dao. (2011). Metric and Syntactic Accessibility in Three-dimensional Urban Networked Spaces: Modeling Options and Visualization. *In Proceedings of the 12th International Conference on Computers in Urban Planning and Urban Management*. Lake Louise, Canada.
11. Dao, T.H.D., and J-C. Thill. (2010). Metric and Syntactic Accessibility Modeling for Three-Dimensional Urban Transportation Networks. *In Proceedings of the 57th Annual North American Meetings of the International Regional Science Association (RSAI)*. Denver, Colorado, USA.
12. Zhou, Y., THD. Dao, J-C. Thill, and E. Delmelle. (2010). Visualization Techniques in Support of Indoor 3D Facility Location Modeling. *In Proceedings of Association of American Geographer (AAG) Annual Meeting*. Washington, DC, USA.
13. Dao T.H.D., Y. Zhou, and J-C. Thill. (2009). GIS-based 3D Urban Environment Data Model: Applications. *In Proceedings of the 2009 North Carolina GIS Conference*. Raleigh, NC, USA. (G. Herbert Stout Award for Exemplary Student Paper).
14. Dao, T.H.D., and J-C. Thill. (2009). Contextualized Space-Time Accessibility Modeling and Measurements with NeuroFuzzy Proximity Relations. *In Proceedings of the International Conference on Advanced Geographic Information Systems & Web Services (GEOWS)*, 158-164. Cancun, Mexico.
15. Dao T.H.D., N. Nagarajan, C.L. Law, and E.K. Poh. (2007). Investigation of GPS Signals for Synchronization of UWB Indoor Positioning System. *In Proceedings of the European Navigation Conference (ENC-GNSS07)*. Geneva, Switzerland.
16. Dao T.H.D., and G. Lachapelle. (2005). GPS Performance for Various Applications. *In the Proceedings of the Asian Conference on Remote Sensing*. Hanoi, Vietnam.
17. Dao T.H.D., and M.T. Tran. (2005). Global Positioning System: An Overview. *In Proceedings of the Asian Conference on Remote Sensing*. Hanoi, Vietnam.
18. Luo, N., THD. Dao, G. Lachapelle, and M.E. Cannon. (2005). GPS Network RTK Performance under Very Active Ionospheric Conditions. *In Proceedings of the Institute of Navigation GPS/GNSS 2005 Conference*. Long Beach, CA.
19. Dao T.H.D., H. Kuusniemi, and G. Lachapelle. (2004). HSGPS Reliability Enhancements Using a Twin-Antenna System. *In Proceedings of the European Navigation Conference (GNSS 2004)*. Rotterdam, the Netherlands.

20. Lachapelle G., H. Kuusniemi, T.H.D. Dao, G. MacGougan, and M.E. Cannon. (2003). HSGPS Signal Analysis and Performance under Various Indoor Conditions. *In Proceedings of the Institute of Navigation GPS/GNSS 2003 Conference. Portland, Oregon, USA.*

Invited Presentations and Talks

1. Invited Speaker (2021) Making Colorado Spring Safer and Healthier Place to Grow Old, Talk series organized by UCCS Gerontology Center, Colorado Springs, UCCS Downtown, Colorado Springs. Co-author with Barboza, G.
2. Invited Speaker (2020) Data Science for Social Science. UCCS Café Scientifique, funded by UCCS Administration and Finance Team, Colorado Springs, CO, USA.
3. Invited Speaker (2018) Spatial Clustering for Neighborhood Boundary Detection, Talk series organized by UCCS Global Intercultural Research Center (GLINT), Colorado Springs, CO, USA.
4. Invited Speaker (2018) Big Data and Big brother, Science on TAP, Cool Science, Colorado Springs, CO, USA.
5. Invited Speaker (2016) Department of Mathematics, University of Montana, USA. Statistical-Based Auto-correction Detection and the Challenge of Mining Data-Driven Spatial Dependence Structure.
6. Invited Speaker (2015) RTC: Rural Institute Research Colloquium, University of Montana, USA. 3DCityNet: Modeling Interior Building Environment for Participation.
7. Invited Speaker (2014) Data Science Initiative Seminar, University of Montana, USA. Geospatial Big Data: Analyzing Daily Travel Pattern and Mining Crime Association as Examples.
8. Invited Co-Speaker (2014) Police Department, University of North Carolina at Charlotte, USA. Spatial Analysis of UNCC 2010 Campus Crime.
9. Invited Speaker (2013) Geography Colloquium, Department of Geography, University of Montana, USA. Traveling in Three-dimensional City: Data Modeling and Spatial Analysis Applications.
10. Invited Lecturer (2013) GPHY385: Field Techniques, Department of Geography, University of Montana, USA. Geolocation.
11. Invited Speaker (2013) Mecklenburg County Air Quality, City of Charlotte, Mecklenburg County, North Carolina, USA. GIS for Environmental, Air Quality Analysis and Modeling: Think Spatial.
12. Invited Speaker (2012) GIScience Seminar, Department of Geography, University of North Carolina at Charlotte, USA. Metric and Syntactic Accessibility in Three-dimensional Urban Networked Spaces: Modeling Option and Visualization.
13. Invited Lecturer (2012) GEOG8000-Topics in Economic Geography: Spatial Optimization, Department of Geography, University of North Carolina at Charlotte, USA. 3D Visualization in Support for Location-Allocation Modeling.

Grants and Scholarship

- Funded Project as PI and Co-PI
 - 2022. PI "Gentrification and Hispanic Community Displacements in Colorado Springs" Sponsored by University of Colorado - Colorado Springs for faculty and undergraduate

student research award, University of Colorado-Colorado Springs, \$3,500.00. (Funded: May 1, 2022 – December 30, 2022)

- 2020. Co-PI "Making Communities Safer Places to Grow Old," Sponsored by University of Colorado - Colorado Springs, University of Colorado-Colorado Springs, \$7,500.00. (Funded: May 1, 2020 - May 1, 2022), PI: Gia Barboza, School of Public Affairs, UCCS
- 2015. Co-PI, "Tribal GIS on the Flathead Indian Reservation: The contribution of local and technical knowledge in adaptation planning for forest management." 01/2016-02/2017, \$60,739, funded by Bureau of Indian Affairs (BIA), other Co-PIs: Roian Matt, Confederated Salish & Kootenai Tribal Forestry Education Outreach Coordinator; Alan Watson, Rocky Mountain Research Station, USDA Forest Service, Missoula, MT.
- Funded Project as Invited Expert (Contractor)
 - 2014. Invited Expert, a competitive research grant to the Rural Institute on Disability, University of Montana (funded by NIDRR, 2013-2018) "Ecological Momentary Assessment of Health and Community Participation". 2013-2018. PI: Craig Ravesloot, RTC: Rural, University of Montana, \$4,000,000.
- Submitted, not funded.
 - 2020. PI "Mapping Evidences of Transit-induced Gentrification and Replacement for City of Denver, Colorado Using GIS," UCCS GLINT Seed grant; \$4,000 for 1 year
 - 2019. PI "Extracting Collocation Patterns for Early Signs of Transit-induced Gentrifying Denver Neighborhoods Using High-Resolution Imagery and Business License Data" UCCS GLINT Seed grant; \$4,000 for 1 year
 - 2018. PI, "Understanding the Multidisciplinary Complex System of Urban Colorado Springs: A Best-Practice Example of Geo-spatiotemporal Integrated Social Science Research at UCCS". 6/2018-6/2021. UCCS College of LAS Innovative Research Grant. Other Co-PIs: Cerian Gibbes and Devin Moeller, Department of Geography and Environmental Studies, UCCS; \$80,000 for 2 years
 - 2015. Co-PI, a proposal to NSF: "CC*IIE Integration: University of Montana Software Defined Network Data Center", \$704,038 for 3 years
 - 2015. Co-PI, a proposal to National Institute on Disability and Rehabilitation Research, "Establishing a Baseline of Accessibility for the United States: Bringing a Demonstrated Method to Scale", \$200,000 for 3 years

Courses Taught

At UCCS

- GES 3030/5030: Introduction to GIS (2 courses)
- GES 4180/5180: Advanced GIS (Spatial Analysis and Modeling) (7 courses)
- GES 4130/5130: Introduction to GeoComputing (GIS Programming GIS with Python) (5 courses)
- GES 4040/5040: Spatial Database (3 courses)
- GES 4070/5070: Geovisualization (1 course)
- GES 4120/5120: Internet GIS (4 courses)
- GES 4980, Internship in Geography (1 course)

At University of Montana

- Python Programming for GIS (3 courses)
- Spatial Analysis and Modeling (3 courses)
- Seminar in GIS and Cartography (3 courses)

At University of North Carolina – Charlotte

- GIS for Non-Majors (1 course)

Non-Credit Instruction

- Internship, the El Paso – Teller County 9-1-1 Authority's (Authority) Geographic Information Systems (GIS) program., 10 participants. (October 2016 - Present)
- Internship Supervisor, "Database Management for Cobham Semiconductor Solutions, in the Safety, Health and Environment Department (SHE)." (May 2018 - December 4, 2018). Advised: Christopher Chacon
- Internship Supervisor – El Paso Teller 9-1-1 Authority Internship (Jan – May 2017). Advised: Alex Marczynski
- Individual/Independent Study. (August 22, 2016 - December 17, 2016). Advised: Thaddeus Swan
- 2022 Undergraduate Research Award – UCCS. Student awardee: Lauren Clarke
- Academic advisor, UCCS undergraduate and graduate students in the GIS certificate programs

Directed Student Learning

At University of Colorado – Colorado Springs

MA Academic Advisor - MA in Applied Geography:

- Theresa Randall (2021 –onward) – Thesis: Urban geography and GIS (to be determined)
- Joshua Rogerson (2019 –2020) – Transferred
- Travis Wright (2018 – 2020) – Thesis: The Role of Neighborhood Gentrification on Crime Pattern Changes – A Case Study for Denver Metropolitan Area
- Zachary Cleland (2018 – 2020) – Thesis: Understanding Associations to Human-Caused Wildfire Occurrences in Western Colorado during 1980-2016 Using Spatial Data Mining

MA Committee Member – MA in Applied Geography:

- Joe Buchheit (2020 - 2021) – Thesis: Developing a habitat model for Osprey (*Pandion haliaetus*) in Colorado using GIS: Where should new nesting platforms be built for the expanded Gross Reservoir?
- Kasia Grudzinski (2019-2021) – Thesis: Groundwater Vulnerability using the DRASTIC model in the Helena Valley-Fill Alluvial Aquifer

- Dwayne Liller (2018 – 2020) – Thesis: Redistricting Colorado: Evaluating the Impact of Compactness and Competitiveness Criteria on Election Outcomes
- Alyssa Tews (2018 – 2020) – Thesis: Predictive modeling of grey wolf (*Canis lupus*) dispersal in Colorado using agent-based modeling in GIS
- Ryan Ballard (2018 – 2019) – MA in Applied Geography – Thesis: Finding home: an exploration of Chinese housing mobilities in Denver
- Brent Courtney (2016–2018)– Thesis: Developing an Accurate Colorado Springs' Burglary Risk Terrain Model
- Michael Madsen (2016–2017) – Thesis: Comparing Aerial Lidar to Visualize the Effects of Soil Erosion Post Wildfire Conditions

Undergraduate Honors Thesis Committee Member:

- Gina Galjour (2022) – Thesis: A Rising Tide Does Not Lift All Boats: Mangroves and Shrimp Farming in Mueang Samut Sakhon District, Thailand
- Katie Martins (2021) – Thesis: Land Degradation in Southern African National Parks: A Multi-scalar Perspective.
- Shelby Paxton (2020) – Thesis: Detecting Colorado Springs Water Contamination With Remotely Sensed Imagery
- Evan Olivier (2019) – Thesis: Lightning Strike Forensics: GIS ArcMap as an Effective Tool for Casualty Associated Lightning Flash Identification
- Hannah Shelton (2018) – Thesis: Marine Mammal Subsistence Fishing In Alaska
- Austen Hawley (2017) – Thesis: A Descriptive Study of Agriculture and Land Use in Vietnam
- Caitlin Parsons (2017) – Thesis: Fire Management Strategies in Central America: Observing Spatial Patterns of Fire & Assessing Plan Efficacy

Research Assistants

Supervisor – Jacob Fox (2022 summer) – Funded Research Assistance for Undergraduate
 Supervisor – Ryan Ballard (2018 summer) – Funded Research Assistance for Postgraduate
 Supervisor – Michelle Barris (2018 spring) – Funded Research Assistance for Undergraduate
 Supervisor – Kriesjo Quimon (2017 fall) – Funded Research Assistance for Undergraduate
 Supervisor – Michelle Barris (2017 fall) – Funded Research Assistance for Undergraduate
 Supervisor – Drew Anderson (2017 spring) – Funded Research Assistance for Undergraduate

At University of Montana

Supervisor – Fernando Sánchez-Trigueros (2/2016-2/2017) – Post-doctoral Research Associate –
 Independent Research Project: Tribal GIS on the Flathead Indian Reservation:

The contribution of local and technical knowledge in adaptation planning for forest management – Department of Geography, University of Montana

Advisor – Nick Kline (2015-2016) – MS in GIS – Thesis: Socio-Economic Reorganization in Response to Climate Change in the Vietnam's Mekong River Delta – Department of Geography, University of Montana

Advisor – Nate Wold (2015-2016) – MS in GIS – Thesis: Sustainable Urbanization: The Case of Missoula, Montana – Department of Geography, University of Montana

Advisor – Sarah Smolka (2015-2016) – MS in GIS – Thesis: Evidences of Human-Environment Interactions by Glacier National Park Surrounding Land Use Change Analysis – Department of Geography, University of Montana

Committee Member – Patrick McKay (2014–2016) – Ph.D. – Dissertation: Exploring Juvenile Justice Issues in Montana: The Role and Impact of Juvenile Risk Assessment Instruments – The University of Montana Individualized Interdisciplinary Doctoral Program

Committee Member – Larry Lee (2014–2016) – MS in Fire Science – Thesis: Seasonality and its effect on fire severity on the North Rim of Grand Canyon National Park, Arizona USA – Department of Fire Sciences and Management, University of Montana

Committee Member – Garin Wally (2013-2015) – M.S. in Geography – Portfolio – Department of Geography, University of Montana

Committee Member – Jessica Schutz (2013–2015) – Master of Arts in Geography – Thesis: A GIS Assessment of Ecoregion Representation in Chile's Existing and Proposed Integrated Network of Protected Areas – Department of Resource Conservation, University of Montana

Number of undergraduate advisees: 10 with geography major

Recognitions

2012	GIScience 2012 Conference Student Award, Association of American Geographers (among 10 recipients internationally)
2009	G. Herbert Stout Award for Exemplary Student Paper in North Carolina GIS Conference
2008-09, 2012	Graduate Travel Award, University of North Carolina at Charlotte
2008-2012	Ph.D. Graduate Full Assistantships, University of North Carolina at Charlotte
2003	Best Presentation Award, the 16 th International Technical Meeting of the Satellite Division, The Institute of Navigation, Portland, Oregon, USA
2003, 2004	Graduate Research Scholarship, University of Calgary, Canada
2003-2005	Alberta Informatics Circle of Research Excellence (iCORE) M.Sc. Graduate Full Assistantships, the Government of Alberta, Canada

1998-2002 The Australian Agency for International Development Scholarship, University of New South Wales, Australia (50 recipient nationally, awarded fully-sponsored 4 year undergraduate study program)

Professional Organizations

- Member, American Association of Geographers
- Montana Association of Geographic Information Professionals
- GIS Colorado

Services

To University of Colorado – Colorado Springs (2016 - present)

At university level

- Member, UCCS Graduate Research Fellowship Review Committee (2018 - 2019)
- Member, UCCS Mentored Doctoral Fellowship Review Committee (2019-2020)
- Member, Misconduct in Research, Scholarship, and Creative Activities Committee (2020-present)
- Faculty Affiliate, UCCS Global Intercultural Research Center (GLINT) (2016-present)
- Faculty Affiliate, Gerontology Center, UCCS (2019-present)

At college of LAS level

- Member, College of LAS. Teaching committee (Jan 2021 -present)
- Member, discussion group, led by LAS Associate Dean on GIS partnership for student internships

At department (Geography and Environmental Studies) level

- Coordinator, UCCS Undergraduate and Graduate Certificate in Geographical Information Science (2018 - present)
- Co-coordinator, GES colloquium (2018 – present)
 - Dr. Young Jei Lee (UCCS; School of Public Affairs; "A Theory Driven Algorithm For Real-Time Crime Hot Spot Forecasting")
 - Dr. Mike MacFerrin (UC-Boulder; "Ice Slabs, Surprise Crevasses, and Cold-War Bases: Explorations of Surface Meltwater from the Interior of the Greenland Ice Sheet")
 - Dr. Hanson Nyantakyi-Frimpong (UC-Denver) – canceled due to the Covid-19 pandemic
- Chair, The Jacquelyn Beyer Women in Geography Grant Committee (2018 Fall – present)
- Member, The Graduate Review Committee (2016 – present)
- Member, The GIScience Certificate Committee (2016 – present)
- Interim GES GIS Lab Coordinator (2018-2019)
- Member, The Jacquelyn Beyer Women in Geography Grant Committee (2016 – 2018)
- Co-Chair, GIS Technology Specialist Full-time Staff search committee (2018-2019)
- Co-chair, GIS Instructor & GIS Lab Director search committee (Spring 2017)
- Member, GES tenure-track faculty search committee (Fall 2017)
- Member, GES full-time instructor in geology search committee (Fall 2017)

To University of Montana (2013-2016)

At university level

- Member, Steering Committee of the University of Montana Data Science Initiative (2013-2016)
- Organizer, University of Montana Data Science Initiative Seminar (2014-2015)
- Curriculum Development Committee Member, University of Montana Data Science Certificate and Degrees (2014-2016)
- Member, Steering Committee of the Certificate in Geographical Information Science and Technology, University of Montana (2013-2016)

At department (Geography) level

- Member, Visioning and Strategic Planning Committee, Department of Geography
- Coordinator, Department of Geography Website
- Co-coordinator, Geospatial Lab and Supervisor of Lab Assistants
- Coordinator, Department Faculty & Graduate Student Posters
- Coordinator, Geography LISTSERV Geography Emailing List
- Member, Faculty Evaluation Committee (2015-2016)
- Faculty Advisor, Student Evaluation Committee (SEC) (2014-2015)
- Member, Visiting Assistant Professor in Geography Search (2014-2015)
- Member, Assistant Professor in Geography Search (2015-2016)
- Participator, Montana State Council Meeting for Land Use and GIS
- Department of Geography Representative, University of Montana Open House Days
- Departmental liaison for international students
- Departmental liaison to the Rural Institute, University of Montana
- Departmental liaison to the Aldo Leopold Wilderness Research Institute
- Departmental liaison to the Montana GIS Professional Community

To Professional Community

- Editorial Board Member, International Journal of Geographical Research (2018-2020)
- Session organizer and chair, Spatial and Spatiotemporal Data Mining, American Association Geographers (AAG) 2019 Annual Meeting. New Orleans, Louisiana
- Session organizer and chair, Spatial and Spatiotemporal Data Mining, American Association Geographers (AAG) 2020 Annual Meeting. Denver, Colorado
- Reviewer of Grant Proposals, Books, and Journal Articles:
 - NSF EARLY-CAREER award in Geography and Spatial Science (1 proposal)
 - NSF in Geography and Spatial Science (1 proposal)
 - South Carolina Experimental Program to Stimulate Competitive Research and Institutional Development Awards (SC EPSCoR/IDeA) (1 proposal)
 - WILEY Publisher (1 book)
 - International Journal of Geographic Information Science (IJGIS): 6 articles
 - Journal of Computers, Environment and Urban Systems (CEUS): 13 articles
 - Applied Geography (1 article)
 - Transactions in Geographic Information Systems (5 articles)
 - Journal of Ambient Intelligence and Humanized Computing (1 article)
 - UCGIS Geographic Information Science & Technology Body of Knowledge, UCGIS (2 articles)
 - Cartography And Geographical Information Science (1 article)
 - The PeerJ Journal of Life and Environmental Sciences (1 article)
- Member, Montana Land Information Advisory Council (official appointment from Montana Governor); actively engaged in the Council's activities (2015-2016)

- Member, Montana G.I.S. Professional Community (2013-2016)
- Member, G.I.S. Colorado (2016-present)
- Member, Montana Land Information Advisory Council (official appointment from Montana Governor); actively engaged in the Council's activities (2015-2016)
- Member, Montana GIS Professional Community (2013-2016)

To Local Community

- Silver Key Senior Assistance Program, Research Collaboration and Volunteer, <https://www.silverkey.org/> (2019-present)
- El Paso-Teller County 9-1-1 Authority, GIS. Internship Coordinator, elpasoteller911.org (2016-present)