

## VITA

### 1. Name and Address

Thi Hong Diep Dao, Assistant Professor  
Department of Geography and Environmental Studies, University of Colorado – Colorado Springs

### 2. Education

Ph.D. (2013) University of North Carolina at Charlotte, USA, Geography & Urban Regional Analysis

M.Sc. (2005) University of Calgary, Canada, Geomatic Engineering

B.E. (2002) University of New South Wales, Australia, Geomatic Engineering

Certificate (2010) University of North Carolina at Charlotte, USA, Summer Doctoral Teaching Associates Initiative

### 3. Professional Experience

|            |   |
|------------|---|
| 2016 -     | Assistant Professor of GIScience, Department of Geography and Environmental Studies, University of Colorado – Colorado Springs, USA                             |
| 2013 -2016 | Assistant Professor of GIScience, Department of Geography, University of Montana, USA   |
| 2013/8-12  | Lecturer, 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 Geomatic 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 Geomatic Engineering, University of New South Wales, Australia  |

### 4. Refereed Publications

- Dao, T.H.D., and J-C. Thill. (2018, In Press). "Indoor Three-dimensional Accessibility Auditing for Computer-aided Architectural Design". *Transaction in Geographic Information Systems*.
- 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.

- Zhou, Y., T.H.D. Dao, J-C. Thill, and E. Delmelle. (2015). "Enhanced 3D Visualization Techniques in Support of Indoor Location Planning". Computer, Environment, and Urban System (CEUS) 50, 15-29.
- 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.
- 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.
- 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.
- Lachapelle G., H. Kuusniemi, T.H.D. Dao, G. MacGougan, and M.E. Cannon. (2004). "HSGPS Signal Analysis and Performance Under Various Indoor Conditions". Navigation 51 (1), 29-43.
- Dao D., C. Rizos, and J. Wang. (2002). "Location-based Services: Technical and Business Issues". GPS Solutions 6, 169-178.

#### 5. Non-Refereed Publications,

- 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.
- McKay, K.H., C. Sanders, and T.H.D. 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
- Sanders, C., K.H. McKay, and T.H.D. 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
- 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)
- Thill J-C., and T.H.D. 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.
- 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.
- Zhou, Y., T.H.D. 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, D.C., USA.
- 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)

- 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.
- 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.
- 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.
- 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.
- Luo, N., T.H.D. 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.
- 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.
- 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

## 6. Publications Submitted

- Dao, T.H.D. (In Review). "Rule Learning for Spatial Data Mining: An Overview". Geographic Information Science and Technology Body of Knowledge. University Consortium for geographic Information Science.

## 7. Books and Book Chapters

- 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.
- Dao, T.H.D. (2012). "Global Satellite Positioning System and Applications". In K.A. Dao (Eds) Experimental Methods in Modern Physics, Hanoi, Vietnam: Vietnam Education Publication House, 512-570.
- Tran M.T., and T.H.D. Dao. (2006). "The Global Positioning Systems: Theory and Applications". Hanoi, Vietnam: Vietnamese Educational Publication. (200 page book in Vietnamese).

## 8. Presentations and Talks

- 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".
- Invited Speaker (2015) RTC: Rural Institute Research Colloquium, University of Montana, USA. "3DCityNet: Modeling Interior Building Environment for Participation".

- Invited Speaker (2014) Data Science Initiative Seminar, University of Montana, USA. “Geospatial Big Data: Analyzing Daily Travel Pattern and Mining Crime Association as Examples”
- Invited Co-Speaker (2014) Police Department, University of North Carolina at Charlotte, USA. “Spatial Analysis of UNCC 2010 Campus Crime”.
- Invited Speaker (2013) Geography Colloquium, Department of Geography, University of Montana, USA. “Traveling in Three-dimensional City: Data Modeling and Spatial Analysis Applications”.
- Invited Lecturer (2013) GPHY385: Field Techniques, Department of Geography, University of Montana, USA. “Geolocation”.
- 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”.
- 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”.
- 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”.

## 9. Grants and Scholarship

- Funded Project as PI
  - 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
  - Invited Expert, 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
  - Co-PI, proposal to NSF: “CC\*IIE Integration: University of Montana Software Defined Network Data Center”, \$704,038 for 3 years
  - Co-PI, 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

## 10. Courses Taught

### At UCCS

- GES 3030/5030: Introduction to GIS (undergraduate and graduate)
- GES 4180/5180: Advanced GIS
- GES 4130/5130: Introduction to GeoComputing (Python for GIS)

- GES 4700: Geographic Issue – Spatial Database
- GES 4070/5070: Geovisualization

#### At University of Montana

- Python Programming for GIS
- Spatial Analysis and Modeling
- Seminar in GIS and Cartography

#### At University of North Carolina – Charlotte

- GIS for Non-Majors

### **11. Student Advising**

#### At University of Colorado – Colorado Springs

Committee Member – Brent Courtney (2016–current) – MA in Applied Geography – Thesis: Developing an Accurate Colorado Springs’ Burglary Risk Terrain Model.

Committee Member – Michael Madsen (2016–2017) – MA in Applied Geography – Thesis: Comparing Aerial Lidar to Visualize the Effects of Soil Erosion Post Wildfire Conditions.

Supervisor – Kriejo 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

Supervisor – Alex Marczynski (2017 spring) – El Paso Teller 9-1-1 Authority Internship

#### 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) – M.S. 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) – M.S. in GIS – Thesis: Sustainable Urbanization: The Case of Missoula, Montana – Department of Geography, University of Montana

Advisor – Sarah Smolka (2015-2016) – M.S. 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) – M.S. 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

## 12. Recognitions

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|---------------|---|
| 2012          | GISciences 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 <sup>th</sup> 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) |

## 13. Professional Organizations

- American Association of Geographers
- North American Regional Science

## 14. Service

### To Department of Geography and Environmental Studies, UCCS (2016 - Current)

- Member, The Jacquelyn Beyer Women in Geography Grant Committee (2016 – onward)
- Member, The Graduate Review Committee (2016 – onward)
- Search committee for GIS Instructor and lab director (Spring 2017)

### To University of Montana (2013-2016)

- 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)

#### To Departmental of Geography, University of Montana (2013-2016)

- 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

- 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)

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): 5 articles
- Journal of Computers, Environment and Urban Systems (CEUS): 13 articles
- Applied Geography (1 article)
- Transactions in Geographic Information Systems (1 article)
- Journal of Ambient Intelligence and Humanized Computing (1 article)