YANAN WU

+1 (607) 372-0368 | ywu@uca.edu

Google Scholar | Personal Website | LinkedIn | GitHub | Medium

EDUCATION

Doctor of Philosophy in Geospatial Information Sciences	**May 2024**

The University of Texas at Dallas

Dissertation: Analysis of Space-Time Events as Individuals, Sequences, and Surfaces

Master of Arts in Geography	**May 2019**

Binghamton University

Thesis: Integration of Earth Observations and In Situ data for analyzing lake level changes in Minnesota (1990-2016)

Bachelor of Science in Resource Environment and Urban-Rural Planning Management	**May 2016**

Xi'an University of Science and Technology, China

Thesis: Analysis of Drought Evolvement Characteristics based on Temperature Vegetation Dryness Index (TVDI) in the Huaihe River Basin

APPOINTMENTS

• **Assistant Professor – University of Central Arkansas**	**2025 - Present**

Field Techniques

GIS I - Cartography

• **Visiting Assistant Professor – Clark University**	**2024-2025**

Python Programming & Computer PROG for GIS

Web Mapping & Open-Source GIS

Intermediate Statistics

Spatial Database

• **GIS Analyst – City of Lewisville**	**Summer 2024**

Information Technology Services

• **Instructor – University of Texas at Dallas**	**2021 – 2023**

GISC 3304 Principles of Geospatial Information Sciences

EPPS 2302 Methods of Quantitative Analysis in the Social and Policy Science

• **Teaching Assistant – University of Texas at Dallas**	**2020-2024**

GISC 6325 Remote Sensing Fundamentals

GISC 4325 Introduction to Remote Sensing

GISC 4386 Global Changes and its Challenges

GISC 3304 Principles of Geospatial Information Science

EPPS 2302 Methods of Quantitative Analysis in the Social and Policy Science

• **Research Assistant – University of Texas at Dallas**	**2019 – 2020**

Participated in the NIST-funded research project: SAFE-NET An Integrated Connected Vehicle and Computing Platform for Public Safety Applications

• **Graduate Assistant – Binghamton University**	**2017 – 2019**

Gathered 10k+ lake-level data using web crawling to ensure lake data quality and metadata standards for research

Analyzed and extracted information from multi-band remote sensing imagery using R-ArcGIS Bridge

PUBLICATIONS

Wu, Y., Yang, Y., & Yuan, M. (2024). Location Analytics of Routine Occurrences (LARO) to Identify Locations with Regularly Occurring Events with a Case Study on Traffic Accidents. *Information*, 15(2), 107.

Yang, Y., **Wu, Y.**, & Yuan, M. (2024). What Local Environments Drive Opportunities for Social Events? A New Approach Based on Bayesian Modeling in Dallas, Texas, USA. *ISPRS International Journal of Geo-Information*, 13(3), 81.

Wu, Y., Yang, Y., & Yuan, M. (2023). Understanding the role of geographical environments in emergency dispatches with GPS trajectories. *Abstracts of the ICA*, 6, 276.

Wu, Y., & Yuan, M. (2021). Where and why there: location analytics of routine occurrences (LARO) with a case study on traffic

accidents. *Abstracts of the ICA*, 3, 318.

CONFERENCE PROCEEDINGS

Wu, Y., Yang, Y., Yuan, M. Analyze emergency-vehicle dispatches in Dallas, Texas, USA, *In AutoCarto* 2022 *Proceedings.*

Yang, Y., **Wu, Y.**, Yuan, M. Quantifying the impacts of social infrastructure on human networks, *In AutoCarto 2022 Proceedings.*

AWARDS

2023   Second Place in Graduate Paper Competition, SWAAG conference

International Cartographic Association Scholarship

Travel award from USNC for ICA with NSF funding to attend the ICC2023

Betty & Gifford Johnson Travel Award, UTD

2022   Graduate student participants of the Grad WINGS Workshop, UCGIS

International Cartographic Association Scholarship

Second Place, Student Lightning Talk Award, UCGIS Symposium

Third Place in GIS Day 2022 Awarded by Geospatial Information Sciences Program, UTD

Travel award from UCGIS to attend the UCGIS Symposium

The University of Texas at Dallas 2022 Three Minute Thesis (3MT) Competition, Finalist

Honorable mentions, GI Science & Systems Student Honors Paper Competition session, AAG

International Cartographic Association Scholarship

2021   Travel award from USNC for ICA with NSF funding to attend the ICC2021

Pioneers Student Research Fund, Geospatial Information Sciences Program, UTD

PhD Research Small Grants Awarded by the Office of Graduate Education, UTD

First Place in GIS Day 2021 Awarded by Geospatial Information Sciences Program, UTD

2019   First Place in GIS Day 2019 Awarded by Geospatial Information Sciences Program, UTD

Pioneers Student Research Fund, Geospatial Information Sciences Program, UTD

First Place in GIS Day 2019 Awarded by the Geography Department at Binghamton University

2015   Outstanding Prize in GeoDesign at Esri GIS Software Development Contest

PRESENTATIONS

2025   Automatic Reconstruction of Historical Buildings through Deep Learning and Map Analysis, Aansas GIS User Forums, October

2025   Reconstructing Historical Urban Landscapes: A Machine Learning Approach to 3D City Modeling, AAG, March

2024   Understanding the role of geographical environments in emergency dispatch, *AAG*, March

2023   Identify geographical environments influencing emergency response performance. *SWAAG*, November

Modeling of emergency incident with GPS trajectory data using random forest algorithm. *ICC*, August

Assessing the role of geographical context in modeling the likelihood of emergency response. *AAG*, April

2022   Driving pattern analysis for emergency vehicle (EV)**.** *AutoCarto,* November

Understanding emergency vehicle movement from GPS trajectory data. *GIS Day in UTD*, November

Understanding 911 Response Time from GPS trajectory data. *UTD Research Day,* October

Driving pattern analysis for emergency vehicle (EV) using multi-source data. *UCGIS, Syracuse, NY,* June

Why is there a delay in a 911 vehicle arriving? The Three Minute Thesis (3MT) Competition, *UTD*, April

Location analytics of routine occurrences (LARO) to identify locations with regularly occurring events. *CO*, April

Location Analytics of Routine Occurrences (LARO) with a case study on traffic accidents. *AAG, New York,* February

2021   location analytics of routine occurrences (LARO) with a case study on traffic accidents. *ICC, Italy,* December

Emergency vehicle data map-matching utilizing the Dijkstra's Algorithm. *GIS Day in UTD*, November

Spatial-temporal analysis of traffic accidents for increasing sustainable transportation. *The Center for Spatial Studies*

The Three Minute Thesis (3MT) Competition. *The University of Texas at Dallas*, April

2020   Research Showcase Poster Competition, EPPS. *The University of Texas at Dallas*, October

2019   Visualizing (Wild) Fires in Sentinel-2 imagery using custom script in EO Browser. *GIS Day in UTD*, November

Developing an hourly risk model for street networks in Dallas. *SWAAG*, *Fort Worth, Texas.* October

Integration of Earth observations and in situ data for analyzing lake level changes. *GIS Day Binghamton University*,

Integration of Earth observations and in situ data for analyzing lake level changes. *AAG, Washington D.C.* April

JOURNAL REVIEWER

Physica A: Statistical Mechanics and its Applications

International Journal of Geo-Information

Computational Urban Science

ACADEMIC SERVICE

2022   Student judge for Faculty Three Minutes Thesis (3MT) Competition at UTD

       USGIF Student Assistant Program at the 2022 GEOINT Symposium

AREAS of RESEARCH

- Geographic Information Science (GIS)
- Geospatial Data Science
- GIS Software Development
- Spatial-Temporal Analysis
- Urban dynamics
- Web-GIS

PROFESSIONAL MEMBERSHIPS

2019 – Present   American Association of Geographers (AAG)

2020 – Present   Cartography and Geographic Information Society (CAGIS)