

YANAN WU

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[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 – The University of Central Arkansas

Field Techniques

GIS I - Cartography

• Visiting Assistant Professor – Clark University

2024-Present

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 – The University of Texas at Dallas

2021 – 2023

GIS 3304 Principles of Geospatial Information Sciences

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

• Teaching Assistant – The University of Texas at Dallas

2020-2024

GIS 6325 Remote Sensing Fundamentals

GIS 4325 Introduction to Remote Sensing

GIS 4386 Global Changes and its Challenges

GIS 3304 Principles of Geospatial Information Science

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

• Research Assistant – The 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** 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
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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)
- GIS Software Development
- Urban dynamics
- Geospatial Data Science
- Spatial-Temporal Analysis
- Web-GIS

PROFESSIONAL MEMBERSHIPS

2019 – Present American Association of Geographers (AAG)

2020 – Present Cartography and Geographic Information Society (CAGIS)