

Hui "William" Wang, Ph.D.

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Education Background

University of Connecticut, USA

2015 – 2019

* Ph.D. in Geography

* Research Interests: *GIS, Climate change, Hydrology, Land use & land cover, Health Geography*

Nanjing University, China

2011 - 2015

* B.S. Geographical Information Science

Professional Appointments

08/2024 – present: **Assistant Professor**, Department of Geography and Planning, Appalachian State University, Boone, North Carolina, USA

01/2022 – 05/2024: **Assistant Teaching Professor**, Department of Geosciences, Mississippi State University, Starkville, Mississippi, USA

08/2019 – 12/2021: **Postdoctoral Fellow**, Geospatial Modeling Group & Mapping Group, Institute for Modeling Collaboration and Innovation, University of Idaho, Moscow, Idaho, USA
(*Grant: National Science Foundation Idaho EPSCoR Program, award# OIA-1757324*)

08/2015 – 05/2019: **Teaching Assistant/Instructor**, Department of Geography, University of Connecticut, Storrs, Connecticut, USA

Publications

*: corresponding authorship

Under Review:

19. Qu, S., Chen, J., and **Wang, H***. Transformation of the relationship between low-carbon development and intensive urban land use. *Sustainable Cities and Society*

18. Qu, S., **Wang, H.**, Hu, Z., Wang, Z., and Hu, S. Mixed-use urban land parcels identification integrating geospatial data and machine learning. *Geo-spatial Information Science* (in production)

In Preparation:

17. **Wang, H.** and Que, X. Spatial resistance and resilience of riparian tree cover to drought

16. **Wang, H.**, Zhang, B., Qu, S., Wang, Z., and Huang, L. Detecting the spatial variation of vegetation change at regional scale based on historical and contemporary aerial photography

Refereed Publications:

15. **Wang, H.**, Chen, M., Wang, Z., Huang, L., Caudill, C. and Qu, S. How does extreme point sampling affect non-extreme simulation in geographical random forest? *Earth Science Informatics*. <https://doi.org/10.1007/s12145-024-01268-9>

14. Hong, Y., Que, X., Wang, Z., Ma, X., **Wang, H.**, Salati, S., and Liu, J. Mangrove extraction from super-resolution images generated by deep learning models. *Ecological Indicators*. <https://doi.org/10.1016/j.ecolind.2024.111714>

13. Que, X., Zhuang, X., Ma, X. Lai, Y., Xie, J., Fei, T., **Wang, H.**, and Wu, Y. (2023) Modeling the spatiotemporal heterogeneity and changes of slope stability in rainfall-induced landslide areas. *Earth Science Informatics*. <https://doi.org/10.1007/s12145-023-01165-7>

12. Chen, X., **Wang, H. (co-first author)**, Lyu, W., and Xu, R. (2022) The Mann-Kendall-Sneyers test to identify the change points of COVID-19 time series in the United States. *BMC Medical Research Methodology*. <https://doi.org/10.1186/s12874-022-01714-6>

11. Chen, X. and ***Wang, H.** (2022) On the rise of the new B. 1.1. 529 variant: Five dimensions of access to a COVID-19 vaccine. *Vaccine*. <https://doi.org/10.1016/j.vaccine.2021.11.096>

10. **Wang, H.**, Xu, R., Qu, S., Schwartz, M. and Chen, X. (2021) Health inequities in COVID-19 vaccination among the elderly: Case of Connecticut *Journal of Infection and Public Health*. <https://doi.org/10.1016/j.jiph.2021.07.013>

9. Yu, Z., Zhu, X., Liu, X., Chen, X., Wei, T., Yuan, H., Xu, Y., Zhu, R., He, H., **Wang, H.**, Wong M., Jia, P., Shi, W. and Chen, W. (2021) Reopening International Borders without Quarantine: Contact Tracing Integrated Policy against COVID-19. *International Journal of Environmental Research and Public Health*. <https://doi.org/10.3390/ijerph18147494>

8. **Wang, H.**, Seaborn, T., Wang, Z., Caudill, C. and Link, T. (2021) Modeling tree canopy height using machine learning over mixed vegetation landscapes. *International Journal of Applied Earth Observations and Geoinformation*. <https://doi.org/10.1016/j.jag.2021.102353>

7. Chen, X., Zhang, A., **Wang, H.**, Gallaher, A. and Zhu, X. (2021) Compliance and Containment in Social Distancing: A Meso-scale Epidemic Model of COVID-19 *International Journal of Geographical Information Science*. <https://doi.org/10.1080/13658816.2021.1873999>

6. Qu, S., Hu, S., Li, W., **Wang, H.**, Zhang, C. and Li, Q. (2020) Interaction between urban land expansion and land use policy: A analysis using the DPSIR framework. *Land Use Policy*. <https://doi.org/10.1016/j.landusepol.2020.104856>

5. **Wang, H.**, Stephenson, S.R. and Qu, S. (2020) Quantifying the relationship between streamflow and climate change in a small basin under future scenarios. *Ecological Indicators*.
<https://doi.org/10.1016/j.ecolind.2020.106251>
4. **Wang, H.**, Stephenson, S.R. and Qu, S. (2019) Modeling spatially non-stationary land use/cover change in the lower Connecticut River Basin by combining geographically weighted logistic regression and the CA-Markov model. *International Journal of Geographical Information Science*.
<https://doi.org/10.1080/13658816.2019.1591416>
3. Qu, S., Hu, S., Li, W., Zhang, C., Li, Q. and **Wang, H.** (2019) Temporal variation in the effects of impact factors on residential land prices. *Applied Geography*.
<https://doi.org/10.1016/j.apgeog.2019.102124>
2. **Wang, H.** and Stephenson, S.R. (2018) Quantifying the impacts of climate change and land use/cover change on runoff in the lower Connecticut River Basin. *Hydrological Processes*. 32:1301–1312. <https://doi.org/10.1002/hyp.11509>
1. **Wang, H.** (2012) Prediction analysis of the carrying capacity of Nanjing Olympic Stadium and supporting facilities based on GIS. *Jiangsu Social Sciences*. S1: 34 -37. (In Chinese)

Honors and Awards

- 2019: Spring 2019 Doctoral Student Travel Award, University of Connecticut
Graduate Outstanding Teaching Award, University of Connecticut
- 2018: Spring 2019 Doctoral Dissertation Fellowship, University of Connecticut
Research Travel & Conference Funding, Department of Geography, University of Connecticut
- 2017: Summer Research Funding, Department of Geography, University of Connecticut
The Dean Ross MacKinnon Endowment for CLAS Graduate Fellows Scholarship, College of Liberal Arts and Science, University of Connecticut
- 2016: Summer Research Travel Award, Department of Geography, University of Connecticut
- 2015: Honorable Mention, Student Illustrated Paper Competition, the New England-St. Lawrence Valley Geographical Society Conference, Bridgewater State University, Bridgewater, MA
- 2014: Third-class People's Scholarship, Nanjing University
- 2013: Outstanding Student of Summer Social Practices, Nanjing University
- 2013: Excellent Thesis of Summer Social Practice (The first place), Nanjing University
- 2013: Outstanding Volunteer of the Second Asian Youth Games, Olympic Committee of Asia

Grants

- 1. Member, *Compliance, and containment: Meso-scale modeling and monitoring of COVID-19*. NSF-supported Geospatial Fellow Project for Advancing COVID-19 Research and Education (PI: Dr. Xiang Chen), Geospatial Software Institute at the University of Illinois at Urbana-Champaign. September 2020 – August 2021.

Service & Affiliations

- Faculty advisor*, Student Chapter at Mississippi State University of American Society for Photogrammetry and Remote Sensing (ASPRS), 2023
- Guest Editor*, Sustainability of MDPI, Special Issue "Sustainability in Geospatial Analysis and Information Science Application", 2023 - 2024
- Member*, Data Science Program, Collaboration between the Food and Agriculture Organization of the United Nations (FAO) and Mississippi State University, 2023
- Member*, The International Association of Chinese Professionals in Geographic Information Sciences (CPGIS) Student Paper Competition Committee, 2021 & 2022
- Co-leader*, Mapping Group, National Science Foundation Idaho EPSCoR Program, 2019 – 2021
- Member*, Search Committee of Hydrologic Modeling Postdoc Hiring, Institute for Modeling Collaboration and Innovation, University of Idaho, April 2020
- Member*, American Association of Geographers, 2015 – present
Specialty groups: Graduate Student Affinity Group; Human Dimensions of Global Change; Water Resources, Climate
- Member*, American Geophysical Union, 2016 – present
- Referee*, Environmental Earth Sciences; Hydrology and Earth System Sciences; Water Resources Management; Transactions in GIS; Journal of Selected Topics in Applied Earth Observations and Remote Sensing; Sustainability; Journal of Forestry Research; Forest; Climatic Change; Computers and Geosciences; Remote Sensing; Papers in Applied Geography; International Journal of Health Geographics; Land Use Science
- Service Supervisor*, Olympic Committee of Asia, 2013
- Team Assistant of the United States Military Academy*, International Underwater Robot Competition, Nanjing, 2011

Presentations

- *: invited talk
- *11. "Spatial non-stationarity and tree canopy height modeling", Mississippi State student chapter of the American Society for Photogrammetry and Remote Sensing (ASPRS), April 2022
- *10. "Geospatial Data Access" (*oral*), School of Applied Computational Sciences, Meharry Medical College, online, April 2021
- *9. "Spatial non-stationarity in modeling tree canopy height using random forest" (*oral*), Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences, China, April 2021
- *8. "US Open-Access Geospatial Data" (*oral*), Department of Geosciences, Mississippi State University, online, March 2021
- *7. "Modeling tree canopy height using machine learning over mixed vegetation landscapes" (*oral*), 2020 Idaho NSF EPSCoR Annual Meeting, online, December 2020
6. "Spatial non-stationarity in modeling tree canopy height by using random forest algorithm" (*oral*), Brown Bag Lunch Seminar, Institute for Modeling Collaboration and Innovation, University of Idaho, September 2020
5. "Investigating the Role of Riparian Vegetation in Stream Temperature Modeling" (*poster*), 2019 Idaho NSF EPSCoR Annual Meeting, Boise, ID, December 2019

4. "Quantifying the spatial responses of runoff change to future land use/cover change and climate change at regional scales in New England" (poster), American Association of Geographers Annual Meeting, Washington, D.C., April 2019
3. "Prediction of land use/cover change in Connecticut River Basin using a geographically weighted logistic regression-Markov chain model" (oral), American Association of Geographers Annual Meeting, New Orleans, LA, April 2018
2. "Impacts of climate change and human activities on water resources in the lower reaches of Connecticut River Basin" (oral), American Association of Geographers Annual Meeting, Boston, MA, April 2017
1. "Research of Dan Jin Li River water pollution forecasting system based on GIS" (poster), the New England-St. Lawrence Valley Geographical Society Conference, Bridgewater State University, Bridgewater, MA, October 2015

Teaching

Mississippi State University, 2022 - present

Instructor:

- GR 1123: Introduction to World Geography
- GR 2313: Maps and Remote Sensing
- GR 4233/6233: Geography of Asia
- GR 4313/6313: Advanced GIS
- GR 4353/6353: Geodatabase Design
- GR 4303/6303: Principles of GIS
- GR 4333/6333: Remote Sensing of the Physical Environment
- GR 4363/6363: GIS Programming
- GR 4990/6990: Novel Geospatial Data Techniques (Python programming)

University of Connecticut, 2015 – 2019

Instructor:

- GEOG 1000: *Introduction to Geography* (Lecture) – Spring 2019
- GEOG 1000: *Introduction to Geography* (Lecture) – Fall 2018
- GEOG 1000: *Introduction to Geography* (Online) – Summer 2018
- GEOG 1302: *GIS Modeling of Environmental Change* (Lab instructor) – Fall 2017 & Fall 2016
- GEOG 1302: *GIS Modeling of Environmental Change* (Guest lecturer for two classes) – Fall 2017
- GEOG 5500: *Fundamentals of Geographic Information Science* (Online) – Spring 2016

Teaching Assistant:

- GEOG 1000: *Introduction to Geography* – Fall 2015
- GEOG 1700: *World Regional Geography* – Spring 2018, Spring 2016 & Fall 2015
- GEOG 2100: *Economic Geography* – Fall 2015
- GEOG 2300: *Introduction to Physical Geography* – Spring 2017
- GEOG 3410: *Human Modifications of Natural Environments* – Spring 2017

Advisees

Current online master's degree students:

1. Gibney, Kelsey (Fall 2022-)
2. Nix, Harrison (Fall 2022-)
3. Drewes, Guenevere (Fall 2022-)
4. Titus-Quick, Kajee (Fall 2022-)
5. Nasca, David Stephen (Fall 2022-)
6. Ramthun, Jocelyn (Fall 2022-)
7. Dudkiewicz, April (Fall 2022-)
8. Jackson, Jeanie (Fall 2022-)
9. Mays, Kevin (Fall 2022-)
10. Montierth, Lindsey (Fall 2022-)

Current PhD students:

1. Islam MD Tazmul (PhD Committee, graduated in Fall 2023)
2. Weiwei Xie (PhD Committee, graduated in Spring 2024)

Media Coverage and Appearances

UConn Today, "UConn Researcher Develops Town-Level Model for COVID-19 in Connecticut" (01/26/2021)

Skills

Languages: English, Mandarin, Wu Chinese

Programming languages: *Proficient*: Python, R, MATLAB, SQL Server and Visual FoxPro | *Work experience*: C, C++ and C#

Updated: July 24th, 2024