Xiangyu Jiang

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	Buffalo NY, 14261	**Email:**	xiangyuj@buffalo.edu

RESEARCH INTERESTS

Air quality modeling, Health impact assessment of air pollution, Wildland fire-related atmospheric pollutant modeling, Uncertainty analysis, Spatio-temporal analysis, GIScience

EDUCATION

Expected Jun 2020
Ph.D. in Geography   GPA: 3.968/4.000
Department of Geography, University at Buffalo
Advisor: Dr. Eun-Hye Enki Yoo
Thesis: "*Using Community Multiscale Air Quality (CMAQ) model to estimate public health impacts of $PM_{2.5}$*"

Aug 2013
M.S. in Geography   GPA: 3.973/4.000
Department of Geography, University at Buffalo
Advisor: Dr. Eun-Hye Enki Yoo
Thesis: "*Spatiotemporal contextual units for environmental exposure study*"

Jun 2011
B.S. in GIScience   GPA: 3.7/4.0
Department of GIScience, Shandong University of Science and Technology, China

RESEARCH EXPERIENCE

Sep 2019 - Present
Research Assistant   Supervisor: Dr. Kang Sun
Department of Civil, Structural and Environmental Engineering, University at Buffalo
- Deriving surface concentrations of NO_2, HCHO, and NH_3 over the contiguous U.S. by merging satellite columns, aircraft trace gas vertical profiles, planetary boundary layer height, meteorological reanalysis, and chemical transport model simulations
- Validating satellite-derived surface atmospheric pollutants

Aug - Dec 2017
Research Assistant   Supervisor: Dr. Eun-Hye Enki Yoo
Department of Geography, University at Buffalo
- Modeled $PM_{2.5}$, O_3, and NO_2 concentrations over Erie and Niagara counties using WRF-SMOKE-CMAQ models

Apr - May 2013
Research Assistant   Supervisor: Dr. Eun-Hye Enki Yoo
Department of Geography, University at Buffalo
- Processed land use, demographic data, and smartphone GPS data for the study of time-activity based personal air pollution exposure assessment

Jul - Sep 2012
Informatics Intern
Independent Health, Buffalo, NY
- Analyzed Independent Health members' spatial accessibility to primary care, emergency room, and urgent care

TEACHING EXPERIENCE

Jan - May 2018   **Adjunct Instructor**, Department of Geography, University at Buffalo
GEO 211: Univariate Statistics in Geography (Undergraduate)

2013-2017   **Teaching Assistant**, Department of Geography, University at Buffalo
GEO 104: Environmental Science (Undergraduate)
GEO 105: Earth, Environment & Climate (Undergraduate)
GEO 106: Earth System Science II (Undergraduate)
GEO 506: Introduction to Geographical Information System (Graduate)
GEO 483/553: Remote Sensing (Cross-listed)
GEO 479/559: GIS for Environmental Modeling (Cross-listed)

PUBLICATIONS

Peer-reviewed Articles

1. **Jiang, X.**; Yoo, E.-H. Modeling wildland fire-specific $PM_{2.5}$ concentrations for uncertainty-aware health impact assessments. *Environ. Sci. Technol.* **2019**, *53(20)*, 11828-11839. DOI: 10.1021/acs.est.9b02660

2. Pan, S.; Roy, A.; Choi, Y.; Eslami, E.; Thomas, S.; **Jiang, X.**; Gao, H. O. Potential impacts of electric vehicles on air quality and health endpoints in the Greater Houston Area in 2040, *Atmos. Environ.* **2019**, *207(15)*, 38-51. DOI: 10.1016/j.atmosenv.2019.03.022

3. **Jiang, X.**; Yoo, E.-H. The importance of spatial resolutions of Community Multiscale Air Quality (CMAQ) models on health impact assessment, *Sci. Total Environ.* **2018**, *627(15)*, 1528-1543. DOI: 10.1016/j.scitotenv.2018.01.228

Book Chapter

1. **Jiang, X.**; Yoo, E.-H. Evaluating the effect of domain size of CMAQ model on regional $PM_{2.5}$ simulations, In *Geospatial Technologies of Urban Health*; Springer, **2020**; pp 53–72. DOI: 10.1007/978-3-030-19573-1_4

CONFERENCES

Oral Presentations

2020   **Jiang, X.**; Yoo, E.-H. Modeling wildland fire-specific $PM_{2.5}$ concentrations for uncertainty-aware health impact assessments. *The 100th American Meteorological Society Annual Meeting*, Boston, MA, U.S., Jan 12 - 16

2018   **Jiang, X.**; Yoo, E.-H. Modeling $PM_{2.5}$ concentrations from wildland fires for health impact assessments. *The 17th Annual CMAS Conference*, Chapel Hill, NC, U.S., Oct 22 - 24

     Jiang, X.; Yoo, E.-H. The importance of spatial resolutions of Community Multiscale Air Quality (CMAQ) models on health impact assessment. *The 114th Annual Meeting of the Association of American Geographers*, New Orleans, LA, U.S., Apr 10 - 14

2017   Yoo, E.-H.; Eum, Y.; **Jiang, X.** Air pollution and emergency department visits for cardiovascular disease. *The 113th Annual Meeting of the Association of American Geographers*, Boston, MA, U.S., Apr 10 - 14

2016	**Jiang, X.**; Yoo, E.-H. Bringing together multiple sources of data for modeling spatio-temporal distribution of particulate matter, *The 112th Annual Meeting of the Association of American Geographers*, San Francisco, CA, U.S., Mar 29 - Apr 2
2014	**Jiang, X.**; Yoo, E.-H. Spatiotemporal contextual units for environmental exposure study, *The 110th Annual Meeting of the Association of American Geographers*, Tampa, FL, U.S., Apr 8 - 12

Poster Presentation

2019	Yoo, E.-H.; **Jiang, X.** Fixed point versus time-activity based personal air pollution exposure assessment: Does the number of days of assessment matter? *The 18th Annual CMAS Conference*, Chapel Hill, NC, U.S., Oct 21 - 23

PROFESSIONAL TRAINING

2018	ISES-ISEE one-day workshop: Big data, machine learning techniques to investigate health effects in environmental health studies, Ottawa, Canada, Aug 26
	WRF basic tutorial, Boulder, CO, U.S., Jul 23 - 27
2016	Introduction to SMOKE online workshop, Chapel Hill, NC, U.S., Feb 22 - 28
2015	Introduction to CMAQ three-day workshop, Chapel Hill, NC, U.S., Oct 8 - 10
2012	Customizing ArcGIS Desktop 10.0 with ArcObjects workshop, Buffalo, NY, U.S., Mar 30 - Apr 1

AWARDS

2019	Barry Fallon Memorial International Student Assistance Award, University at Buffalo
2015	Who's Who Among Students in American Universities & Colleges
2013-2017	College of Arts and Sciences Dean's Scholarship, University at Buffalo
2010	Second Prize Scholarship, Shandong University of Science and Technology
2009	Youluoka Scholarship, Shandong University of Science and Technology
2008-2010	First Prize Scholarship, Shandong University of Science and Technology
2008	Shandong Provincial Government Scholarship

SKILLS

Computer Skills:
- Modeling: CMAQ, SMOKE, WRF
- Programming Languages: R, MATLAB, Python
- GIS/Remote Sensing: ArcGIS, QGIS, ENVI
- Data Visualization: VERDI, Panoply
- System Operation: Windows, Linux, Mac OS
- Others: BenMap, Data Fusion Tool (DFT)

Languages:
- Chinese: Native
- English: Fluent

REFERENCES

Dr. Eun-Hye Enki Yoo

Associate Professor
Department of Geography
University at Buffalo

Phone: (716) 645-0476
Email: eunhye@buffalo.edu
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Dr. Jared Aldstadt

Associate Professor
Department of Geography
University at Buffalo

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Dr. Kang Sun

Assistant Professor
Department of Civil, Structural and
Environmental Engineering
University at Buffalo

Phone: (716) 645-6167
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