Biographical Information

Name: Xiaorong Shan
Address: George Mason University, Department of Civil, Environmental and Infrastructure Engineering, 4511 Patriot Circle,Fairfax, VA 22030
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Education

- Hohai University
    Degree: Bachelor of Science (BS)
    Subject: Wastewater Management and Treatment
    Date Completed: June 2018
- IMT Nord Europe
    Degree: Master of Engineering (MEng)
    Subject: Environmental Industry Engineering
    Date Completed: September 2019
- Hohai University
    Degree: Master of Science (MS)
    Subject: Wastewater Management and Treatment
    Date Completed: June 2021
- George Mason University
    Degree: Doctor of Philosophy (PhD)
    Subject: Environmental Engineering
    Potential Graduation Date: May 2026

Research Interests

- Air modeling
- Environmental justice and air quality
- Regulatory accountability
- Health effects of environmental interventions
- Big data applications

Professional Positions

- <u>Research Experience</u>
    - Graduate Research Assistant of Department of Civil, Environmental and Infrastructure Engineering, George Mason University (August 2021 – Present)
    - Graduate Research Assistant of Department of Environmental Engineering, Hohai University (September 2019 – June 2021)
- <u>Industry Experience</u>
    - Air Quality Engineering, TotalEnergies, Paris, France (August 2018 – Auguest 2019)
    - Environmental Engineering, Electricity of France (EDF), Oraison, France (April 2018 – August 2018)

Honors, Awards, and Scholarships
- Awards
  - Inclusive Teaching for STEM Graduate Students, George Mason University (2023 – 2024)
  - Leadership in Mason, George Mason University (2023 – 2024)
  - National Undergraduate Research Project Award: Innovational Competition in Water Pollution, China (2015 – 2016)
  - Outstanding Student, Hohai University (2014 – 2016)
  - Distinguished Volunteer, Hohai University (2014 – 2016)
  - Distinguished Leadership, Hohai University (2014 – 2016)
- Scholarships
  - MPower Scholarship (2024)
  - Graduate and Professional Student Association Scholarship (2022 – 2025)
  - Graduate Travel Fund, George Mason University (2023 – 2025)
  - Graduate Travel Fund, George Mason University (2023 – 2025)
  - Outstanding Academic Achievement Scholarship, Hohai University (2019 – 2020)
  - Queudot Scholarship for Excellent Academic Record, IMT North Europe (2018 – 2019)
  - Outstanding Academic Achievement Scholarship, Hohai University (2014 – 2016)
  - Exceptional Volunteer Service Scholarship, Hohai University (2014 – 2016)
  - Cultural and Physical Activities Scholarship, Hohai University (2014 – 2016)

Professional Activities
- Societies, Committees, and Panels
  - Member, International Society for Environmental Epidemiology (ISEE) (2024 - Present)
  - Committee Member, Equity, Diversity, and Inclusion Committee, ISEE(2024 - Present)
  - ISEE Abstract Review Program (2024 – Present)
  - Committee Member, Community Modeling and Analysis System (CMAS) Volunteer Committee (2024 – Present)
  - Committee Member, CAFÉ Climate & Health Conference Planning Committee (2024 – Present)
  - Committee Member, International Society of Exposure Science (ISES) Publication Committee (2024 – Present)
  - Member, Air & Waste Management Association (2023 - Present)
  - Member, Interdisciplinary Association for Population Health Science (2016 –Present)
  - Member, American Society of Civil Engineers (ASCE) (2023 – Present)
  - Committee Member, Mason Graduate Interdisciplinary Conference (MAGIC) Publication Committee (2022 – Present)
- Academic Research Activities
  - Historical social and environmental determinants of memory decline and dementia among U.S. older adults, National Institutes of Health (NIH) (2021– Present)

- o Modeling the Spatial Distribution of Camp Fire Smoke from California to New York (2021– Present)
- o Eliminating Hexavalent Chromium from Wastewater via Photocatalysis, Master Thesis, Hohai University (2019 – 2021)
- o Quantifying Atmospheric PM Levels with Drone-Mounted Microsensors, Master Thesis, IMT North Europe (2018 – 2019)

Bibliography

- Publications
1. Sheng Liu, Zixuan Zhang, Chuanfu Zhao, Mengru Zhang, Fei Han, Jie Hao, Xun Wang, **Xiaorong Shan**, Weizhi Zhou. Nonlinear responses of biofilm bacteria to alkyl-chain length of parabens by DFT calculation. JHM. 2024; Volume 472, 134460.
2. Sheng Liu, Peifang Wang, Chao Wang, Juan Chen, Xun Wang, Bin Hu, **Xiaorong Shan**. Disparate toxicity mechanisms of parabens with different alkyl chain length in freshwater biofilms: Ecological hazards associated with antibiotic resistome. STOTEN. 2023; Volume 881, 163168.
- In Reviewing
1. **Xiaorong Shan**, Joan Casey and Lucas Henneman. "Metrics for source-specific air pollution exposure, epidemiology, and risk assessment

Conferences and Symposiums

- Conference Presentations
  - o **Xiaorong Shan**, Joan Casey and Lucas Henneman, "Evaluating the 1940 Exposures: A Modern Projection and Comparison", 46th ISEE Conference, Santiago, Chile, August 2024, Oral Presentation.
  - o **Xiaorong Shan**, Joan Casey and Lucas Henneman, "Evaluating the 1940 Exposures: A Modern Projection and Comparison", 2nd AIRDC Conference, George Mason University, June 2024, Poster.
  - o **Xiaorong Shan**, Joan Casey and Lucas Henneman, "Evaluating the 1940 Exposures: A Modern Projection and Comparison", MAGIC Conference, George Mason University, March 2024, Oral Presentation.
  - o **Xiaorong Shan**, Joan Casey and Lucas Henneman, "Evaluating the 1940 Exposures: A Modern Projection and Comparison", 23st CMAS Conference, UNC-North Carolina, November 2023, Poster.
  - o **Xiaorong Shan**, Daniel Tong, Joan Casey, Joseph Wilkins and Lucas Henneman, "Modeling $PM_{2.5}$ transport from the California Camp Fire to New York", 2023 Meteorology and Climate - Modeling for Air Quality Conference, UC Davis, Sept. 2023, Poster.
  - o **Xiaorong Shan**, Joan Casey and Lucas Henneman "Historical social and environmental determinants of memory decline and dementia among U.S. older adults", 2023 Earth System Observations & Modeling Graduate Symposium, George Mason University, April 2023, Oral Presentation.
  - o **Xiaorong Shan**, Lucas Henneman, Daniel Tong, Joan Casey and Lucas Henneman, "Development of $PM_{2.5}$ transport: Modeling the Spatial Distribution of Camp Fire from California to New York", 22st CMAS Conference, UNC-North Carolina, November 2022, Poster.

University Service

- George Mason University
    - Member, International Student Advisory Board (2024 – Present)
    - Member, Graduate Council (2024 – Present)
    - Member, Scholars Promoting Access, Representation, and Knowledge (2024 – Present)
    - Member, President's Leadership Cohort (2024 – Present)
    - Member, Dining Request for Proposal (2024 – Present)
    - Member, Mason Recreation Advisory Board (2024 – Present)
    - President, Civil & Environmental Graduate Student Association (2023 – Present)
    - Member, President – Student Advocacy Group (2023 – Present)
    - Member, Shuttle Advisor Committee (2023 – Present)
    - Member, Graduation Speech Committee (2023 – 2024)
    - Vice President, Graduate and Professional Student Association (2022 – Present)
- IMT North Europe
    - Vice President, International Student Union Office (2018 – 2019)
    - Member, Chinese Teaching Center (2017 – 2018)
- Hohai University
    - President, Environmental Volunteer Association (2015 – 2016)
    - Vice President, Red Cross Association (2015 – 2016)

Technical Skills

- Air Modeling
    - Community Multiscale Air Quality Model (CAMQ)
    - Weather Research & Forecasting Model (WRF)
- Programming Language
    - C
    - C++
    - R
    - Python
    - Matlab
- Other Tools
    - AutoCAD
    - ADMS
    - QGIS
    - Microsoft Office
    - Phrast
- Languages
    - Mandarin (Native)
    - French (Proficient), DALF C2 Certificate
    - English (Proficient)
    - Spanish (Beginner)

Advising and Mentoring

- High School
  - Kirit Hota (2024 – Present)