

# Yicen Liu

## PhD Student

Department of Civil and Environmental Engineering

University of Illinois Urbana-Champaign

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### RESEARCH THEMES

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Advancing the understanding of aerosol formation and growth by integrating novel mechanisms into aerosol models.

- Environmental Engineering and Science
- Atmospheric and climate science
- Computational Science and Engineering
- Data Science

### EDUCATION

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**Ph.D. (in progress).** Environmental Engineering with a concentration in Computer Science and Engineering. University of Illinois Urbana-Champaign (UIUC), IL, United States. | GPA: 3.94/4

**M.S. (2021).** Environmental Engineering. UIUC, IL, United States.

**B.S. (2020).** Environmental Science. Tongji University, Shanghai, China.

### RESEARCH EXPERIENCE

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<b>Research assistant</b>	2020-
Department of Atmospheric Sciences, UIUC, IL, United States.	
Department of Mechanical Science and Engineering, UIUC, IL, United States.	
<b>CEE REU Program</b>	2019-2020
Department of Civil and Environmental Engineering, UIUC, IL, United States.	
<b>Shanghai Undergraduate Innovation Program</b>	2018-2019
Project title: The exploration of Hormesis of commercial personal care products on <i>Vibrio qinghaiensis</i> sp. -Q67	

### SELECTED AWARDS & HONORS

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Fall 2023 Schlesinger Travel Grant	Oct. 2023
40 <sup>th</sup> Annual Aerosol Conference Student Travel Grant, <i>Raleigh, NC, United States.</i>	Aug. 2022
Fall 2021 Conference Presentation Awards, <i>UIUC, IL, United States.</i>	Dec. 2021
Outstanding Talk in Air Connect 3-min talk (3MT) 2021, <i>UIUC, IL, United States.</i>	Aug. 2021
The Third Prize Scholarship, <i>Tongji University, Shanghai, China.</i>	Nov. 2018
Ke Lan Scholarship for Academic Excellence, <i>Tongji University, Shanghai, China.</i>	Nov. 2018
Scholarship for Social Practice, <i>Tongji University, Shanghai, China.</i>	Dec. 2017

### TEACHING EXPERIENCE

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Radiative Transfer-Remote Sens (ATMS 304)	Jan. 2022-May 2022
<i>Spring 2022 List of Teachers Ranked as Excellent by Their Students.</i>	

## PUBLICATIONS

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### Peer-Reviewed Papers

1. Y. Wang, J. V. Puthussery, H. Yu, **Y. Liu**, S. Salana, and V. Verma. (2022). Sources of cellular oxidative potential of water-soluble fine ambient particulate matter in the Midwestern United States. *Journal of Hazardous Materials*, 425, 127777.  
<https://doi.org/10.1016/j.jhazmat.2021.127777>
2. **Y. Liu**, Y. Yao, J. H. Curtis, M. West, N. Riemer. The impacts of aerosol mixing state on heterogeneous N<sub>2</sub>O<sub>5</sub> hydrolysis, *to be submitted*.
3. **Y. Liu**, J. H. Curtis, M. L. Dawson, D. N. Higgins, M. V. Johnston, N. Riemer. Modeling the seed-dependent particle growth via multiphase reactions with the particle-resolved model PartMC-CAMP, *in preparation*.

### SELECTED CONFERENCE PRESENTATIONS

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1. **Y. Liu**, J. H. Curtis, M. L. Dawson, D. N. Higgins, M. V. Johnston, N. Riemer. Modeling the seed-dependent particle growth via multiphase reactions with the particle-resolved model PartMC-CAMP (Oral). *International Aerosol Modeling Algorithms Conference*. Davis, CA, United States, December 6-8, 2023.
2. **Y. Liu**, Y. Yao, J. H. Curtis, M. West, N. Riemer. Quantifying the impacts of aerosol mixing state on heterogeneous N<sub>2</sub>O<sub>5</sub> uptake coefficients with the particle-resolved model PartMC-MOSAIC (Oral). *28<sup>th</sup> Environmental Engineering and Science Symposium*. Urbana, IL, United States, April 14, 2023.
3. **Y. Liu**, Y. Yao, J. H. Curtis, M. West, N. Riemer. Quantifying the impacts of aerosol mixing state on heterogeneous N<sub>2</sub>O<sub>5</sub> uptake coefficients with the particle-resolved model PartMC-MOSAIC (Poster). *40<sup>th</sup> American Association for Aerosol Research Conference*. Raleigh, NC, United States, October 3-7, 2022.
4. **Y. Liu**, Y. Yao, J. H. Curtis, M. West, N. Riemer. The impacts of aerosol mixing state on N<sub>2</sub>O<sub>5</sub> reaction probability (Poster), *School of Earth, Society and Environment Research Review*. Urbana, IL, United States, February 18, 2022.
5. **Y. Liu**, Y. Yao, J. H. Curtis, M. West, N. Riemer. The impact of aerosol mixing state on N<sub>2</sub>O<sub>5</sub> uptake coefficient (Poster), *39<sup>th</sup> American Association for Aerosol Research Conference*. Online, October 18-22, 2021.

### INTERNSHIP

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#### **UN Environment - Tongji Institute of Environment for Sustainable Development** 2017-2018

- Coordinated over 50 student volunteers in environmental activities or seminars.
- Managed paperwork revision and advertised 2 international environmental-related conferences.

#### **Urban Planning and Design, Kunshan, Jiangsu** July 2019

- Conducted a field survey to point out issues in urban water supply and sewage treatment.
- Tested water quality of effluents from industries, communities, and retail stores.
- Collaborated in a technical assistance project to provide suggestions on pipeline network design to ensure water supply safety.

## **OUTREACH ACTIVITIES**

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Membership Director, AAAR at UIUC Student Chapter	2022-2023
Vice President, AAAR at UIUC Student Chapter	2021-2022
Coordinator, Asia-Pacific Leadership on Environment for Sustainable Development	Oct. 2018
Student organizer, 2017 International Student Conference on Environment and Sustainability	June 2017
Student volunteer, The International Conference on Ozone and Advanced Oxidation for the Water-Food-Health Nexus	Dec. 2017
Student volunteer, Seminar on Urban Pollution Control in the Context of UN Sustainable Development Goals	Oct. 2017