

## CURRICULUM VITAE

### **Dr. Kristina M. Wagstrom**

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Phone: (860) 486-1715 Email: kristina.wagstrom@uconn.edu

### WORK EXPERIENCE

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**Assistant Professor**, Department of Chemical, Materials, and Biomolecular Engineering, *University of Connecticut*, Storrs, CT, August 2012 – current. (on leave for a fellowship from September 1, 2012 – August 31, 2013)

Affiliations: Environmental Engineering  
Center for Clean Energy Engineering  
Center for Environment Science and Engineering

My lab, the Computational Atmospheric Chemistry and Exposure Laboratory, specializes in applying computational engineering-based approaches to address problems related to air pollution and atmospheric chemistry. This includes creating new and expanded modeling approaches, using community-developed computational tools to directly answer pressing scientific questions, using low-cost monitoring tools to expand the observational data available for model evaluation and development, and addressing local air pollution concerns posed by community partners.

*The overarching goal of the laboratory is to bridge the gap between the basic scientific understanding of the transport and transformation of atmospheric pollutants and the tools policy makers and communities use to develop potential air pollution strategies.*

**Fellow**, Science and Technology Policy Fellowship, *American Association for the Advancement of Science (AAAS)*, Washington, DC, September 2012 – August 2013.

Host Office: U.S. Environmental Protection Agency; Office of Research and Development  
National Center for Environmental Research; Applied Sciences Division

Mentor: Sherri Hunt

My work during my fellowship focused on developing approaches to evaluate the long-term impacts of research funding looking beyond just the resulting number of publications to the impact the scientific understanding. I specifically investigated the impacts from several funding programs from about 10 years prior.

**Postdoctoral Associate**, Department of Civil Engineering, *University of Minnesota*, Minneapolis, MN, August 2009 – May 2012

Focus Area: Air chemistry and biofuels.

Advisor: Dr. Julian Marshall

I was part of a team evaluating and quantifying the societal benefits and costs associated with changes in air pollution resulting from using ethanol in place of gasoline to meet future energy demands. Our analysis included emissions resulting from the full life cycle of ethanol and gasoline production and use. My primary contributions to the team were meteorological modeling (WRF), regional air quality modeling (CAMx), and atmospheric chemistry expertise.

## EDUCATION

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**Doctor of Philosophy in Chemical Engineering**, Department of Chemical Engineering, *Carnegie Mellon University*, Pittsburgh, PA, 2009

Focus Area: Atmospheric chemistry

Dissertation Title: Characterizing the Origin of Atmospheric Particulate Matter

Dissertation Advisor: Dr. Spyros N. Pandis

I developed and evaluated the Particulate Matter Source Apportionment Technology (PSAT), a computationally efficient source apportionment algorithm, in PMCAMx, a regional air quality model. I further extended my work to utilize the algorithm to study different aspects of atmospheric particulate matter populations including particulate matter age distributions, impacts from large source regions, and the extent of pollutant transport.

**Bachelor of Science in Chemical Engineering**, Chemical and Environmental Engineering Department, *Illinois Institute of Technology*, Chicago, IL, 2004

**Bachelor of Science in Chemistry**, Biological, Chemical and Physical Sciences Department, *Illinois Institute of Technology*, Chicago, IL, 2004

## FUNDING

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**Total Funding:** \$1,304,475

**Wagstrom Lab Share:** \$1,030,434

**External:** \$937,355

**Faculty, Service Learning at the Intersection of Environmental Stewardship at the University of Connecticut**, Campuses for Environmental Stewardship - Campus Compact, 06/01/2018-05/31/2021. \$5,399

**Principal Investigator, Source Contributions to Ozone in Connecticut**, Connecticut Department of Energy and Environmental Protection - Contract. 05/23/2019-05/22/2022, \$136,018.

**Principal Investigator, CAREER: Engaging Communities to Bridge the Local to Regional Gap in Air Pollution Exposure Assessment**, National Science Foundation – Environmental Engineering Program. 05/23/2018-05/22/2023, \$500,000.

**Principal Investigator, Resolving Source Contributions to Atmospheric Deposition**, National Science Foundation – Environmental Engineering Program. 09/01/2017-08/31/2020, \$299,990.

**Co-Director, Student Engagement in a Living Laboratory for Sustainable Agriculture**, University of Connecticut Academic Plan Program. 07/01/2017-06/20/2020, \$295,000 (\$25,000 share). PD: Richard Parnas.

**Principal Investigator**, University of Connecticut CESE Mini-Grants in Support of Environmental Research Programs. 05/01/2017-06/30/2018, \$4,900.

**Principal Investigator, Transport and Transformation of Air Pollutants Service-Learning Activities**, University of Connecticut Provost's Teaching Innovation Mini Grant Competition. 01/01/2016-06/30/2016, \$2,000.

**Principal Investigator, Developing a Strong Local Professional Network and Improving Writing Habits**, University of Connecticut School of Engineering Micro-grant Program. 01/01/2015-12/31/2015, \$1,179.

**Eversource Assistant Professor for Environmental Engineering Education**, University of Connecticut Endowed Faculty Appointment. 08/23/2013-08/22/2019, \$10,000/year, \$60,000 total.

## AWARDS AND FELLOWSHIPS

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**CBE Faculty Research Award**, University of Connecticut, Department of Chemical and Biomolecular Engineering. 2018.

**CBE Faculty Teaching Award**, University of Connecticut, Department of Chemical and Biomolecular Engineering. 2018. *Selected by the graduating senior class.*

**CBE Faculty of the Year**, University of Connecticut, Department of Chemical and Biomolecular Engineering. 2015. *Selected by the graduating senior class.*

**Service Learning Faculty Fellow**, University of Connecticut. 2015

**AAAS Science and Technology Policy Fellowship**, American Association for the Advancement of Science. 2012-2013.

## PEER-REVIEWED PUBLICATIONS

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Denotes: **Kristina Wagstrom**, Wagstrom Lab Graduate Student, Wagstrom Lab Undergraduate Student

Lamancusa, Carmen, **Wagstrom, Kristina**. Global Transport of Dust Emitted from Different Regions of the Sahara. (2019) *Atmospheric Environment*. In Press. <https://doi.org/10.1016/j.atmosenv.2019.05.042>

Parvez, Fatema, **Wagstrom, Kristina**. A Hybrid Modeling Framework to Estimate Pollutant Concentrations and Exposures in Near Road Environments. (2019) *Science of the Total Environment*. 663, 144-153. <https://doi.org/10.1016/j.scitotenv.2019.01.218>.

Parvez, Fatema, **Wagstrom, Kristina**. Comparing Estimates from the R-LINE Near Road Dispersion Model Using Model-derived and Observation-derived Meteorology. (2018) *Atmospheric Pollution Research*. 9 (3), 483-493. <https://doi.org/10.1016/j.apr.2017.10.007>

Parvez, Fatema, Lamancusa, Carmen, **Wagstrom, Kristina**. Primary and Secondary Particulate Matter Intake Fraction from Different Height Emission Sources. (2017) *Atmospheric Environment*. 165, 1-11. <https://doi.org/10.1016/j.atmosenv.2017.06.011>

Lamancusa, Carmen, Parvez, Fatema, **Wagstrom, Kristina**. Spatially Resolved Intake Fraction Estimates for Primary and Secondary Particulate Matter in the United States. (2017) *Atmospheric Environment*. 150, 229-237. <https://doi.org/10.1016/j.atmosenv.2016.11.010>

Ciston, S., Luchini-Colbry, K., Weyant, C.M., Nagel, R.L., Nagel, J.K., Genau, A.L., **Wagstrom, K.M.**, Briedis, D. Two Body Solutions: Strategies for the Dual-Career Job Search. (2015) *American Society for Engineering Education Annual Conference and Exposition*. Seattle, WA. June 14-17, 2015.  
<https://www.asee.org/public/conferences/56/papers/11885/view>

**Wagstrom, Kristina M.**, Baker, Kirk, Hunt, Sherri. Synthesizing Scientific Progress: Outcomes from US EPA's Carbonaceous Aerosols and Source Apportionment STAR Grants. (2014) *Environmental Science and Technology*. 48 (18), 10561-10570. <https://doi.org/10.1021/es500782k>

Roy, Anirban A., **Wagstrom, Kristina M.**, Adams, Peter A., Pandis, Spyros N., Robinson, Allen L. Quantification of the Effects of Molecular Marker Oxidation on Source Apportionment Estimates for Motor Vehicles. (2011) *Atmospheric Environment*. 45 (18), 3132-3140.  
<https://doi.org/10.1016/j.atmosenv.2011.03.020>

**Wagstrom, Kristina M.**, Pandis, Spyros N. Contributions of Long Range Transport to Local Fine Particulate Matter Problems. (2011) *Atmospheric Environment*. 45 (16), 2730-2735.  
<https://doi.org/10.1016/j.atmosenv.2011.02.040>

**Wagstrom, Kristina M.**, Pandis, Spyros N. Source-Receptor Relationships for Fine Particulate Matter in the Eastern United States. (2011) *Atmospheric Environment*. 45 (2). 347-356.  
<https://doi.org/10.1016/j.atmosenv.2010.10.019>

**Wagstrom, Kristina M.**, Pandis, Spyros N. Determination of the Age Distribution of Aerosol Species Using a Chemical Transport Model. (2009) *Journal of Geophysical Research - Atmospheres*. 114.  
<https://doi.org/10.1029/2009JD011784>

**Wagstrom, Kristina M.**, Pandis, Spyros N., Yarwood, Greg, Wilson, Gary M., Morris, Ralph E. Development and Application of a Computationally Efficient Apportionment Algorithm in a Three Dimensional Chemical Transport Model. (2008) *Atmospheric Environment*. 42 (22). 5650-5659.  
<https://doi.org/10.1016/j.atmosenv.2008.03.012>

## **SUBMITTED MANUSCRIPTS**

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Denotes: **Kristina Wagstrom**, Wagstrom Lab Graduate Student, Wagstrom Lab Undergraduate Student

Parvez, Fatema, **Wagstrom, Kristina**. Impact of Regional versus Local Resolution Air Quality Modeling on Particulate Matter Exposure Health Impact Assessment. *Air Quality, Atmosphere, and Health*. Submitted on March 29, 2019.

Lamancusa, Carmen, Naranjo, Andrea, Rumsey, Sarah, Chen, Xuanwen, **Wagstrom, Kristina**. Seasonal Atmospheric Nitrogen Deposition to US Hydrologic Units and Ecoregions. *Science of the Total Environment*. Submitted on April 11, 2019.

## **MANUSCRIPTS IN PREPARATION**

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Denotes: **Kristina Wagstrom**, Wagstrom Lab Graduate Student, Wagstrom Lab Undergraduate Student

Lamancusa, Carmen, **Wagstrom, Kristina**. Global Particulate Matter Source Apportionment Model Description. In preparation for *Geoscientific Model Development*.

Lewicki, Matthew, Ramsay, Samantha, Ambroise, Joshua, Coon, Ashley, Schiraldi, Dominique, Walters, Kealy, **Wagstrom, Kristina**. Comparing Exposure to Cyclists in 50 United States Cities. In preparation for *Air Quality, Atmosphere, and Health*.

Buehler, Colby, Keary, Anne, Wielechowski, Kamil, Cote, Samuel, Rumsey, Sarah, **Wagstrom, Kristina**. Pesticide Drift from Conventional to Organic Farmlands in Eastern Connecticut. In preparation for *Journal of the Air and Waste Management Association*.

Akter, Sharmin, Crowl, Michael, **Wagstrom, Kristina**. Inter-regional Impacts on Nitrogen Deposition in US Hydrologic Regions. In preparation for *Science of the Total Environment*.

Wakeman, Caressa, **Wagstrom, Kristina**. Air Pollution Exposures at School Locations throughout the United States. In preparation for *Air Quality, Atmosphere, and Health*.

## OTHER PUBLICATIONS

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Denotes: **Kristina Wagstrom**, Wagstrom Lab Graduate Student, Wagstrom Lab Undergraduate Student

**Wagstrom, Kristina M.**, Hill, Jason D. Chapter 3: Air Pollution Impacts of Biofuels. In *Socioeconomic Impacts of Biofuels: Evidence from Developing Nations*. Eds: Gasparatos, A., Stromberg, P. Cambridge University Press. 2012.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Impacts of Large Source Regions on Particulate Matter Concentrations in the Eastern United States. *Air and Waste Management Association's 101<sup>st</sup> Annual Conference - Student Poster/Paper Competition*. June 24-27, 2008. Portland, OR.

## THESIS ADVISING

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**Doctoral Thesis Advisor, University of Connecticut, CBE Department.**

- ✦ Sharmin Akter (Environmental Engineering – 2024) *To be determined*
- ✦ Landon Bassett (2023) *To be determined*
- ✦ Yukui Lei (2023) *To be determined*
- ✦ Carmen Lamancusa (2019) *Global Particulate Matter Source Apportionment (tentative)*
- ✦ Fatema Parvez (2018) *Fine Scale Modeling to Estimate Human Exposure to Air Pollution*

**Doctoral Thesis Associate Advisor (committee member), University of Connecticut, CBE Department.**

- ✦ Huiying Luo (2019 – Environmental Engineering)
- ✦ Maryam Pardakhti (2019)
- ✦ Rebecca Rubinstein (2018)
- ✦ Lewis Crane (2017)
- ✦ Daniel Anastasio (2015)
- ✦ Hom Sharma (2015)

**Masters Thesis Advisor, University of Connecticut, CBE Department.**

- ✦ Michael Crowl (2017 – Project) *Estimating Inter-Regional Influences on Pollutant Deposition*
- ✦ Kerry Chen (2016 – Thesis) *Quantifying Atmospheric Nitrogen Deposition to US Waterways*

**Honors Thesis Advisor, University of Connecticut, CBE Department.**

- ✦ Brianna Mancuso (2020) *Measuring Air Pollution at the Stamford Transportation Center*
- ✦ Luke Kinard (2019) *Design of a Low-Cost Nitrogen Detection System*
- ✦ Anita Luxkaranayagam (Physiology and Neurobiology - 2019) *Deposition of Nitrate, Sulfate, and Ammonium in the Respiratory Tract*
- ✦ Kyle Terracciano (2018) *Designing and Calibrating a Low-Cost Gaseous Air Pollutant Monitor*
- ✦ Colby Buehler (2018) *Assessing Herbicide Drift to the Spring Valley Student Farm and EcoGarden*
- ✦ Samantha Ramsay (2017) *Evaluating Exercise Routes and Potential Pollutant Exposures*

## TEACHING EXPERIENCE

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**Instructor/Undergraduate Research Advisor, CHEG 4989: Introduction to Research (and equivalent courses)** (Students from all levels - elective) Department of Chemical and Biomolecular Engineering, University of Connecticut, Storrs, CT.

- ✦ I mentor teams of students from a variety of departments on campus participating on different undergraduate research projects in my laboratory.
- ✦ Developed modules and trainings to help students develop important skills related to research, teamwork, and project planning.
- ✦ Enrollment: 3 (Spring 2014), 2 (Fall 2014), 5 (Spring 2015), 14 (Fall 2015), 16 (Spring 2016), 16 (Fall 2016), 13 (Spring 2017), 20 (Fall 2017), 23 (Spring 2018), 34 (Fall 2018)
- ✦ Honor's Thesis Advisor: Samantha Ramsay (2017), Colby Buehler (2018), Kyle Terracciano (2018), Anita Luxkaranayagam (2019 – PNB), Luke Kinard (2019), Brianna Mancuso (2020)
- ✦ IDEA Grant Mentor: Colby Buehler (2017)

**Instructor, CHEG 3151: Process Kinetics** (Junior Level Core Major Course), Department of Chemical and Biomolecular Engineering, University of Connecticut, Storrs, CT, Spring 2014, Spring 2015, Spring 2016, Spring 2017, Spring 2018.

- ✦ Developed a “flipped” classroom including over 50 video lectures and examples and over 50 in-class example problems.
- ✦ Developed the course from scratch including all videos and class handouts.
- ✦ Textbook: *Chemical Reaction Engineering* by Octave Levenspiel.
- ✦ Course enrollment: 52 (Spring 2014), 74 (Spring 2015), 77 (Spring 2016), 87 (Spring 2017), 77 (Spring 2018)
- ✦ Median teaching evaluations: 4.0/5.0 (Spring 2014), 4.5/5.0 (Spring 2015), 4.0/5.0 (Spring 2016), 4.0/5.0 (Spring 2017), 5.0/5.0 (Spring 2018)

**Instructor/Design Team Mentor, CHEG 4140/4143: Senior Capstone Design** (Senior Level Core Major Course – W course starting in 2017), Department of Chemical and Biomolecular Engineering, University of Connecticut, Storrs, CT, 2013-2014, 2015-2016, 2017-2018.

- ✦ Mentored teams of senior students as they spent a year completing a capstone design project.
- ✦ 2013-2014: Mercury Removal from Coal-Fired Power Plants
- ✦ 2015-2016: Design of a Pollution Control Device for Home Fireplaces
- ✦ 2017-2018: Design of a Passive Snow Melting Device (W course)
- ✦ 2018-2019: Design of a New Horseshoe Crab Exhibit in partnership with the Maritime Aquarium (service-learning, W course)

- ✧ 2018-2019: Design of a Community Aquaponics System in partnership with the Keney Park Sustainability Project (service-learning, W course)

**Instructor, CHEG 4139: Senior Lab** (Senior Level Core Course), Department of Chemical and Biomolecular Engineering, University of Connecticut, Storrs, CT, Fall 2017, Fall 2018.

- ✧ Lab-designated course; developed new oral data quiz approach and new lab safety focus.
- ✧ Implemented a specifications grading approach (Fall 2018).
- ✧ Course enrollment: 24 (Fall 2017), 18 (Fall 2018)
- ✧ Median teaching evaluations: 4.0/5.0 (Fall 2017), 3.0/5.0 (Fall 2018 – low response rate of 3/11 and 2/7 for the sections)

**Instructor, CHEG 4995/ENVE 5221: Transport and Transformation of Air Pollutants** (Senior/Graduate Level Elective Course), Department of Chemical and Biomolecular Engineering, University of Connecticut, Storrs, CT, Fall 2014, Fall 2015.

- ✧ Piloted a project-based, service-learning designated course.
- ✧ Developed the course from scratch.
- ✧ Developed relationships with community organizations to offer community-engaged service-learning projects: Knox Parks, Connecticut Department of Energy and Environmental Protection, UConn Facilities, UConn Office of Environmental Policy, Asylum Hill Neighborhood Association, and Hartford Public High School.
- ✧ In May 2018, I received funding to further develop this course starting in Fall 2019 as part of an NSF CAREER Award. Students will partner with a different neighborhood in Hartford each year to complete a neighborhood air quality assessment.
- ✧ Course enrollment: 13 (Fall 2014), 18 (Fall 2015)
- ✧ Median teaching evaluations: 5.0/5.0 (Fall 2014), 5.0/5.0 (Fall 2015)

## RECENT PROFESSIONAL SERVICE

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### EXTERNAL SERVICE

**Second Vice-Chair, American Institute of Chemical Engineers Environmental Division, 2019.**

- ✧ Chaired the Cecil Award Committee (2019)
- ✧ Working with other members of division leadership to continue the division newsletter
- ✧ Working with other members of division leadership to develop strategies to increase membership in the division.
- ✧ Will serve as First Vice-Chair (2020) and Chair (2021)

**Board of Directors, American Institute of Chemical Engineers Environmental Division, 2015-2018.**

- ✧ Chaired the Early Career Award Committee (2018)
- ✧ Worked with fellow directors to resurrect the division newsletter

**Newsletter Committee**, American Association for Aerosol Research, 2015-2018.

- ✧ Junior editor (2017)
- ✧ Editor (2018)

**Speaker Committee**, Association of Environmental Engineering and Science Professors, 2018-current.

- ✧ AAAR Speaker Subcommittee (2019-current)

**Session Chair**, American Association for Aerosol Research Annual Conference, 2008, 2013-2018.

**Poster Judge**, American Association for Aerosol Research Annual Conference, 2012-2018.

**Session Chair**, American Institute of Chemical Engineers Annual Meeting, 2015-2019.

**Reviewer**, *Atmospheric Environment*, *Environmental Engineering and Science*, *Atmosphere*, *Ambio*, *Environmental Science and Technology*, *Environmental Research*, *American Society for Engineering Education*, *Journal of the Air and Waste Management Association*, *Environmental Research Letters*, *Environmental Science and Pollution Research*, *Environmental Pollution*, *PLOS ONE*

**Grant Panelist/Ad Hoc Reviewer**, US Environmental Protection Agency, National Science Foundation, National Oceanic and Atmospheric Administration, American Association for the Advancement of Science.

#### INTERNAL SERVICE

**Seminar Coordinator**, University of Connecticut, CBE Department. 2018-current.

- ✧ Responsible for planning and scheduling departmental seminars.

**Sustainable Community Food Systems Minor Program Advisory Board**, University of Connecticut. 2018-current.

- ✧ Work with faculty throughout the university to develop and provide students with opportunities through the Sustainable Community Food Systems minor program which integrates teaching and internship opportunities.

**Teaching and Active Learning Space Committee**, University of Connecticut. 2018-current.

- ✧ Work with committee members throughout the university to assess opportunities to improve classroom space on campus to better support active learning approaches in the classroom.

**daVinci Workshop**, University of Connecticut, School of Engineering. 2015, 2017, 2018.

- ✧ Developed and led a week-long workshop for middle and high school teachers focused on air pollution and applying Arduino-based approaches.

**Young Senior Scholars Summit**, University of Connecticut. 2018.

- ✧ Host two high school students in my lab for three weeks over the summer.

**Undergraduate Committee**, University of Connecticut, CBE Department, 2013-present.

- ✧ Work with other members of the team with address all aspects of the undergraduate curriculum in the CBE department including constantly keeping the curriculum up-to-date and considering better approaches for undergraduate research department-wide.

**Omega Chi Epsilon Faculty Advisor**, University of Connecticut, CBE Department. 2013-current.

- ✧ Advising the UConn chapter of the chemical engineering honors society as they develop meaningful activities for the entire department.

**Academic Advisor**, University of Connecticut, CBE Department. 2013-current.



- ✧ 2013-2014: 8 advisees
- ✧ 2014-2015: 14 advisees
- ✧ 2015-2016: 14 advisees
- ✧ 2016-2017: 12 advisees
- ✧ 2017-2018: 24 advisees
- ✧ 2018-2019: 24 advisees

**Explore Engineering**, *University of Connecticut, School of Engineering*. 2014, 2015, 2017.

- ✧ Held an atmospheric chemistry demonstration for high school students.

**Connecticut Invention Convention**, *University of Connecticut, School of Engineering*. 2014-2017.

- ✧ Helped organize the Chemical and Biomolecular Engineering Department demonstration booth.

## INVITED PRESENTATIONS AND SEMINARS

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Wagstrom, Kristina M. Relating Air Pollutant Exposure and Emissions Using Advanced Modeling Approaches. *University of Connecticut, Natural Resources and the Environment*. 2015. Storrs, CT.

Wagstrom, Kristina M. Relating Air Pollutant Exposure and Emissions Using Advanced Modeling Approaches. *Illinois Institute of Technology, Chemical and Biological Engineering Department*. 2015. Chicago, IL.

Wagstrom, Kristina M. Quantifying Atmospheric Particulate Matter Exposure Variation Among Sources. *University of Connecticut, Marine Sciences*. 2015. Avery Point, CT.

Wagstrom, Kristina M. Reframing “Not in My Backyard”: Exposure Variation Among Sources. *University of Rhode Island, Chemical Engineering Department*. 2014. Kingston, RI.

Wagstrom, Kristina M. Intake Fraction and Distance from Different Source Regions. *University of Connecticut, Department of Pharmaceutical Sciences*. 2014. Storrs, CT.

Wagstrom, Kristina M. Air Quality Impacts of Achieving U.S. Renewable Fuel Mandates. *University of Connecticut, Environmental Engineering Department*. 2013. Storrs, CT.

Wagstrom, Kristina M. Atmospheric Chemistry: From Air Pollution Sources to Models to Policy. *Randolph-Macon College, Chemistry Department*. April 12, 2013. Ashland, VA.

Wagstrom, Kristina M. How Might the Renewable Fuel Standard Impact Air Pollution? *Minnesota State University – Mankato, Department of Geography*. December 2, 2011. Mankato, MN.

Wagstrom, Kristina M. Air Pollution Modeling Basics *Minnesota State University – Mankato, Minnesota Simulation and Modeling Center*. December 2, 2011. Mankato, MN.

Wagstrom, Kristina M. How Might Biofuels Impact Air Quality? *Minnesota State University – Mankato, Department of Biological Sciences*. March 18, 2011. Mankato, MN.

## CONFERENCE PRESENTATIONS

Denotes: **Kristina Wagstrom**, Wagstrom Lab Graduate Student, Wagstrom Lab Undergraduate Student

### ORAL PRESENTATIONS

Crowl, Michael, Naranjo, Andrea, Chen, Xuanwen, Lamancusa, Carmen, **Wagstrom, Kristina**. Quantifying Inter-Regional Atmospheric Nitrogen Deposition to U.S. Hydrologic Regions. *National Atmospheric Deposition Program Annual Meeting*. November 5-9, 2018. Albany, NY.

Lamancusa, Carmen, **Wagstrom, Kristina**. Global Source Apportionment of Atmospheric Particulate Matter. *American Institute of Chemical Engineers*. October 28 – November 2, 2018. Pittsburgh, PA.

Parvez, Fatema, **Wagstrom, Kristina**. Hybrid Modeling to Estimate Near-Road Pollutant Concentrations and Exposures. *Community Modeling and Analysis System Annual Conference*. October 22-24, 2018. Chapel Hill, NC.

Lamancusa, Carmen, **Wagstrom, Kristina**. Global Particulate Matter Source Apportionment. *International Aerosol Conference*. September 2-7, 2018. St. Louis, MO.

Parvez, Fatema, **Wagstrom, Kristina**. Estimation of Human Exposure to Near Road Emission Sources Using a Hybrid Modeling Framework. *International Aerosol Conference*. September 2-7, 2018. St. Louis, MO.

Parvez, Fatema, **Wagstrom, Kristina**. Hybrid Modeling to Estimate Near-Road Pollutant Concentrations and Exposures. *International Society for Exposure Science*. August 26-30, 2018. Ottawa, Canada.

Parvez, Fatema, **Wagstrom, Kristina**. Hybrid Modeling to Estimate Near-Road Pollutant Concentrations. *American Institute of Chemical Engineers*. October 29 – November 3, 2017. Minneapolis, MN.

Parvez, Fatema, **Wagstrom, Kristina**. Hybrid Modeling to Estimate Near-Road Pollutant Concentrations. *American Association for Aerosol Research*. October 16-20, 2017. Raleigh, NC.

Chen, Xuanwen, Parvez, Fatema, **Wagstrom, Kristina**. Quantifying Atmospheric Nitrogen Deposition to US Waterways. *American Institute of Chemical Engineers*. November 13-18, 2016. San Francisco, CA.

**Wagstrom, Kristina**. Creating Socially Minded Engineers through Student-Led Air Pollution Assessments of Local Towns. *American Institute of Chemical Engineers*. November 13-18, 2016. San Francisco, CA.

Parvez, Fatema, **Wagstrom, Kristina**. Impact of Meteorology Datasets on Near Roadway Dispersion Model Estimates. *American Association for Aerosol Research*. October 17-21, 2016. Portland, OR.

Lamancusa, Carmen, **Wagstrom, Kristina**. Regionally Specific Saharan Dust Transport. *American Association for Aerosol Research*. October 17-21, 2016. Portland, OR.

**Wagstrom, Kristina.** Identifying Reaction Regimes in Atmospheric Chemical Transport Models for Mechanism Reduction. *American Institute of Chemical Engineers*. November 8-13, 2015. Salt Lake City, UT.

**Wagstrom, Kristina.** Flipping the Chemical Reaction Engineering Classroom. *American Institute of Chemical Engineers*. November 8-13, 2015. Salt Lake City, UT.

Lamancusa, Carmen, Parvez, Fatema, Wagstrom, Kristina. Human Particulate Matter Exposure Implications from Regional Pollutant Transport. *American Association for Aerosol Research's 34<sup>th</sup> Annual Conference*. October 12-16, 2015. Minneapolis, MN.

**Wagstrom, Kristina.** Identifying Organic Chemical Reaction Regimes in a Regional Model. *Atmospheric Chemical Mechanisms*. December 10-12, 2014. Davis, CA.

**Wagstrom, Kristina, Lamancusa, Carmen, Parvez, Fatema.** Associating Intake Fraction and Distance from Source Regions with a Variety of Characteristics. *International Aerosol Conference*. August 28 – September 2, 2014. Busan, Korea.

Murphy, Benjamin, **Wagstrom, Kristina**, Pandis, Spyros. Organic Aerosol Source Apportionment in the United States. *American Association for Aerosol Research's 31<sup>st</sup> Annual Conference*. October 8-12, 2012. Minneapolis, MN.

**Wagstrom, Kristina M.,** Tessum, Christopher, Hill, Jason, Marshall, Julian. Air Quality Impacts of Achieving U.S. Renewable Fuel Mandates. *2011 American Institute of Chemical Engineering Annual Meeting*. October 16-21, 2011. Minneapolis, MN.

Murphy, Benjamin N., **Wagstrom, Kristina M.,** Pandis, Spyros N. Exploring Atmospheric Organic Aerosol Source Apportionment in the United States for an Entire Simulation Year. *2011 American Institute of Chemical Engineering Annual Meeting*. October 16-21, 2011. Minneapolis, MN.

**Wagstrom, Kristina M.,** Tessum, Christopher, Hill, Jason, Marshall, Julian. Air Quality Impacts of Achieving U.S. Renewable Fuel Mandates. *American Association for Aerosol Research's 30<sup>th</sup> Annual Conference*. October 3-7, 2011. Orlando, FL.

Tessum, Christopher, **Wagstrom, Kristina M.,** Hill, Jason, Marshall, Julian. Air Quality Implications of Alternative Fuels: A spatially, temporally explicit lifecycle modeling approach. *23<sup>rd</sup> Conference of the International Society for Environmental Epidemiology*. September 13-16, 2011. Barcelona, Spain.

Pandis, Spyros N., Tsimpidi, Alexandra, Karydis, Vlassis, Fountoukis, Christos, Megaritis, Athanasios, Pilinis, Christodoulos, **Wagstrom, Kristina**, Murphy, Benjamin. Aerosol Formation and Transport To and From Polluted Megacities. *European Geophysical Union General Assembly 2011*. April 3-8, 2011. Vienna, Austria.

**Wagstrom, Kristina M.,** Tessum, Christopher, Hill, Jason, Marshall, Julian. Air Pollution Impacts of Conventional and Alternative Fuels. *American Association for Aerosol Research's 29<sup>th</sup> Annual Conference*. October 25-29, 2010. Portland, OR.

Roy, Anirban, **Wagstrom, Kristina M.,** Pandis, Spyros N., Adams, Peter, Robinson, Allen L. Investigating the Effects of Heterogeneous Oxidation on Organic Molecular Markers Concentrations.

*American Association for Aerosol Research's 29<sup>th</sup> Annual Conference*. October 25-29, 2010. Portland, OR.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Contribution of Long Range Transport to Local Fine Particulate Matter Problems. *American Association for Aerosol Research's 28<sup>th</sup> Annual Conference*. October 26-30, 2009. Minneapolis, MN.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Evaluation of Long-Range Transport of Atmospheric Particulate Matter Using a Regional Chemical Transport Model. *2008 American Institute of Chemical Engineers Annual Meeting*. November 16-21, 2008. Philadelphia, PA.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Determination of Atmospheric Aerosol Age Using a Three-Dimensional Eulerian Model. *American Association for Aerosol Research's 27<sup>th</sup> Annual Conference*. October 20-24, 2008. Orlando, FL.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Determination of Atmospheric Aerosol Age Using a Three-Dimensional Eulerian Model. *European Aerosol Conference 2008*. August 24-29, 2008. Thessaloniki, Greece.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Application of an Apportionment Algorithm to Studying Source Influences in the Eastern United States. *Air and Waste Management Association's 100<sup>th</sup> Annual Conference*. June 26-28, 2007. Pittsburgh, PA.

**Wagstrom, Kristina M.**, Pandis, Spyros N., Yarwood, Greg, Wilson, Gary M., Morris, Ralph E. Development and Application of a Computationally Efficient Apportionment Algorithm in a Three Dimensional Chemical Transport Model. *2006 International Aerosol Conference*. September 10-15, 2006. St. Paul, MN.

#### POSTER PRESENTATIONS

Lamancusa, Carmen, **Wagstrom, Kristina**. Source Apportionment in GEOS-Chem. *9<sup>th</sup> International GEOS-Chem Meeting (IGC9)*. May 6-9, 2019. Cambridge, MA.

Lamancusa, Carmen, **Wagstrom, Kristina**. Atmospheric Deposition to Long Island Sound Watershed. *Long Island Sound Research Conference*. March 15, 2019. Port Jefferson, NY.

Lamancusa, Carmen, **Wagstrom, Kristina**. Global Particulate Matter Source Apportionment: Evaluation. *Community Modeling and Analysis System Annual Conference*. October 22-24, 2018. Chapel Hill, NC.

Buehler, Colby, **Wagstrom, Kristina**. Assessing Herbicide and Fertilizer Drift between Conventional and Organic Farmland. *American Institute of Chemical Engineers – Student Meeting*. October 29 – November 3, 2017. Minneapolis, MN.

Lamancusa, Carmen, **Wagstrom, Kristina**. Incorporating Flexible Source Tracking into GEOS-Chem. *8<sup>th</sup> International GEOS-Chem Meeting (IGC8)*. May 1-4, 2017. Cambridge, MA.

Parvez, Fatema, **Wagstrom, Kristina**. Impact of Meteorology Datasets on Near Roadway Dispersion Model Estimates. *American Institute of Chemical Engineers*. November 13-18, 2016. San Francisco, CA.

**Wagstrom, Kristina.** Optimizing External Coursework in a Flipped Chemical Reaction Engineering Classroom. *American Institute of Chemical Engineers*. November 13-18, 2016. San Francisco, CA.

Parvez, Fatema, **Wagstrom, Kristina.** Impact of Meteorology on Dispersion Model Performance. *Community Modeling and Analysis System Annual Meeting*. October 24-26, 2016. Chapel Hill, NC.

Lamancusa, Carmen, **Wagstrom, Kristina.** Source Resolved Modeling of Saharan Dust. *American Geophysical Union Fall Meeting*. December 13-18, 2015. San Francisco, CA.

Parvez, Fatema, **Wagstrom, Kristina.** Assessment of Diurnal and Seasonal Variability in Near Roadway Dispersion Modeling. *American Association for Aerosol Research's 34<sup>th</sup> Annual Conference*. October 12-16, 2015. Minneapolis, MN.

Lamancusa, Carmen, Parvez, Fatema, **Wagstrom, Kristina.** Human Particulate Matter Exposure Implications from Regional Pollutant Transport. *Community Modeling and Analysis System Annual Conference*. October 5-7, 2015. Chapel Hill, NC.

Parvez, Fatema, **Wagstrom, Kristina.** Assessment of Diurnal and Seasonal Variability in Near Roadway Dispersion Modeling. *Community Modeling and Analysis System Annual Conference*. October 5-7, 2015. Chapel Hill, NC.

**Wagstrom, Kristina.** Identifying Organic Reaction Regimes from Atmospheric Organic Reactions. *Atmospheric Chemistry Gordon Research Conference*. August 2-9, 2015. Waterville Valley, NH.

Lamancusa, Carmen, Parvez, Fatema, **Wagstrom, Kristina.** Assessing the Spatial Trends within the Inhalation Intake Fraction. *Association of Environmental Engineering and Science Professors Conference*. June 13-19, 2014. New Haven, Connecticut.

**Wagstrom, Kristina.** Service Learning in an Advanced Air Pollution Course: Lessons Learned. *Association of Environmental Engineering and Science Professors Conference*. June 13-19, 2014. New Haven, Connecticut.

Parvez, Fatema, Lamancusa, Carmen, **Wagstrom, Kristina.** Evaluation of Intake Fraction from Different Point Sources. *Association of Environmental Engineering and Science Professors Conference*. June 13-19, 2014. New Haven, Connecticut.

Chen, Xuanchen (Kerry), **Wagstrom, Kristina.** Dry and Wet Deposition of Nitrogen Containing Species in Different Seasons in the United States. *Association of Environmental Engineering and Science Professors Conference*. June 13-19, 2014. New Haven, Connecticut.

**Wagstrom, Kristina**, Parvez, Fatema. Relating Stack Height to Regional Pollutant Exposures. *American Association for Aerosol Research 33<sup>rd</sup> Annual Conference*. October 20-24, 2014. Orlando, FL.

**Wagstrom, Kristina**, Hunt, Sherri. A Self-Consistent Global Emissions Inventory Spanning 1850-2050 – Why We Need One. *American Association for Aerosol Research's 32<sup>nd</sup> Annual Conference*. September 30 – October 4, 2013. Portland, OR.

**Wagstrom, Kristina**, Baker, Kirk, Hunt, Sherri. An Analysis of EPA's STAR Program and a Decade of Field Changing Research in Atmospheric Aerosols. *Gordon Research Conference - Atmospheric Chemistry*. July 28 – August 2, 2013. West Dover, VT.

**Wagstrom, Kristina M.** Impact of Long Range Transport of Atmospheric Aerosols on Cloud Dynamics in Latin America and the Caribbean. *Pan-American Advanced Studies Institute on Atmospheric Processes in Latin America and the Caribbean: Observations, Analysis, and Impacts*. May 24 – June 7, 2013. Cartagena, Colombia.

**Wagstrom, Kristina M.** Improving Our Understanding of Atmospheric Particulate Matter Concentrations and Feedbacks (Meet the Faculty Candidates Poster Session). *2011 American Institute of Chemical Engineering Annual Meeting*. October 16-21, 2011. Minneapolis, MN.

Murphy, Benjamin N., **Wagstrom, Kristina M.**, Pandis, Spyros N. Organic Aerosol Source Apportionment in the United States. *American Association for Aerosol Research's 30<sup>th</sup> Annual Conference*. October 3-7, 2011. Orlando, FL.

Tessum, Christopher, **Wagstrom, Kristina M.**, Hill, Jason, Marshall, Julian. Air Quality Implications of Alternative Fuels: A Spatially, Temporally Explicit Lifecycle Modeling Approach. *LCA XI*. October 4-6, 2011. Chicago, IL.

**Wagstrom, Kristina**, Tessum, Chris, Nickerson, Tom, Hill, Jason, Marshall, Julian. Air Pollution Impacts of Conventional and Alternative Fuels. *22<sup>nd</sup> Annual Transportation Research Conference*. May 24-25, 2011. St. Paul, MN.

Tessum, Chris, **Wagstrom, Kristina**, Hill, Jason, Marshall, Julian. Air Quality Implications of Alternative Fuels: A Spatially, Temporally Explicit Lifecycle Modeling Approach. *E3 2010*. November 30, 2010. St. Paul, MN.

**Wagstrom, Kristina**, Tessum, Chris, Hill, Jason, Marshall, Julian. Air Pollution Impacts of Conventional and Alternative Fuels. *Minnesota Supercomputing Institute's 25<sup>th</sup> Anniversary Research Exhibition*. April 30, 2010. Minneapolis, MN.

**Wagstrom, Kristina**, Tessum, Chris, Hill, Jason, Marshall, Julian. Air Pollution Impacts of Conventional and Alternative Fuels. *E3 2009*. November 17, 2009. St. Paul, MN.

Roy, Anirban, **Wagstrom, Kristina M.**, Weitkamp, Emily A., Hennigan, Chris, Pandis, Spyros N., Robinson, Allen L. Chemical Transport Model Simulations of the Effects of Heterogeneous Oxidation on Motor Vehicle Molecular Markers Concentrations in the Eastern United States. *American Association for Aerosol Research's 28<sup>th</sup> Annual Conference*. October 26-30, 2009. Minneapolis, MN.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Impact of Large Source Regions on Particulate Matter Concentrations in the Eastern United States. *Air and Waste Management Association's 101<sup>st</sup> Annual Conference - Student Poster/Paper Competition*. June 24-27, 2008. Portland, OR.

**Wagstrom, Kristina M.**, Pandis, Spyros N., Yarwood, Greg, Wilson, Gary M., Morris, Ralph E. Particulate Matter Source Apportionment Technology (PSAT). *2008 EPA Science Forum*. May 20-22, 2008. Washington, D.C.

**Wagstrom, Kristina M.**, Pandis, Spyros N. Understanding Source Impacts on Particulate Matter Concentrations in the Eastern United States. *American Association for Aerosol Research's 26<sup>th</sup> Annual Conference*. September 24-28, 2007. Reno, NV.

**Wagstrom, Kristina M.**, Teymour, Fouad. Monte Carlo Simulation of Fragment Length Distributions Resulting From Branched Polymer Degradation. *2004 AIChE Chicago Chapter Poster Session*. April 2004. Chicago, IL.

#### OUTREACH PRESENTATIONS

**Wagstrom, Kristina M.** ENGR 1000 Out-of-Class Presentation. *University of Connecticut – School of Engineering*. 2013, 2014, 2015, 2017.

**Wagstrom, Kristina M.** Using Air Quality Models to Identify Sources of Air Pollution. *Carnegie Mellon University Society of Women Engineers' Introduce a Girl to Engineering Day*. February 2009. Pittsburgh, PA.

Hildebrandt, Lea, Engelhart, Gabriella, **Wagstrom, Kristina M.** (co-presented) Introduction to Air Quality Research. *Carnegie Mellon University American Association for Aerosol Research Student Chapter*. November 2008. Pittsburgh, PA.

#### COMMUNITY PARTNERS

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City of Hartford Office of Sustainability (2018 – current)  
Kellogg Environmental Center (2018 – current)  
Marine Education Center (2018 – current)  
Rye Nature Center (2018 – current)  
Meigs Point Nature Center (2018 – current)  
Goodwin Conservation Center (2018 – current)  
UConn Spring Valley Students Farm (2017 – current)  
Connecticut Department of Energy and Environmental Protection (2014 – current)  
UConn Office of Environmental Policy (2014 – current)  
Kenev Park Sustainability Project (2018 – 2019)  
Maritime Aquarium at Norwalk (2018 – 2019)  
UConn Dining Services (2018)  
Asylum Hill Neighborhood Association (2015)  
Hartford Public High School (2015)  
Knox Parks (2014)

#### PROFESSIONAL DEVELOPMENT

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**Writing Winning Grant Proposals.** Sponsored by the University of Connecticut - Storrs. 2014-2015. Including: NIH, NSF, and NSF CAREER workshops.

**AAAS Science and Technology Policy Fellowships Professional Development Seminars.** Washington, DC. Various dates September 1, 2012 – August 31, 2013. Including: Crafting a Professional

Development Plan, Putting Your Degree to Work, Media Skills, Speaking Skills, Productivity, Negotiation, Effective Writing Strategies, Congressional Testimony Training.

***Pan-American Advanced Studies Institute (PASI) – Atmospheric Processes in Latin America and the Caribbean: Observations, Analysis and Impacts.*** Cartagena, Colombia, May 27 – June 7, 2013.

***Negotiating the Ideal Faculty Position.*** NSF ADVANCE Program, *Rice University*. Houston, TX. September 18-20, 2011.

***Spring Training.*** National Institute for Computational Sciences and the Oak Ridge Leadership Computational Facility, *Oak Ridge National Laboratory*. Oak Ridge, TN. March 7-11, 2011.

***Faculty Horizons.*** NSF ADVANCE Program, *University of Maryland – Baltimore County*. Baltimore, MD. July 10-12, 2008.

***Sparse Matrix Operating Kernel Emissions (SMOKE) System Training.*** Community Modeling and Analysis System Center and the Institute for the Environment, *University of North Carolina*. Chapel Hill, NC. January 22-24, 2007.

***Preparing for a Future Faculty Career.*** *Carnegie Mellon University*. Pittsburgh, PA. 2005-2007. Attended a series of 12 seminars on different aspects of the faculty role

#### ADDITIONAL PARTICIPATION AT CONFERENCES AND WORKSHOPS

American Association for Aerosol Research Annual Conference: 2005 (Austin, TX), 2007 (Reno, NV), 2008 (Orlando, FL), 2009 (Minneapolis, MN), 2010 (Portland, OR), 2011 (Orlando, FL), 2012 (Minneapolis, MN), 2013 (Portland, OR), 2014 (Orlando, FL), 2015 (Minneapolis, MN), 2016 (Portland, OR), 2017 (Raleigh, NC)

Community Modeling and Analysis System Conference: 2012, 2013, 2014, 2015, 2017, 2018 (Research Triangle Park, NC)

Gordon Research Conference – Atmospheric Chemistry: 2013 (West Dover, VT), 2015 (Waterville, NH), 2017 (Newby, MA)

American Association for the Advancement of Science's Science and Technology Policy Forum: 2013 (Washington, DC)

American Institute for Chemical Engineers Annual Meeting: 2008 (Philadelphia, PA), 2011 (Minneapolis, MN), 2013 (San Francisco, CA), 2015 (Salt Lake City, UT), 2016 (San Francisco, CA), 2017 (Minneapolis, MN), 2018 (Pittsburgh, PA)

Transportation Research Conference: 2011 (Minneapolis, MN)

E3: 2009-2010 (St. Paul, MN)

International Society for Exposure Science Annual Conference: 2009 (Minneapolis, MN)

Air and Waste Management Association Annual Meeting: 2007 (Pittsburgh, PA), 2008 (Portland, OR), 2018 (Hartford, CT)

EPA Science Forum: 2008 (Washington, DC)

European Aerosol Conference: 2008 (Thessaloniki, Greece)

International Aerosol Conference: 2006 (St. Paul, MN), 2014 (Busan, Korea), 2018 (St. Louis, MO)

American Geophysical Union: 2013, 2014, 2015 (San Francisco, CA)



Research Evaluation in Practice – Towards Sustainable Scientific Investments: Oct 17, 2012  
(Washington, DC)  
Next Generation Air Monitoring Workshop: II-Nov 6-7, 2012 (RTP, NC), III-Mar 19-20, 2013 (RTP, NC)  
EPA STAR Meeting “Dynamic Air Quality Management” and “Adaptation for Future Air Quality”:  
Nov 8-9, 2012 (RTP, NC)  
Bring Your Own Data: Nov 14, 2012 (Arlington, VA)  
EPA STAR Meeting “Extreme Events”: Feb 26-27, 2013 (Arlington, VA)  
EPA STAR Meeting “Coarse Particulate Matter”: Mar 18, 2013 (RTP, NC)  
Broadening Participation in STEM Education Through Technology” Promises and Challenges: Aug 21,  
2013 (Washington, DC)  
Air Pollution in the Arctic: Climate, Environment and Societies (PACES) Workshop: June 27-29, 2017  
(Victoria, BC, Canada)  
Alaskan Pollution and Chemical Analysis (ALPACA) Planning Workshop: May 14-16, 2018  
(Fairbanks, AL)

## TEACHING DEVELOPMENT

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**Teaching Workshops.** Center for Excellence in Teaching and Learning, University of Connecticut, Storrs, CT, 2013-current.

- ✦ Attended a variety of workshops on active learning techniques, service-learning, community engagement, “flipping” the classroom, instructional design, and specifications grading.

**Preparing Future Faculty Program.** Center for Teaching and Learning, University of Minnesota, Minneapolis, MN, Spring and Fall 2010.

- ✦ Completed two courses preparing graduate students and postdoctoral associates for faculty positions
- ✦ Studied and practiced active learning techniques
- ✦ Designed a syllabus for a Mass and Energy Balances class
- ✦ Guest taught in Introduction to Environmental Engineering, in addition I planned the lectures for the unit that I taught on air pollution
- ✦ Observed and discussed faculty role activities with a faculty mentor (Dr. Michael Semmens)
- ✦ Attended panels and discussions on different aspects of the faculty role at a variety of institutions

**Assistant Instructor, Air Quality Engineering** (Graduate-level Course), Department of Civil Engineering, University of Minnesota, Minneapolis, MN, Fall 2009.

- ✦ Worked one-on-one with students to answer questions during office hours
- ✦ Taught several guest lectures, in addition I planned the lectures for the unit that I taught on ozone chemistry

**Teaching Seminars.** Eberly Center for Teaching Excellence, *Carnegie Mellon University*, Pittsburgh, PA, 2005-2008.

- ✦ Attended 30+ hours of interactive seminars addressing different aspects of teaching
- ✦ Taught guest lectures that were observed and after which I was given feedback

**Teaching Assistant, Introduction to Chemical Engineering**, Department of Chemical Engineering, Carnegie

Mellon University, Pittsburgh, PA, Fall 2004, Spring 2005 and Spring 2006.

- ✦ Directed and supervised undergraduate laboratory exercises
- ✦ Guest lectured
- ✦ Worked individually with students to resolve issues and answer questions

**Teaching Assistant**, *Advanced Fluid Dynamics* (Graduate-level course), Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, Fall 2005.

## **EARLY LEADERSHIP EXPERIENCE (BEFORE UCONN)**

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**Society of Women Engineers Professional Chapter**, Minnesota Section 2010-2012, *Outreach Committee Co-chair* (2011-2012)

- ✦ Aid organizations in finding speakers and demonstrations to increase the visibility of STEM.
- ✦ Organize several events throughout the year targeted towards increasing the interest of young students in engineering and sciences.

**Society of Women Engineers Student Chapter**, Carnegie Mellon University 2008-2009, *Grad Greets Committee Member*

- ✦ Organized various graduate student networking events.

**American Association for Aerosol Research Student Chapter**, Carnegie Mellon University 2007-2008, *Treasurer* (2007-2008)

- ✦ Founding member (2007)
- ✦ Worked with fellow members to sponsor an aerosol research information session (2008)

**Chemical Engineering Graduate Student Association**, Carnegie Mellon University 2005 – 2006, *President* (2006) and *Vice-President of External Affairs* (2005)

- ✦ Organized the 27th Annual Graduate Student Symposium (2005)
- ✦ Worked with industry contacts to identify potential participants and sponsors
- ✦ Identified and corrected major problems related to the finances of the organization

**Zeta Pi Omega Sorority**, Illinois Institute of Technology, 2000-2004, *President* (2001-2003), *Treasurer* (2001-2003) and *Community Service Officer* (2003-2004)

- ✦ Led the multi-year drive to increase membership and campus involvement

**Greek Council**, Illinois Institute of Technology, 2000-2003, *President* (2003), *Treasurer* (2002) and *Public Relations Chair* (2001)

**Student Government Association**, Illinois Institute of Technology, 2000-2003, *Finance Board Member* (2001-2003), *Voting Member* (2000-2003)

## EARLY FELLOWSHIPS AND AWARDS (BEFORE UCONN)

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### GRADUATE

**EPA STAR (Science To Achieve Results) Graduate Student Fellowship**, US EPA. 2007-2009. \$69,000.

**Third Place Doctoral Student Poster Competition**, Air & Waste Management Association. 2008.

**Make the Connection Volunteerism Award**, NAWBO Pittsburgh Chapter. 2008.

In recognition of service to Gwen's Girls, an organization serving at-risk female populations

**Lubrizol Graduate Fellowship**, Carnegie Mellon University. 2007. \$8,200.

**National Science Foundation Graduate Fellowship, Honorable Mention**. 2004, 2005, 2006.

### SELECTED UNDERGRADUATE

**McCormack Award**, Chicago AIChE Chapter. 2004.

Recognizing excellence in a combination of study, research and extra-curricular activities

**Outstanding Senior Award in Chemistry**, Illinois Institute of Technology. 2004.

**Richard A. Babcock Leadership Award**, Illinois Institute of Technology. 2003.

Recognizing one student per year university-wide for significant leadership skills in personal and academic life

**Camras/NEXT Scholarship**, Illinois Institute of Technology. 2000-2004.

Academic Scholarship covering full tuition, room and board

## UNDERGRADUATE RESEARCH EXPERIENCE

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**Undergraduate Researcher**, Chemical and Environmental Engineering Department, Illinois Institute of Technology, Chicago, IL, 2002-2004

Focus Area: Modeling polymer reaction systems

Advisor: Dr. Fouad Teymour

**Undergraduate Researcher**, Biological, Chemical and Physical Sciences Department, Illinois Institute of Technology, Chicago, IL, 2002-2003

Focus Area: Inorganic materials synthesis and catalysis

Advisor: Dr. Ishaque Khan

**Summer Researcher**, Analytical Laboratory, Nuclear Technologies Division, Argonne National Laboratory - West, Idaho Falls, ID, 2003 (now Idaho National Laboratory)

Focus Area: Long term storage methods for uranyl nitrate solutions

Mentor: Calvin Morgan

## EARLY PROFESSIONAL SERVICE (BEFORE UCONN)

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**Outreach Committee**, Society of Women Engineers – Minnesota Chapter, *Co-chair* 2011-2012, *Committee Member* 2010-2012

**Judge**, Minnesota State Science Fair, 2011 and 2012.

**Judge**, Junior Science and Humanities Symposium, 2011 and 2012.

**Poster and Paper Judge**, Twin Cities Regional Science Fair, 2010 - 2012.

**Category Judge**, Pittsburgh Regional Science and Engineering Fair, 2006 and 2007.

**Volunteer**, Carnegie Mellon University Chemical Engineering, *Carnegie Science Center's Engineering Fair*, 2006, 2008, 2009.

**Teaching Assistant** (atmospheric unit), *Summer Engineering Experience for Girls (SEE)*, Carnegie Mellon University, 2007.

## SKILLS AND TECHNICAL EXPERIENCE

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Regional chemical transport modeling (PMCAMx and CAMx)

Meteorological modeling (WRF)

Emissions inventory development (SMOKE)

Parallel computing experience

Programming languages: Fortran77 and C++

Linux and MatLab

## PROFESSIONAL AFFILIATIONS

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American Association for Aerosol Research

American Association for the Advancement of Science

American Institute for Chemical Engineers

Association of Environmental Engineering and Science Professors

International Society for Exposure Science

Society of Women Engineers

Tau Beta Pi