

Srinidhi Balasubramanian

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EDUCATION

University of Illinois at Urbana-Champaign (UIUC), Urbana, IL	2010-Present
<i>Ph.D, Civil and Environmental Engineering (CEE)</i>	(GPA: 3.8/4)
Indian Institute of Technology (IIT) Bombay, Mumbai, India	2008-2010
<i>Masters in Technology, Environmental Science and Engineering</i>	(GPA: 10/10)
Sardar Patel College of Engineering (SPCE), Mumbai University, India	2004-2008
<i>Bachelors of Engineering, Civil Engineering</i>	(83%)

FELLOWSHIPS AND SCHOLARSHIPS

1. *Faculty for the Future Fellowship*, 2013-2014, Schlumberger Foundation, Renewed 2014-2015
2. *Ravindar K. and Kavita Kinra Fellowship*, 2010- 2012, CEE, UIUC
3. *Ratan Tata Scholarship, Excellence in Engineering*, 2006-2008, Mumbai University

AWARDS

1. *Platform Paper Award, 3rd Place*, June 2014, Annual Conference and Exhibition, Air & Waste Management Association, Long Beach, CA
2. *Racheff Student Travel Award*, October 2014 and October 2012, CEE, UIUC
3. *Graduate Conference Travel Award*, Spring 2014, UIUC
4. *Lake Michigan States Travel Scholarship*, June 2014 & June 2013, Air & Waste Management Association
5. *List of Teachers Ranked as Excellent by their Students*, Fall 2013, UIUC
6. *Outstanding Student Paper Award*, December 2013, American Geophysical Union Fall Meeting
7. *Shri Rajit Bhagwati Memorial Medal, Outstanding Master's Student*, 2010, IIT Bombay
8. *Kulpati's Gold Medal*, 2008, SPCE
9. *Shri R.M. Joshi Prize, Highest Grades in Civil Engineering*, 2006-2008, SPCE

TEACHING AND MENTORING EXPERIENCES

1. **Instructor Graduate Academy**, UIUC, August 2015

- Designed and delivered an hour long lecture to teaching assistants on using the course syllabus to setting in-class expectations and leveraging student learning.

2. **Coordinator, Environmental Engineering and Sustainability**, Girls Adventures in Mathematics, Engineering and Sciences (GAMES), UIUC, Jan - July 2012-2015

- Designed course content and worksheets with faculty mentors and provided lectures to expose high-school girls to concepts in Environmental Engineering and Sustainability.
- Demonstrated concepts in air quality and visualization tools through lectures, demonstrations, hands-on software training and field visits.
- Coordinated and supervised teaching instructors and student assistants.

3. **Instructor (Advance Placement Environmental Science)**, Urbana High School, Mar 2014

- Provided three hours of instructions in basics of air quality and nitrogen cycle.

4. **Ph.D. Meaningful Teaching Experience (CEE 445 Air Quality Modeling)**, UIUC, Oct 2013

- Developed and taught modules on regulatory model AERMOD and atmospheric deposition.
- Designed a month-long hands-on project on AERMOD with focus on developing inputs, post-processing data and technical report writing skills through organized lab sessions.

5. **Graduate Mentor, Civil and Environmental Engineering**, UIUC, Jan 2013 - Present

- Trained one graduate and two undergraduate students to use a biogeochemical model and tools for developing databases for managing, analyzing and mapping spatial data.

6. **Student Tutor**, Women in Mathematics, Science and Engineering, UIUC, Sept –May 2012

- Tutoring undergraduate women in introductory physics, chemistry, biology and calculus.

7. **Mentor to Undergraduate Women**, Society of Women Engineers, UIUC, 2011- 2013

- Conducted monthly meetings with mentees to discuss career opportunities, professional certifications, time management practices, research goals and coursework.

8. **Instructor**, GAMES (Structural Engineering), Women in Engineering, UIUC, Apr-Jul 2011

- Developed a new module on ‘Structures and Sustainability’ with focus on introducing basics of Green Buildings and Life Cycle Analysis tools to 24 high school girls.

9. **Teaching Assistant**, Center for Environmental Science and Engineering, IITB, 2008-2010

- Supervised and helped in grading quizzes for 375 students and organized weekly office hours for helping students with course content.

10. **Student Mentor**, American School of Bombay, 2009-2010

- Demonstrated laboratory exercises in noise pollution, water quality and indoor air quality for 12th grade students in subject of Environmental Studies.
- Supervised a student for an advanced science essay on ‘Indoor Air Pollution in Schools’.

RESEARCH EXPERIENCE

1. **Graduate Research Assistant**, CEE, UIUC, Advisor(s): Prof. Mark Rood and Dr. Sotiria Koloutsou-Vakakis, 2010- present

- Developed an improved ammonia emissions inventory from chemical fertilizer usage using regional crop management and local environmental data.
- Evaluation of emissions inventory using in-field measurements and assessment of impact of agricultural fertilizer usage on regional air quality in progress.
- Contributed to proposals funded by National Science Foundation and UIUC Research Board.

2. **Graduate Research Student**, Center for Environmental Science and Engineering, IIT Bombay, Advisor: Prof. Rashmi S. Patil, 2008-2010

- Conducted field measurements and modeled ventilation parameters using a computational fluids dynamic tool to characterize indoor air quality in school microenvironments.

PUBLICATIONS AND PRESENTATIONS

Peer Reviewed Publications

1. **Balasubramanian, S.**, Koloutsou-Vakakis, S., McFarland, D. M. and Rood, M.J. (2015) '*Reconsidering Emissions of Ammonia from Chemical Fertilizer Usage in Midwest United States*'. Journal of Geophysical Research: Atmospheres, 120, 6232-6246. DOI:10.1002/2015JD023219.

Publications in Progress

1. **Balasubramanian, S.**, Nelson, A., Koloutsou-Vakakis, S., Rood, M.J. (and other collaborators) '*Evaluation of DNDC model for Estimating Ammonia Emissions over a Corn Canopy*'. Proposed to be submitted to Atmospheric Environment.

2. **Balasubramanian, S.**, Koloutsou-Vakakis, S., Fu, K., McFarland, D. M. and Rood, M.J. '*Evaluation of an Improved Ammonia Emission Inventory from Chemical Fertilizer Usage to Predict Regional Particulate Matter Formation and Atmospheric Deposition Of Nitrogen under Different Spatial Scales*'. Journal to be decided.

Conference Proceedings

1. **Balasubramanian, S.**, Wang, M., Koloutsou-Vakakis, S., and Rood, M.J. '*Modeling Temporal Variability in Gaseous Ammonia Emissions from Chemical Fertilizer Usage in Midwest USA*'. Full Paper published in Proceedings and Presented at the 107th Annual Conference and Exhibition, Air & Waste Management Association, Long Beach, California, June 2014.

2. **Balasubramanian, S.**, Koloutsou-Vakakis, S., and Rood, M.J. '*Identifying Spatial Heterogeneity in Ammonia Emissions from Agricultural Fertilization*'. Full Paper published in Proceedings and Presented at the 106th Annual Conference and Exhibition, Air & Waste Management Association, Chicago, June 2013.

3. **Balasubramanian, S.** and Patil, R.S. '*Monitoring of Particulate Matter Concentrations in Naturally Ventilated Schools in Mumbai*'. Published in Proceedings of the Conference of Indian

Aerosol Science and Technology Association, Darjeeling, India, I-O-5, 612-615. May 2010.

4. **Balasubramanian, S.** and Patil, R.S. ‘*Assessment of Indoor Air Quality in Schools in Mumbai, India*’. Published in Proceedings of the A&WMA International Specialty Conference: Leapfrogging Opportunities for Air Quality Improvement, Xi’an, China, 594. (In absentia) June 2010.

Conference and Technical Presentations

1. **Balasubramanian, S.**, Koloutsou-Vakakis, S., and Rood, M.J. ‘*Quantifying Uncertainty in Daily Temporal Variations of Atmospheric NH₃ Emissions Following Application of Chemical Fertilizers*’. Accepted for a poster presentation at AGU 2014 Fall Meeting, American Geophysical Union, San Francisco, California, December 2014.

2. **Balasubramanian, S.** and Koloutsou-Vakakis, S. ‘*Preliminary Outcomes from a Week-Long Environmental Engineering Summer Camp for High School Female Students*’. Accepted for a poster presentation at AGU 2014 Fall Meeting, American Geophysical Union, San Francisco, California, December 2014.

3. **Balasubramanian, S.**, Koloutsou-Vakakis, S., Wang, M., Xiong, Y. and Rood, M.J. ‘*Increasing Spatial and Temporal Resolution of Gaseous Ammonia Emissions from Agricultural Chemical Fertilizer Usage*’. Poster presented at 2014 Annual Meeting and Scientific Symposium, National Atmospheric Deposition Program, Indianapolis, Indiana, October 2014.

4. **Balasubramanian, S.**, Koloutsou-Vakakis, S., and Rood, M.J. ‘*Modeling Spatial and Temporal Variability in Ammonia Emissions from Chemical Fertilizer Usage*’. Presented at the Advanced Graduate Student Seminar, CEE, UIUC, February 2014.

5. **Balasubramanian, S.**, Wang, M., Koloutsou-Vakakis, S., and Rood, M.J. ‘*Modeling Spatial and Temporal Variability in Ammonia Emissions from Agricultural Fertilization*’. Presented at AGU 2013 Fall Meeting, American Geophysical Union, San Francisco, California, Dec 2013.

6. **Balasubramanian, S.**, Koloutsou-Vakakis, S., Lehmann, C. and Rood, M.J. ‘*An Improved High-Spatial Resolution Inventory for Ammonia Emissions from Agricultural Fertilization*’, Presented at 2012 Annual Meeting and Scientific Symposium, National Atmospheric Deposition Program, South Portland, Maine, Oct 2012.

Invited Lectures

1. **Balasubramanian, S.** ‘*The A-Z of Tutoring*’, Women in Mathematics, Science and Engineering, Florida Avenue Residence Hall, UIUC, Sept 2013.

2. **Balasubramanian, S.** ‘*An Uncertain Link in the Nitrogen Cycle – Modeling Ammonia Emission from Fertilizer Application*’, Center for Environmental Science and Engineering, Indian Institute of Technology Bombay, Mumbai, June 2013.

3. **Balasubramanian, S.** ‘*Safe Drinking Water in Slums in Mega-Cities: A case study of Mumbai*’, T-CASE Special Session, EES, UIUC, September 2010.

SERVICE AND LEADERSHIP ROLES

1. *Vice-President*, American Society of Engineering Education, UIUC, August 2014-Present

2. *Internal Publicity Coordinator*, Graduate Society of Women Engineers, UIUC, 2013-2014
3. *Projects Coordinator*, Asha for Education, UIUC Chapter, 2013-Present
4. *Chairperson*, Environmental Engineering Graduate Advisory Committee, UIUC, 2011-2012
5. *President*, Asha for Education, UIUC Chapter, 2011-12
6. *Publicity Secretary*, Environmental Science and Engineering Association, IITB, 2009-10
7. *General Secretary and Head of Training and Placement Office*, General Student Council, SPCE, 2006-07

PROFESSIONAL MEMBERSHIP

1. American Society of Engineering Education, 2014 - present
2. American Geophysical Union, 2013 - present
3. Air & Waste Management Association, 2008 - present
4. Society of Women Engineers, 2011 – present

PROFESSIONAL DEVELOPMENT

1. *Reviewer*, Environmental Science & Technology, ACS Publications, 2015 and Environmental Technology & Innovation, Elsevier Publications, 2014.
2. Participant, *SMOKE Tutorial*, CMAS Center, Chapel Hill, April 2015.
3. Completed the *Certificate in Foundations of Teaching*, Center of Teaching Excellence, UIUC, May 2014.
4. Completed the *CEE Ph.D. Student Professional Development Program*, UIUC, 2011-2013.
5. Participant, *Women Empowered in STEM (WeSTEM) Conference*, UIUC, April 2014 & 2013.
6. Participant, *The Committee for the Professional Development of Women Luncheon and Meeting*, Air & Waste Management Association, June 2014 & 2013.
7. Participant, *Weather Research and Forecasting Model Tutorial*, Boulder, January 2013.
8. Collaborator, *'Reach out Water Solutions'*, Acara Challenge, IITB, Jan –May 2009.