
Education

Present **Ph.D.**, *Columbia University*, New York, NY.
Earth and Environmental Engineering Department

Adviser Upmanu Lall, Columbia Water Center

2015 **M.S., Earth Resources Engineering**, *Columbia University*, New York, NY.

Concentration Water Resources and Climate Risks

2012 **B.S., Civil Engineering**, *SUNY-Buffalo*, Buffalo, NY.
Summa Cum Laude, Honors College member

2012 **B.A., Mathematics**, *SUNY-Buffalo*, Buffalo, NY.
Summa Cum Laude, Honors College member

Experience

Research Experience

2012–Present **Graduate Student Researcher**, *Columbia Water Center & Department of Earth and Environmental Engineering*, Columbia University, New York, NY.

2012 **Student Researcher**, *Department of Civil and Environmental Engineering*, SUNY-Buffalo, Buffalo, NY.

2012 **Student Researcher**, *Ecosystem Restoration through Interdisciplinary Exchange*, NSF IGERT REU, SUNY-Buffalo, Buffalo, NY.

Teaching Experience

2015 **Teaching Assistant/Guest Lecturer: Environmental Data Analysis (Graduate level)**, *Department of Earth and Environmental Engineering*, Columbia University, New York, NY.

2015 **Teaching Assistant: Better Planet By Design (Undergraduate level)**, *Department of Earth and Environmental Engineering*, Columbia University, New York, NY.

2014–Present **Lead Module Developer: HydroViz Web Modules: Teleconnections Module**, www.hydroviz.org.

Publications and Presentations

Journal Articles

- [1] **Farnham, D. J.**, Gibson, R. A., Hsueh, D. Y., McGillis, W. R., Culligan, P. J., Zain, N., Buchanan, R., “Citizen science-based water quality monitoring: Constructing a large database to characterize the impacts of combined sewer overflow in New York City”. In: *Science of The Total Environment* (Dec. 2016). doi: 10.1016/j.scitotenv.2016.11.116.
- [2] **Farnham, D. J.**, Lall, U., “Predictive statistical models linking antecedent meteorological conditions and waterway bacterial contamination in urban waterways”. In: *Water Research* 76 (June 2015), pp. 143–159. doi: 10.1016/j.watres.2015.02.040.

Conference Presentations and Papers

- [1] Doss-Gollin, J., **Farnham, D. J.**, Lall, U., “Global-Local Interactions Modulate Tropical Moisture Exports to the Ohio River Basin”. In: *AGU Fall Meeting*. San Francisco, CA, 2016. doi: 10.13140/RG.2.2.36009.19044.
- [2] **Farnham, D. J.**, Doss-Gollin, J., Lall, U., “Seasonal climate signals and synoptic circulation patterns associated with regional daily intense precipitation in the Ohio River Basin”. In: *Workshop on Sub-Seasonal to Seasonal Predictability of Extreme Weather and Climate*. Columbia University, 2016.
- [3] **Farnham, D. J.**, Doss-Gollin, J., Lall, U., “Space-time characteristics and statistical predictability of extreme sub-weekly precipitation events in the Ohio River Basin”. In: *AGU Fall Meeting*. San Francisco, CA, 2016.
- [4] Habib, E., Tarboton, D., Deshotel, M., **Farnham, D. J.**, “Development of Student-centered Modules to Support Active Learning in Hydrology”. In: *ASEE Annual Conference & Exposition*. New Orleans, LA, 2016.
- [5] Larson, L. R., Cooper, C. B., Krafte, K., Gibson, R., **Farnham, D.**, Hsueh, D., Culligan, P., Wade McGillis, “Characterizing citizen scientists based on project engagement: Data generators, data users, and “onlooker effects.”” In: *Southeastern Recreation Research Conference*. Asheville, NC, 2016.
- [6] **Farnham, D. J.**, Habib, E., Lall, U., “HydroViz: A Web-based Climate Teleconnection Module for Undergraduate and Graduate Water Engineering Students”. In: *AGU Fall Meeting*. San Francisco, CA, 2015.
- [7] **Farnham, D. J.**, Lall, U., Kwon, H.-H., Doss-Gollin, J., “Moisture Transport and Extreme Precipitation in Mid-latitudes”. In: *AGU Fall Meeting*. San Francisco, CA, 2015.
- [8] Habib, E., Bodin, M., Taboton, D., Merck, M., **Farnham, D. J.**, “Stimulating Active Learning in Hydrology Using Research-Driven, Web-based Learning Modules”. In: *ASEE Annual Conference & Exposition*. Seattle, WA, 2015.
- [9] Hsueh, D., **Farnham, D. J.**, Gibson, R., McGillis, W. R., Culligan, P. J., Cooper, C., Larson, L., Mailloux, B. J., Buchanan, R., Borus, N., Zain, N., Eddowes, D., Butkiewicz, L., Loiselle, S. A., “Advancing the Potential of Citizen Science for Urban Water Quality Monitoring: Exploring Research Design and Methodology in New York City”. In: *AGU Fall Meeting*. San Francisco, CA, 2015.
- [10] Hsueh, D. Y., **Farnham, D. J.**, Gibson, R. A., McGillis, W. R., Zheng, Y., Buchanan, R., Eddowes, D., Zain, N., Loiselle, S., Butkiewicz, L., “NYC URBAN WATER QUALITY: MONITORING THE FLOW OF CSOS WITH CITIZEN SCIENTISTS”. In: *Aquatic Sciences Meeting*. Granada, Spain, 2015.
- [11] **Farnham, D. J.**, Atkinson, J. F., “Flow visualization study: Understanding water circulation in Lake Ontario through physical modeling”. In: *The 22nd Annual Great Lakes Research Consortium Student-Faculty Conference*. Oswego, NY, 2012.

Invited Presentations and Panel Participation

Invited Presentations

- November 6, 2015 **Bronx Sewershed Water Quality and Citizen Science, with W. McGillis and D. Hsueh**, *Interdisciplinary Workshop on Urban Green Infrastructure: Reports on Monitoring, Modeling, Performance & Design Work*, Columbia University, New York, NY.
- August 7, 2015 **Extreme Rainfall Mechanisms, Prediction, and Simulation at Chonbuk National University in Summer 2015**, *NSF EAPSI closing ceremony presentation series*, National Research Foundation of Korea, Seoul, South Korea.
- April 15, 2015 **NYC Urban Water Quality: Monitoring the Flow of CSOs with Citizen Scientists, with R. Gibson and D. Hsueh**, *Citizens Advisory Committee, New York-New Jersey Harbor & Estuary Program meeting*, Hudson River Foundation, New York, NY.

- October 10, 2013 **Urban Water Cycle Responses to Climate**, *Brown Bag seminar series*, Columbia University, New York, NY.
- July 11, 2013 **Understanding Climate Risks in an Urban Environment**, with M. Haraguchi, *NSF IGERT, Solving Urbanization Challenges by Design summer workshop series*, Columbia University, New York, NY.
- [Panel participation](#)
- May 13, 2016 **The Monster El Niño Of 2015-16: What Was Expected? And, What Was Done?**, *Earth Institute Sustainable Development Seminar Series*, Columbia University, New York, NY.
- April 21, 2016 **Rethinking Water: Solutions for a 21st Century Infrastructure**, *2016 Planet Forward Sustainable Cities Summit*, George Washington University, Washington, DC.

Honors and Awards

- 2015 **National Science Foundation/National Research Foundation of Korea EAPSI Fellowship**, *National Science Foundation*.
- 2015 **Graduate Research Fellowship Program Honorable Mention**, *National Science Foundation*.
- 2012–Present **Integrated Graduate Education and Research Traineeship**, *National Science Foundation*.
- 2012 **Best Poster Presentation**, *22nd Annual Great Lakes Research Consortium*.
- 2012 **Garmen Scholarship**, *SUNY-Buffalo*.
- 2012 **Robert P. Apmann Memorial Award**, *SUNY-Buffalo*.
- 2012 **Undergraduate Research Award**, *SUNY-Buffalo*.
- 2008–2012 **Provost Scholar Award**, *SUNY-Buffalo*.