David J. Farnham

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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 membe

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] David J Farnham, Rebecca A Gibson, Diana Y Hsueh, Wade R McGillis, Patricia J Culligan, Nina Zain, and Rob Buchanan. "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] David J. Farnham and Upmanu Lall. "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

[9] James Doss-Gollin, David J. Farnham, and Upmanu Lall. "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.

[10] David J. Farnham, James Doss-Gollin, and Upmanu Lall. "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.

[11] David J. Farnham, James Doss-Gollin, and Upmanu Lall. "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.

[1] E. Habib, D. Tarboton, M. Deshotel, and D. J. Farnham. "Development of Student-centered Modules to Support Active Learning in Hydrology". In: *ASEE Annual Conference & Exposition*. New Orleans, LA, 2016.

[2] Lincoln R. Larson, Caren B. Cooper, Katie Krafte, Rebecca Gibson, David Farnham, Diana Hsueh, Patricia Culligan, and Wade McGillis. "Characterizing citizen scientists based on project engagement: Data generators, data users, and "onlooker effects."" In: *Southeastern Recreation Research Conference*. Asheville, NC, 2016.

[3] David J. Farnham, Emad. Habib, and Upmanu Lall. "HydroViz: A Web-based Climate Teleconnection Module for Undergraduate and Graduate Water Engineering Students". In: *AGU Fall Meeting*. San Francisco, CA, 2015.

[4] David J Farnham, Upmanu Lall, Hyun-Han Kwon, and James Doss-Gollin. "Moisture Transport and Extreme Precipitation in Mid-latitudes". In: *AGU Fall Meeting*. San Francisco, CA, 2015.

[5] Emad. Habib, Madeleine Bodin, David Taboton, Madeline Merck, and David J. Farnham. "Stimulating Active Learning in Hydrology Using Research-Driven, Web-based Learning Modules". In: *ASEE Annual Conference & Exposition*. Seattle, WA, 2015.

[6] Diana Hsueh, David J Farnham, Rebecca Gibson, Wade Randall McGillis, Patricia Jane Culligan, Caren Cooper, Lincoln Larson, Brian Justin Mailloux, Robert Buchanan, Nancy Borus, Nina Zain, Diana Eddowes, Lizzette Butkiewicz, and Steven A. Loiselle12. "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.

[7] D. Y. Hsueh, D. J. Farnham, R. A. Gibson, W. R. McGillis, Y. Zheng, R. Buchanan, D. Eddowes, N. Zain, S. Loiselle, and L. Butkiewicz. "NYC URBAN WATER QUALITY: MONITORING THE FLOW OF CSOS WITH CITIZEN SCIENTISTS". In: *Aquatic Sciences Meeting*. Granada, Spain, 2015.

[8] David J. Farnham and Joseph F. Atkinson. "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 Institue 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*.

Last updated on January 14, 2017