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James Doss-Gollin

Education

Present **M.S./Ph.D. Student**, *Columbia University*, New York.
Earth and Environmental Engineering Department

2015 **B.S., Mechanical Engineering** , *Yale University*, New Haven, CT.
Honors Cum Laude, Distinction in Mechanical Engineering
Senior Project Adapting UVC-LEDs for Portable Water Disinfection, advised by Prof. Jaehong Kim and Prof. Corey O'Hern

2011 **Wilbur Cross High School**, New Haven, CT.

Research Interests

- Hydroclimatic variability and extremes
- Stastical modeling and forecasting
- Climate-informed water management
- Water security in the developing world

Experience

2015–Present **Graduate Student Researcher**, *Columbia Water Center, Department of Earth and Environmental Engineering, Columbia University*, New York.
Statistical process-based modeling of extreme precipitation events and flooding

2014–2015 **Student Researcher**, *Universidade Federal do Ceará, Hydraulic and Environmental Engineering Department*, Fortaleza, Brazil.
Created computer model to evaluate hydraulic sustainability for two spatial scales. Coupled rainfall-runoff, evaporation, and precipitation models to estimate water levels of small reservoirs in rural areas.

2014-2015 **Research Assistant**, *Prof. Jaehong Kim*, Yale University.
Researched design and application of UVC-LED technology for water purification. Built lab testing apparatus and cell phone case to house UVC-LEDs.

2014 **President**, *Engineers Without Borders, Yale Undergraduate Chapter*.
Also Design Lead (2013), Member (2012, 2015). Led 30-member interdisciplinary team through design and construction of rural water supply system for community of 2000 in Rohvitangitaa, Cameroon.

2013 **Mechanical Design Intern**, *DEKA Research and Development*, Manchester, NH.
Built and tested Slingshot water purification systems. Advised Slingshot trials in rural Paraguay.

2012 **Ikatú Agua Project Intern**, *Fundación Paraguaya*, Asunción, Paraguay.
Developed and conducted review of microcredit program to help rural water providers in rural Paraguay make sustainable service improvements. Visited 19 rural communities in 5 states and presented findings.

Computer Skills

Data Analysis **R** (proficient), Matlab (proficient), STATA (basic), Python (basic)
Programming C++ (basic), Java (basic)
Office Proficient in LaTeX, LyX, Microsoft Office

GIS	Competent in ARCGIS and QGIS
OS	Windows, OSX, Linux (Ubuntu, Linux Mint), UNIX shell

Languages

English	Native
Spanish	Full Professional Proficiency
Portuguese	Professional Working Proficiency
French	Elementary Proficiency
Guaraní	Basic

Honors and Awards

2015 **Presidential Distinguished Fellowship**, *Columbia University*.

2015 **Distinction in Mechanical Engineering and Materials Science**, *Yale University*.

2014 **Larry Coben '79 Fellowship**, *Yale University*.
Funded travel and research at Federal University of Ceará

2013 **Vance-Carter Travel Award**, *Yale University*.
Funded travel to lead Engineers Without Borders trip to Cameroon

2012 **Thomas C. Barry Fellowship**, *Yale University*.
Funded travel to Paraguay for Ikatú Agua Internship

Publications and Presentations

Journal Articles

[1] James Doss-Gollin, Francisco de Assis de Souza Filho, and Francisco Osny Enéas da Silva. "Analytic Modeling of Rainwater Harvesting in the Brazilian Semiarid Northeast". In: *Journal of the American Water Resources Association* (Dec. 2015). DOI: 10.1111/1752-1688.12376.

Conference Papers

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

[2] Luiz Martins Araújo Júnior, Francisco de Assis de Souza Filho, Cleiton da Silva Silveira, Tyhago Aragão Dias, and James Doss-Gollin. "Análise dos Eventos de Seca no Nordeste Setentrional Brasileiro com Base no Índice de Precipitação Normalizada". In: *XII Simpósio de Recursos Hídricos do Nordeste*. 2014. DOI: 10.13140/RG.2.1.4610.7685.

[3] James Doss-Gollin, Francisco de Assis de Souza Filho, and Francisco Osny Enéas da Silva. "Considerações Sobre a Sustentabilidade Hídrica de Cisternas para Captação de Chuva no Semiárido Brasileiro". In: *XII Simpósio de Recursos Hídricos do Nordeste*. Natal, RN: Associação Brasileira de Recursos Hídricos (ABRH), 2014. DOI: 10.13140/RG.2.1.4086.4807.

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