
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
- Statistical 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] 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.
[2] 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.

Non-Peer Reviewed Papers

- [1] James Doss-Gollin. *Drought Vulnerability of Rural Communities in the Brazilian Northeast*. New Haven, CT, 2014. doi: 10.13140/RG.2.1.3824.3368.