

# James Doss-Gollin

+1 (203) 494 9408  
✉ [james.doss-gollin@columbia.edu](mailto:james.doss-gollin@columbia.edu)  
🌐 [www.jamesdoss-gollin.me](http://www.jamesdoss-gollin.me)

---

## Education

- Present **M.S./Ph.D. Student**, *Columbia University*.  
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

- 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

Office Experience working with Microsoft Office, L<sup>A</sup>T<sub>E</sub>X, and standard L<sup>A</sup>T<sub>E</sub>X packages

GIS	Basic competence using ArcGIS (Windows) and QGIS (UNIX) to generate simple maps and geo-referenced databases
Programming	Basic exposure to C, C++ , Java, and Objective C
Analysis/Modeling	Significant experience in Matlab and basic exposure to STATA. Intermediate experience in R, including standard packages such as dplyr and tidyr
O.S.	Comfortable using Windows 7, Windows 8, Ubuntu 14.10, and Linux Mint 17.x

## 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

### Articles In Review

- [1] James Doss-Gollin, Francisco Osny Enéas da Silva, and Francisco de Assis de Souza Filho. "Analytic Modeling of Rainwater Sustainability in the Brazilian Semi-Arid".

### 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.

### Conference Papers

- [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: *Simpósio de Recursos Hídricos do Nordeste*. Natal, RN: Associação Brasileira de Recursos Hídricos (ABRH), 2014. DOI: 10.13140/RG.2.1.4610.7685.
- [1] 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: *Simpósio de Recursos Hídricos do Nordeste*. Natal, RN: Associação Brasileira de Recursos Hídricos (ABRH), 2014. DOI: 10.13140/RG.2.1.4086.4807.

Last updated on July 29, 2015