

James Doss-Gollin

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Education

- Present **Ph.D. Student**, *Columbia University*, New York.
Adviser Upmanu Lall, Columbia Water Center
- 2016 **M.S., Earth and Environmental Engineering**, *Columbia University*, New York.
- 2015 **B.S., Mechanical Engineering**, *Yale University*, New Haven, CT.
Honors Cum Laude, Distinction in Mechanical Engineering
- 2011 **Wilbur Cross High School**, New Haven, CT.

Research Interests

- Dynamics of extreme rainfall and flooding
- Process-based understanding of hydroclimatic extremes
- Machine learning and dimension reduction techniques
- Statistical-physical space-time modeling approaches

Research Experience

- 2015–Present **Graduate Student Researcher**, *Columbia Water Center, Department of Earth and Environmental Engineering, Columbia University*, New York.
- 2014–2015 **Visiting Student Researcher**, *Universidade Federal do Ceará, Hydraulic and Environmental Engineering Department*, Fortaleza, Brazil.
- 2014–2015 **Undergraduate Research Assistant**, *Prof. Jaehong Kim, Yale University*.

Computer Skills

- Data Analysis R (advanced), Matlab (proficient), STATA (basic), Python (basic)
- Programming C++ (basic), Java (basic)
- Office Proficient in L^AT_EX, L^AT_EX, Microsoft Office
- GIS Competent in ARCGIS and QGIS
- OS Windows, OSX, Linux (Ubuntu, Linux Mint), UNIX shell
- Github Codes available at www.github.com/jdossgollin

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.

Articles In Review

- [1] James Doss-Gollin, David J Farnham, Upmanu Lall, and Richard Iannone. "A toolkit for Lagrangian trajectory analysis to identify moisture sources, moisture transport mechanisms and pathways for extreme rainfall and floods". May 2016.