

Sharmin Siddiqui

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EDUCATION

University of Florida, Gainesville, FL Anticipated May 2023
PhD, Environmental Engineering Sciences (Advisor: Dr. David Kaplan)
Certificate: Tropical Conservation & Development

University of Florida, Gainesville, FL May 2018
BSc, Biological Engineering (Specialization in Land and Water Resources)
Minor: International Development & Humanitarian Assistance

RESEARCH

National Science Foundation Graduate Research Fellow August 2018 – Present
University of Florida, Gainesville, FL
Dissertation: Quantifying the Effects of Landscape Disturbance on Ecosystem Response & Resilience in the Amazon Basin

Graduate Intern, United States Geological Survey June 2018 – August 2018
Integrated Modeling and Prediction Division, Lakewood, CO
Contributed to application and development of the National Hydrologic Model in Alaska

Research Assistant, UF Center for Remote Sensing October 2017 – May 2018
Department of Agricultural and Biological Engineering, University of Florida under Dr. Jasmeet Judge
Responsible for soil moisture sensor setup and data processing during experiment in forest, wetland, and agricultural field sites (goal: optimizing remote sensing crop models with measured data to better predict vegetative growth)

Research Assistant, Population and Landscape Ecology Aug 2014 – Aug 2017
School of Natural Resources and Environment, University of Florida under Dr. Fletcher
Contributed to evaluation of anthropogenic activities on biodiversity via ecological modeling, statistical analysis, and data collection; conducted literature reviews to compile biodiversity and land use data into a global meta-analysis

Web Developer, Florida Automated Weather Network May 2017 – Dec 2017
Institute of Food and Agricultural Sciences, University of Florida
Used ArcGIS, JavaScript, and HTML/CSS to develop spatial tools for visualizing weather data and managing natural resources.

Research Intern, State Climate Office of North Carolina May 2016 – Aug 2016
North Carolina State University, Raleigh, NC
Used Linux database management to prepare global climate model data into fine resolution regional climate models; visualized multiple downscaled regional climate model outputs for Puerto Rico; performed quality control of incoming data from all state weather stations

Research Intern, Whitney Laboratory for Marine Bioscience May 2015 – Aug 2015
University of Florida, Marineland, FL
Monitored nutrient levels to assess the ecosystem contributions of Loggerhead Sea Turtles (*Caretta caretta*) in sand dune ecosystems; Assisted Dr. Nichole Bishop with ongoing research projects using field surveying equipment to determine changes in beach profile, characterizing compaction where sea turtle crawls occur in driving and non-driving beaches

PUBLICATIONS & PRESENTATIONS

Publications:

Siddiqui, S., Zapata-Rios, X., Torres-Paguay, S., Encalada A.C., Anderson, E.P., Allaire, M., Kaplan, D.A., (2021). Flow Regimes of the Amazon. Accepted. *Aquatic Conservation: Marine and Freshwater Ecosystems*

Núñez-Regueiro, M. M., Hiller, J., Branch, L. C., Núñez Godoy, C., **Siddiqui, S.**, Volante, J., & Soto, J. R. (2020). Policy lessons from spatiotemporal enrollment patterns of payment for ecosystem service programs in Argentina. *Land Use Policy*

Núñez-Regueiro, M. M., Fletcher, R. J., & **Siddiqui, S.** (2019). Effects of bioenergy on biodiversity arising from land-use change and crop type. *Conservation Biology*

Presentations:

Sharmin F. Siddiqui, Nathan Reaver, David Kaplan. 2022. Effects of wildfires on annual streamflow response in southeastern Amazon Basin watersheds. UF Informatics Institute, Gainesville, FL

Sharmin F. Siddiqui, Nathan Reaver, David Kaplan. 2022. Effects of wildfires on annual streamflow response in southeastern Amazon Basin watersheds. UF Water Institute Symposium, Gainesville, FL

Sharmin F. Siddiqui, David Kaplan. 2021. Effects of wildfires on annual streamflow response in southeastern Amazon Basin watersheds. American Geophysical Union, New Orleans, LA.

Sharmin Siddiqui, Xavier Zapata-Rios, Sandra Torres-Paguay, Andrea C. Encalada, Elizabeth P. Anderson, Mark Allaire, David A. Kaplan, Impacts of Hydrology Dynamics in the Amazon, Amazon Dams Network, April 2020, Webinar

Sharmin Siddiqui, Alexandra Feldman, Rafael M. Almeida, Carolina Rodrigues da Costa Doria, Maria Alice L. Lima, Farah Aryan, David A. Kaplan, Mercury in the Amazon Basin: Meta-Analysis & Socio-Ecological Systems Review. American Geophysical Union Fall Meeting. December 2020

Claire Beveridge, Thiago B. A. Couto, **Sharmin F. Siddiqui**, Xavier Zapata-Rios, Elizabeth P. Anderson, Andrea C. Encalada, A comprehensive Andes-Amazon hydrologic budget to support freshwater conservation planning and management, Society of Freshwater Scientists Annual Meeting 2021, Online Event

Sharmin Siddiqui, Xavier Zapata-Rios, Sandra Torres-Paguay, Andrea C. Encalada, Elizabeth P. Anderson, Mark Allaire, David A. Kaplan, Impacts of Hydrology Dynamics in the Amazon, Amazon Dams Network, April 2020, Online Event

Sharmin Siddiqui, Xavier Zapata-Rios, Sandra Torres-Paguay, Andrea C. Encalada, Elizabeth P. Anderson, Mark Allaire, David A. Kaplan, Flow Regimes of the Amazon, American Geophysical Union, December 2019, San Francisco, CA

Sharmin Siddiqui, Xavier Zapata-Rios, Sandra Torres-Paguay, Andrea C. Encalada, Elizabeth P. Anderson, Mark Allaire, David A. Kaplan, Flow Regimes of the Amazon, Water Institute Symposium, February 2020, Gainesville, FL

SKILLS & AWARDS

Programming Programs	R, Google Earth Engine, JavaScript, MATLAB, Python, Linux, SQL/PHP, HTML, CSS ArcGIS, QGIS, ENVI, Excel VBA, AutoCAD, Miradi Conservation Planning, Adobe Photoshop, Adobe Illustrator
Awards	National Science Foundation Graduate Research Fellowship (2018-2023) University of Florida Informatics Institute Graduate Fellowship (2021-2023)

University of Florida Graduate Student Pre-eminence Award (2018-2023)
American Water Resource Association William V. Storch Award (2020)
1st place Biological Engineering Senior Design Project (2018)
Doris Duke Collaborative Scholarship (2015-2017)
Presidential Service Award in Youth Education (2016)
Allan G. Smajstrla Award for Land and Water Resource Engineering (2016)

Languages

English (native), Urdu/Hindi (fluent), Spanish (intermediate), Portuguese (beginner)

OUTREACH

Instructor, Data Carpentry

April 2020 – Present

Led workshops aimed at teaching basic concepts, skills, and tools for effective data analysis in R and Geospatial Sciences

Undergraduate Research Mentor

August 2018 – Present

Pamela M. Senesi, EARTH University Research Exchange (2018-2019), Thesis: Land use as a driver of sediment production from the River San Francisco to Lake Atitlan, *Mark Allaire*, UF Honors Thesis: Combining Environmental-Social-Governance Solutions & Blockchain Technology to Reduce Carbon Emissions from Land Use Change in the Amazon (2020), *Alexandra Feldman* (2019-Present); Farah Aryan, UF Honors Thesis: The Effects of Colonization on Water Distribution in Indigenous Lands (2020-2021)

Webmaster, Graduate Student Council

May 2019 – May 2021

Managed Graduate Student Council website and grants portal; reviewed student travel grants

Irrigation Consultant, Senior Design Project

Aug 2017 – May 2018

Worked with a regional-scale farmer in Live Oak, Florida to determine irrigation needs and developed recommendation options that conserve water and optimize system efficiency; *Advisor*: Dr. Kati Migliaccio

Site Leader Trainer, Florida Alternative Breaks

Aug 2013–May 2018

Instructed *EDA4931: Leading and Immersive Service Experience* to help 34 trip leaders plan meaningful and diverse service experiences throughout the year; developed lesson plans, taught facilitation skills & oversaw logistics involved with planning 17+ service trips each year, maintained and initiated community partnerships

Treasurer, Strategies for Ecology Education, Diversity and Sustainability

Sept 2016–May 2017

Managed annual budget and expenses, mentored peers in course selection and advise students on how to get involved; worked with the Natural Resource Diversity Initiative to organize local natural resource networking and education events

Team Leader, MentorUF

Aug 2013–May 2016

Met with four local middle schools, led workshops, worked with site coordinators to establish a positive mentoring experience for the mentors and students; developed and facilitated two workshops: *Understanding the State of our Education System & Supporting Self-Esteem in Adolescents*

TRAINING

Ecology: SESYNC SEEDS Workshop on Diversity, Equity, and Inclusion in Socio-Environmental Synthesis Research (2020), National Conservation Training Center Basic Training (2015)

Leadership: University of Florida Center for Leadership and Service Student Training (2016), Doris Duke Scholars Program Diversity and Leadership Training (2015)

Technology: Data Carpentry Workshop: Data Management and Visualization with the Tidyverse (2019), Python for Data Management (2018), Ecological Society of America Mobile Application Development Training (2017)