

# J. MICHELLE HU

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## EDUCATION

### **University of Washington**

PhD Civil and Environmental Engineering | Hydrology and Hydrodynamics 2018 – pres.

### **Oregon State University**

MS Water Resources Science | GPA 3.93 2016 – 2018

### **University of Wisconsin-Madison**

GIS Professional Development Certificate | GPA 4.00 2014 – 2015

BS Biology, International Studies, Environmental Studies | GPA 3.68 2007 – 2011

Tropical Conservation Semester Abroad, Ecuador 2011

### Awards and Honors

2018 *University of Washington* Allison/Knudson Fellowship

2017 *Oregon State University* Watershed Community Scholarship

2016 *AWRA Wisconsin Section* Best Graduate Oral Presentation

2015 *National Geographic Student Map Award* Honorable Mention

2015 *Wisconsin Land Information Association* Best Student Map, Best in Category

2011 *University of Wisconsin-Madison* David H. Durra Scholarship Award

2010 *University of Wisconsin-Madison* Imogene Hand Carpenter Outstanding Student Award

2009 *University of Wisconsin-Madison* Wisconsin Undergraduate Idea Fellow

## RESEARCH EXPERIENCE

**Graduate Research Assistant**, University of Washington 2018 – present

- Expand and develop snow depth and SWE mapping workflow using high resolution imagery
- Leverage SnowEx campaign's in situ measurements to calibrate satellite measurements
- Create observation-derived correction surfaces for snow model ingestion/assimilation

**Graduate Research Assistant**, Oregon State University 2016 – 2018

- Investigated storm temperatures in support of National Climate Assessment
- Developed snowstorm dataset derived from SNOTEL database
- Assessed large-scale spatiotemporal trends of historic winter snowfall (in MATLAB)

**Water Resources Management Specialist**, WI Dept. of Natural Resources 2015 – 2016

- Performed GIS analyses to identify agricultural land vulnerable to erosion
- Wrote *LANDSAT* image processing procedure for tillage analysis (in R)
- Presented EVAAL model and results to Marathon county land conservation officials

**Conservation Intern**, Ceiba Foundation for Tropical Conservation 2011

- Established permanent sampling sites and rewrote stream monitoring protocols

- Collected, analyzed baseline stream data from source to sink in rural Ecuador
- Designed macroinvertebrate identification cards for local watersheds

**Wisconsin Undergraduate Idea Fellow**, Morgridge Center for Public Service 2009

- Implemented community-based research project on gender gap in athletics
- Wrote grant proposal and secured project funding
- Compiled, transcribed and analyzed focus group data

**Undergraduate Lab Researcher**, UW-Madison School of Medicine 2007 – 2009

- Investigated transcriptional regulation of cardiac hypertrophy
- Designed and implemented DNA cleansing project using real-time PCR
- Instructed techniques in histology, electrophoresis, restriction digests, PCR

## PRESENTATIONS

Hu, J. M. (Oral) *Winter storms in the western US*. April 23, 2018. Pacific Northwest Water Research Symposium, 8th. Corvallis, OR

Hu, J. M., Nolin, A.W., (Oral) *Warming snowfall in the western United States*. December 13, 2017. American Geophysical Union Fall Meeting. New Orleans, LA.

Hu, J. M., Nolin, A. W., (Poster) *Winter storm temperatures in the Western United States*. November 6, 2017. American Water Resources Association Annual Conference. Portland, OR.

Hu, J. M., Nolin, A. W., (Poster) *Winter storms and climate change in the Oregon Cascades*. June 13, 2017. Universities Council on Water Resources/The National Institutes for Water Resources Annual Conference, 8<sup>th</sup>. Fort Collins, CO.

Hu, J. M., Nolin, A. W., (Poster) *Winter storms and climate change in the Oregon Cascades*. March 6, 2017. Pacific Northwest Water Research Symposium, 7th. Corvallis, OR

Hu, J. M., Nelson, T., Ruesch, A., (Oral) *Determining the feasibility of using satellite-derived tillage practices to improve statewide erosion vulnerability estimates*. March 10, 2016. American Water Resources Association – Wisconsin Section Annual Meeting, 40<sup>th</sup>. Wisconsin Dells, WI.

Hu, J. M., Valdez, N. M., MacDonald, C., (Oral) *Empowering underrepresented girls through athletics*. April 15, 2010. Undergraduate Symposium, 11<sup>th</sup>. Madison, WI.

Hu, J. M., (Poster) *Use of DNase in eliminating genomic DNA from mRNA to be utilized in RT-PCR quantitation*. April 16, 2008. Undergraduate Symposium, 9<sup>th</sup>. Madison, WI.

## LEADERSHIP AND SERVICE

Vice President, OSU Hydrophiles, AWRA student chapter 2017 – 2018

Crew Leader & AmeriCorps Member, American Conservation Experience 2011 – 2012

Volunteer Soccer Coach, Millennium Soccer Club 2008 – 2010

Badger Volunteer Team Leader, Morgridge Center for Public Service 2009

## SOFTWARE AND PROGRAMMING SKILLS

Proficient in ArcGIS, QGIS, ENVI, Adobe Illustrator

Working proficiency in MATLAB, R, Python