

**Annika Hjelmstad**  
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## Education

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- September 2020 – present      **Ph.D. Civil and Environmental Engineering (Hydrology and Water Resources).** University of California Irvine, Irvine, CA.  
- May 2021: Passed preliminary exam.
- May 2020      **M.S. Civil, Environmental, and Sustainable Engineering (Hydrosystems Engineering).** Arizona State University, Tempe, AZ.  
- Master's thesis: *Propagation of Radar Rainfall Uncertainties into Urban Flood Predictions: An Application in Phoenix, AZ*
- Dec 2018      **B.S.E. Civil Engineering (Environmental Engineering)** *magna cum laude*. Arizona State University, Tempe, AZ.  
- Minor: Mathematics.  
- Honors thesis: *Effect of Drought Policies on Los Angeles Water Demand*  
- Completed 147 credit hours in 3.5 years.

## Experience

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- September 2020-present      **Graduate Student Researcher**  
Dr. Amir AghaKouchak, University of California Irvine.
- August 2019-August 2020      **Graduate Service Assistant**  
- Project: "Assessing the Accuracy of Multi-Radar/Multi-Sensor (MRMS) Precipitation Estimates in the Phoenix Metropolitan Area to Support Flash Flood Warning Operations." PIs: Giuseppe Mascaro (ASU), Larry Hopper Jr. and Paul Iñiguez (National Weather Service).  
- Project "FloodAware: Community-Based Automated Information for Urban Flooding." PI: Dr. Mikhail Chester  
Dr. Giuseppe Mascaro and Dr. Margaret Garcia, Arizona State University.
- April 2018-August 2020      **Research Aide**  
- Laboratory work performing column tests for removal of arsenic and per-fluorinated chemicals.  
- Data analysis.  
- Sorption modeling in MATLAB and MINEQL+.  
- Regularly present research to faculty, postdoctoral researchers, and graduate students at weekly meetings.  
NEWT (Nanotechnology-Enabled Water Treatment) Center, Dr. Paul Westerhoff, Arizona State University.
- May 2019-August 2019      **Graduate Teaching Assistant**

- Assisted students during recitations in CEE 321: Structural Analysis and Design. Held office hours, gave lecture on the direct stiffness method for beams. Instructor: Dr. Kristen Ward.
- Ran the lab component for CEE 341: Fluid Mechanics for Civil Engineers. Held office hours. Instructor: Naushita Sharma.
- Assisted students in recitation in CEE 212: Engineering Mechanics II-Dynamics. Instructor: Dr. Efthalia Chatziefstratiou.

Arizona State University.

Jan 2019-May 2019

**Grader**

- Graded student homework and exams for CEE 441: Water Resources Engineering. Instructor: Dr. Giuseppe Mascaro.

Arizona State University.

Jan 2018-Dec 2018

**Undergraduate Research Assistant**

- Worked on mathematical modeling project exploring factors affecting water demand for Los Angeles.
- Learned and used R for data analysis, multiple linear regression modeling, and spatial interpolation of data.
- Wrote detailed results in honors thesis paper.

Dr. Margaret Garcia, Arizona State University.

Jan 2018-May 2018

**Engineering Tutor**

- Assisted students in tutoring center with civil engineering coursework at all undergraduate levels.

Fulton Schools of Engineering Tutoring Centers, Arizona State University.

Aug 2016-Dec 2018

**Undergraduate Teaching Assistant**

- FSE 100 (Introduction to Engineering, 1 semester). Assisted instructor during labs.
- CEE 212 (Engineering Mechanics II-Dynamics, 4 semesters). Provided tutorial assistance to students during problem-solving recitations.
- CEE 213 (Introduction to Deformable Solids, 1 semester). Provided tutorial assistance to students during problem-solving recitations.

Fulton Schools of Engineering, Arizona State University.

May 2016-May 2018

**Student Worker**

- Clerical work.
- Customer service duties.

Hayden Library, Arizona State University.

Sept 2015-Dec 2015

**Professional Tutor**

- Courses: CHM 114 (General Chemistry for Engineers).
- Tutored a student one-on-one to prepare for exams and labs.

Dorrance Scholarship Programs.

## Publications

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- Hjelmstad, A.,** Shrestha, A., Garcia, M., & Mascaro, G. (2021). Propagation of Radar Rainfall Uncertainties into Urban Pluvial Flood Modeling during the North American Monsoon. Manuscript submitted to *Hydrological Sciences Journal* for publication.
- Zeng, C., Atkinson, A., Sharma, N., Ashani, H., **Hjelmstad, A.,** Venkatesh, K., & Westerhoff, P. (2020). Removing per- and polyfluoroalkyl substances from groundwaters using activated carbon and ion exchange resin packed columns. *AWWA Water Science*, 2(1).
- Hjelmstad, A.,** Garcia, M., & Larson, K. (2019). Effect of Drought Policies on Los Angeles Water Demand. World Environmental and Water Resources Congress 2019 239. In *World Environmental and Water Resources Congress 2019* (pp. 239–250).

## Posters & Presentations

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- Hjelmstad, A.,** Shrestha, A., Garcia, M., Hopper Jr., L., Iñiguez, P., Mascaro, G. (2021, January). Propagation of Radar Rainfall Uncertainty into Urban Flood Predictions during the North American Monsoon. Poster presented at the meeting of the 101<sup>st</sup> American Meteorological Society Annual Meeting, 35<sup>th</sup> Conference on Hydrology, Virtual. (Presented)
- Zeng, C., Sharma, N., **Hjelmstad, A.,** Venkatesh, K., & Westerhoff, P. (2019, August). Removal of perfluoroalkyl substances (PFASs) in groundwater using activated carbon and ion exchange resin: Column test. In *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY* (Vol. 258). 1155 16TH ST, NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.
- Hjelmstad, A.,** Garcia, M., Larson, K. (2019, May). Effect of Drought Policies on Los Angeles Water Demand. Poster presented at the meeting of ASCE EWRI World Environmental Resources Conference, Pittsburgh, PA. (Presented)

## Awards

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June 2022	Awarded UCI-Engineering LANL Fellowship
June 2021	Awarded Ridge to Reef and UCI Graduate Division fellowship
Spring 2020	Awarded Provost PhD Fellowship (UCI Graduate Division).
May 2019	3 <sup>rd</sup> place, ASCE-EWRI Conference Poster Competition.
Dec 2018	Civil, Environmental, and Sustainable Engineering Leadership and Service Award, Arizona State University.
Fall 2015-Fall 2018	Dean's list, Fulton Schools of Engineering, Arizona State University. FA15, FA16, FA17, SP18, FA18.

## Certifications

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March 2019	Passed Fundamentals of Engineering (FE Civil) exam.
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## Technical Skills

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- Programming in MATLAB, R, and Python
- Statistical analysis
- Completed lab safety training at Arizona State University
- Basic lab work skills
- Microsoft Office (proficient in Excel, PowerPoint, Word)