

Lucas Alexandre Djehdian

Engineer in Training (EIT)

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EDUCATION

University of Illinois at Urbana-Champaign (UIUC)

Expected May 2018

Master of Science in Civil Engineering

GPA: 4.00/4.00

- Energy-Water-Environment Sustainability

University of Illinois at Urbana-Champaign (UIUC)

May 2016

Bachelor of Science in Civil Engineering

GPA: 3.86/4.00

- Energy-Water-Environment Sustainability and Structural Engineering

WORK EXPERIENCE

Carollo Engineers

Chicago, IL

Engineering Intern

June 2016 – August 2016

- Developed the framework for a hydraulic/hydrologic model of DuPage County, IL.
- Created a GIS model of the sanitary sewer and drinking water system of Oahu, HI.
- Created a GIS-reliant basis for a resiliency study between two water commissions in IL to prevent water shortages.

RESEARCH & ACADEMIC EXPERIENCE

UIUC Department of Civil and Environmental Engineering

Urbana, IL

Graduate Research Assistant

May 2016 - Present

- Studying the spatial and temporal interactions between water flows (direct and indirect) and water scarcity across the US to quantify the stress and reliability of the U.S. Food-Energy-Water Nexus.
- Thesis Title: Urban Water Resources Stress and Reliability of the U.S. Food-Energy-Water Nexus, Advisor: Ashlynn S. Stillwell.

Teaching Assistant: Water Resources Engineering

January 2016 – May 2017

- Assisted to instruct an introductory water resources engineering course. Topics covered included precipitation, infiltration, evapotranspiration, groundwater physics, surface water physics, and water distribution systems.

Undergraduate Research Assistant

July 2015 – May 2016

- Quantified leaks and their embedded energy in an uphill water distribution system in Phoenix, AZ.
- Assisted modeling an optimized reclaimed water supply system for power plant cooling in the Chicagoland area. Presented this work at the 2016 World Environmental & Water Resources Congress and the 2016 Illinois Water Conference.

UIUC Department of Systems Engineering and Design

Urbana, IL

Lab Assistant - Engineering Graphics and Design 101

January 2014-May 2015

- Assisted teaching 3-D modeling techniques to students in an intro to Engineering Graphics and Design course at UIUC.

UIUC Department of Mechanical Engineering

Urbana, IL

Independent Study

June 2014-December 2014

- Employed the Finite Element method to understand and optimize a design structure model, analyze structure assemblies through Abaqus, and program a mathematical description of structural deformation through MATLAB.

LEADERSHIP EXPERIENCE

American Society of Civil Engineers

Urbana, IL

Secretary

December 2014-December 2015

- Provided weekly newsletters, completed the end-of-the-year ASCE annual report, and maintained membership and attendance.

HONORS & AWARDS

AWWA Larson Aquatic Research Support (Masters) Scholarship Recipient

April 2017

Illinois Water Conference Poster Presentation Runner-Up

October 2016

CEE Interdisciplinary Program Fellowship

August 2016

Highest Honors Bachelor of Science in Civil Engineering, UIUC

May 2016

ASCE Great Lakes Student Conference Environmental Engineering Competition Runner-up

April 2016

William A. Oliver Endowed Scholarship

May 2015

ASCE Great Lakes Student Conference Environmental Engineering Competition Winner

April 2015

UIUC Dean's List in the Engineering Program

January 2013 – May 2015

UIUC Engineering James Scholar

January 2013 - January 2014

PUBLICATIONS

“Reliability of the U.S. Urban Virtual Hydro-economic Network.” *Sustainability Cities & Society*, in preparation.

“Urban Water Resource Stress of the U.S. Food-Energy-Water Nexus.” *Water Resources Research*, in preparation.

“Virtual Water Transfers of the U.S. Electricity Grid from 2010 to 2015.” *Proceedings of the National Academy of Sciences*, in preparation.

“Utilizing reclaimed water at power plants in the Chicago Area.” *Illinois Water Conference, October 2016*.

“Quantifying De Facto Water Reuse in the Greater Chicago Area.” World Environmental and Water Resources Congress, May 2016.

“Quantifying Leaks in Mummy Mountain (Phoenix, AZ).” (2016) City of Phoenix. Phoenix, AZ, USA.