

Lucas Alexandre Djehdian

Engineer in Training (EIT)

(507) 316-1557 · djehdia2@illinois.edu · <http://stillwell.cee.illinois.edu/people/lucas-djehdian/>

EDUCATION

M.S. Civil Engineering (Expected May 2018) - University of Illinois at Urbana-Champaign (UIUC) **GPA: 4.00/4.00**

- Energy-Water-Environment Sustainability Program

B.S. Civil Engineering (Highest Honors) - University of Illinois at Urbana-Champaign **GPA: 3.86/4.00**

- Energy-Water-Environment Sustainability and Structural Engineering Programs

WORK EXPERIENCE

Water-Wastewater Engineering Intern – Carollo Engineers (Chicago, IL) *Summer 2016*

- Developed the framework for a hydraulic wastewater and stormwater model of a major county in IL.
- Built a GIS-reliant basis for a resilience study between two water commissions in IL to prevent water shortages.
- Contributed to a Capacity, Management, Operations, and Maintenance study to prevent sewer overflows in a major Chicago suburb.

SOFTWARE AND LANGUAGES

- Engineering and programming: ArcGIS, MATLAB, R, VBA, EPANET, HEC-RAS, LaTeX, Autodesk Fusion and Inventor
- Fluent languages: English, Portuguese and Spanish

RESEARCH & TEACHING EXPERIENCE

Graduate Research Assistant - UIUC Dept. Of Civil Engineering *Summer 2016 – Present*

- Building a GIS based iterative platform aimed at optimizing water resource allocation across the U.S.
- Spatially quantifying the reliability and vulnerability of direct and indirect water resources of U.S. cities.

Teaching Assistant: Water Resources Engineering - UIUC Dept. of Civil Engineering *Spring 2017*

- Assisted in instructing a sophomore-junior level water resources engineering course.
- Tasks included grading exams and homework, keeping attendance, holding office hours, as well as lecturing two classes on precipitation and the food-energy-water nexus.

Undergraduate Research Assistant - UIUC Dept. of Civil Engineering *Summer 2015 – Spring 2016*

- Quantified leaks and their embedded energy in an uphill water distribution system in Phoenix, AZ.
- Assisted in modeling an optimized reclaimed water supply system for power plant cooling in the Chicagoland area.

Lab Assistant - Engineering Graphics and Design – UIUC Dept. of Systems Engineering and Design *Spring 2014 – Spring 2015*

- Assisted in teaching a freshman level 3D CAD course. Tasks included supervising modeling lab classes and administering exams.

Independent Study – UIUC Dept. of Mechanical Engineering *Summer 2014 – Fall 2014*

- Optimized a design structure model and built a mathematical model of structural deformation with MATLAB.

HONORS & AWARDS

AWWA Larson Aquatic Research Support (Masters) Scholarship *Summer 2017*

List of Teachers Ranked as Excellent by Students *Spring 2017*

CEE Interdisciplinary Program Fellowship *Fall 2016 – Spring 2017*

Illinois Water Conference Poster Presentation Runner-Up *Fall 2016*

ASCE Great Lakes Student Conference Environmental Engineering Competition Runner-up *Spring 2016*

William A. Oliver Endowed Scholarship *Spring 2015*

ASCE Great Lakes Student Conference Environmental Engineering Competition Winner *Spring 2015*

UIUC Dean's List in the Engineering Program *Spring 2013 – Spring 2015*

UIUC Engineering James Scholar *Spring 2013 – Fall 2014*

PUBLICATIONS

Djehdian, L., Stillwell, A., "Reliability of the U.S. Food-Energy-Hydroeconomic Network." Sustainable Cities and Society, in preparation.

Djehdian, L., Chini, C., Stillwell, A., "Urban Water Resource Stress of the U.S. Food-Energy-Water Nexus." Water Resources Research, in preparation.

Chini, C., **Djehdian, L.**, Lubega, W., Stillwell, A., "Electrified Water: Virtual Water Transfers of the U.S. Electricity Grid." Nature Energy, in revision.

Barker, Z., Stillwell, A., **Djehdian, L.**, "Utilizing Reclaimed Water at Power Plants in the Greater Chicago Area." Illinois Water Conference, October 2016 (poster).

Barker, Z., Stillwell, A., **Djehdian, L.**, "Quantifying De Facto Water Reuse in the Greater Chicago Area." World Environmental and Water Resources Congress, May 2016 (poster).

Djehdian, L., Stillwell, A., "Quantifying Leaks in Mummy Mountain (Phoenix, AZ)." (2016) City of Phoenix. Phoenix, AZ, USA.