

# WANDA WALTERS

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1 Forestry Drive  
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*An undergraduate student seeking to explore pathways towards innovative water systems that meet human needs and achieve environmental stability. Driven by the increasing prevalence of water-related crises worldwide, caused by both water surplus and scarcity, I am looking to apply engineering and scientific skills to re-invent water systems in order to best manage and utilize this essential resource.*

## EDUCATION

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**B.S.** SUNY College of Environmental Science and Forestry (ESF) Dec. 2018  
Environmental Resources Engineering (ERE)  
Minor in Mathematics  
GPA 3.83

## RESEARCH EXPERIENCE

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**Bioprocess Engineering Undergraduate Researcher**, SUNY- ESF, Syracuse, NY Aug. 2017-May 2018  
Advisor: Dr. Siddharth Chatterjee

- Checked derivations of mathematical equations;
- Developed meaningful and reflective questions in order to critically enhance manuscript content;
- Used computational program CoCALC for the plotting of derived equations in set conditions;
- Transcribed manuscript to the open - form document writer Latex with document assistant LyX;
- Employed timeliness in the fulfillment of checkpoints;
- Assisted in translating reviewer edits to manuscript enhancements in publication submission process.

**Turfgrass Fertigation REU**, New Mexico State University, Las Cruces, NM May-Aug. 2017  
Advisor: Dr. Elena Sevostianova

- Conducted research regarding sustainable turfgrass irrigation through simultaneous fertilization with tertiary phase effluent;
- Developed skills in experimental design, data collection, and technical analysis;
- Executed proficiency in gas chromatography and cadmium ion reduction methods for nitrogen detection;
- Presented preliminary research conclusions at REU Conference at Stanford University;
- Composed extended abstract and summary slides of research findings;
- Presented research conclusions and REU experience during ReNUWIt video conference.

## TEACHING EXPERIENCE

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**SUNY - ESF**, Syracuse NY  
**Surveying Teaching Assistant**, Dept. of ERE Aug. 2018-Present

- Attend weekly TA meetings and assist in weekly 3-hour lab as a guide to 4-person surveying crews;
- Demonstrate proficient use of Total Station, grade rod, and taping equipment;
- Oversee students in field based labs, providing guidance and technical assistance.

**Numerical & Computing Methods Teaching Assistant**, Dept. of ERE Aug. 2017-Present

- Assist students in algorithm development by catering explanations individual student's logic process during class work periods and office hours;
- Employ proficiency in R and Python coding languages through de-coding.

**Math Center Undergraduate Staff**, Mathematics Dept. Jan. 2016-Present

- Enhance understanding of math skills for students seeking guidance in a range of math classes including Calculus I, II, & III, Differential Equations, and Statistics;
- Evaluate math comprehension through the unbiased and efficient grading of assignments.

**Teaching Assistant**, Dept. of Chemistry Aug. 2016-May 2017

- Conducted weekly review sessions to overview lecture content tailored to student needs;
- Applied efficient work skills to thoroughly grade homework assignments on a weekly basis.

## PROFESSIONAL ENGINEERING EXPERIENCE

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**Indian Health Service**, Minot, ND May-Aug. 2018

**Jr. Commissioned Officer Student Training Extern**, US Public Health Service

- Prepared AutoCAD drafts and as-built's of water and wastewater systems including water mains, sewer main, and Presby, Bioclere and Drainfield individual site sanitary systems;
- Inspected construction on various sewer main, water main, and individual wastewater treatment projects;
- Designed individual sewage treatment systems;
- Demonstrated ability to concisely communicate technical information in a professional setting while applying on-the-spot problem solving skills and decision making.

## PUBLICATIONS

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### *Online Journal Publications*

**Horvath, I.R.**, Chatterjee, S.G., "A surface renewal model for unsteady-state mass transfer using the generalized Danckwerts age distribution function," *The Royal Society Open Science*; 23, May 2018.

## LEADERSHIP EXPERIENCE & CAMPUS SERVICE

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**Environmental Resources Engineering Club**, ESF, Syracuse, NY Aug. 2017-Present

### **President**

- Conduct meetings, organize projects, coordinate club trips and lead an executive board;
- Communicate as a liaison with the club faculty advisor and contact point to persons outside of club including professional engineers, alumni and facilities operators.

**Office of Student Involvement and Leadership**, ESF, Syracuse, NY Aug. 2016-Present

### **Orientation Leader**

- Welcome new students and their families to the campus life and culture in the week before classes;
- Assist in scheduling, administrative protocols, and social concerns for first year students;
- Orient 8 to 10 students during their first week, and act as a resource for them through their first year.

**Office of Undergraduate Admissions**, ESF, Syracuse, NY Aug. 2015-Present

### **Student Ambassador**

- Lead groups of incoming students and their family members on a 1-hour walking tour of ESF campus weekly;
- Attend full-day receptions serving on a student panel, and department led academic sessions;

- Maintain a social media presence on accepted student Facebook pages serving to guide students and answer questions.

**Department of ERE, ESF, Syracuse, NY**

April-June 2018

**Search Committee Student Representative**

- Represented the undergraduate student body in the search for an Ecological Eng. Faculty Position;
- Reviewed applications, participated in phone interviews, voiced student perspective in selection process.

**HONORS AND AWARDS**

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**Rising Student Leader of the Year**

April 2017

Awarded during the annual SUNY-ESF Student Organization and Leadership Award Reception (SOLAR) to an underclassman demonstrating the promise of a leader in a student organization.

**Undergraduate Club of the Year – Environmental Resources Engineering Club**

April 2018

President of the ERE Club when the club was presented with this SUNY-ESF 2018 SOLAR Award. The award was presented in recognition of outstanding club achievements including hosting a Women in Science and Engineering Panel, the Pine Grove Middle School Green Infrastructure Symposium, Mentoring Program, Girls Summit Green Infrastructure Session, two ERE student retreats, and NYS DEC networking and career exploration day.

**PRESENTATIONS AND INVITED LECTURES**

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**Presenter**, “Turfgrass Fertigation: An Investigation into Sustainable Backyard Irrigation,” Re-Inventing the Nation’s Urban Water Infrastructure (ReNUWIt) All-REU Conference, July 2017.

**Speaker**, “Ecological Engineering in the Tropics,” Engineers Without Borders Northeast Regional Conference, March 2018.

**PROFESSIONAL AFFILIATIONS**

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**New York Water Environment Association (NYWEA)**

Aug. 2015-Present

ESF Student Chapter member.

**Engineers Without Borders (EWB)**

Jan. 2016-Present

ESF Student Chapter member. Participant in Marichaj, Guatemala project.

**TECHNICAL SKILLS**

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**Programming:** Python, R, CoCALC

**Hydrologic Modeling:** Rstudio, HEC-RAS

**Analytical:** Gas Chromatograph with micro-ECD, nitrate and nitrite detection with colorimetric methods

**Microsoft Office:** Word, PowerPoint, Excel

**Open Source:** LyX Document Processor

## REFERENCES

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**Douglas Daley**, Associate Professor  
Department of Environmental Resources Engineering  
State University of New York College of Environmental Science and Forestry  
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**Dr. William Shields**, Professor Emeritus  
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