**EDUCATION**

**Dickinson College**, Carlisle, PA May 2017

Bachelor of Sciences: Physics, Certificate: Social Innovation and Entrepreneurship (SINE)

**Peer-reviewed Papers**

* **Whitaker, E. C**., Reed, D. E. and Desai, A. R. (2016), *Lake ice measurements from soil water content reflectometer sensors*. Limnol. Oceanogr. Methods, 14: 224–230. doi:10.1002/lom3.10083

**Conferences Attended**

* Association for the Advancement of Sustainability in Higher Education 2016, talk: *Small Scale Biogas for Energy Sustainability and Education*
* American Geophysical Union’s Fall 2015 Meeting, presented poster, *Soil Water Content Sensors as a Method of Measuring Lake Ice Depth*
* Central PA Consortium: Symposium on Innovation and Entrepreneurship, Spring 2017, created and led workshop, *“Getting Grit”*

**Dickinson College Physics Colloquium Presentations**

* *Where do Different Sized Particles Accumulate on Gravity-Capillary Waves*, Spring 2017
* *Passive Thermal Heating of a Biogas Digester*, Fall 2016
* *Exploring the Effects of Frequency on the Dynamics of Gravity-Capillary Waves*, Fall 2016
* *A Holistic Look at a Lake*, Fall 2015

**Honors**

* The Rush Citizen of the Year, *Spring 2017*
  + Recognized for active citizenship, leadership, being a leader and a role model, enacting positive changes, positively contributing to the community, peer accountability, and self-governance.
* 1902 Award, *Spring 2016*
  + Awarded to a Junior student who has contributed the most to the good of the college
* Poster Honors: *Increasing the Potential of a Biogas Digester through the use of a Solar Air Heater*

**CURRENT WORK**

**Lab Manager and Researcher,** Contextual Dynamics Lab, Dartmouth College (July 2017-Present)

* Researching the functional connectivity of the brain using python3 and fMRI data sets
* Examining intersubject connectivity with subjects who are presented with similar and dissimilar stimuli
* Write and maintain IRB protocols
* Mentor undergraduate research assistances

**RESEARCH EXPERINCE**

Thesis: *Where do contaminates accumulate on gravity-capillary waves*? Fall 2016-Spring 2017, **Dickinson** **College**, Carlisle PA, Advisor: Dr. Stephen Strickland

* Examined the size discrepancy of where particles fall on induced Faraday waves
* Matlab imaging techniques to find nodes/antinodes of waveforms
* Created nanoparticles and small-scale plasma chamber

Thesis: *Exploring the Feasibility of a Colocation Project in Carlisle PA*, Spring 2017, **Dickinson College**, Carlisle PA, Advisor: Dr. Helen Takacs

* Created an interview protocol and used it to interview service providers, their clients, and local leaders
* Synthesized collected data and previous data to better understand the need of colocation in the region
* Presented work at community presentation

Oceanography Research: *Anthropogenic Beach Manipulation: The Impact of Groins on Sand Distribution,*

Fall 2016, **Dickinson College**, Carlisle PA, Advisor: Dr. Jorden Hayes

* Developed and executed experiment including field work and data collection
* Performed wet-lab data analysis using a Laser Scattering Particle Size and Distribution Analyzer

Independent Research: *Interfacing a Solar Air Heater with a Methane Producing Biogas Digester,*

Spring-Fall 2016, **Dickinson** **College**, Carlisle PA, Advisor: Dr. Hans Pfister

* Increased biogas production by 25% in the winter and decreased CO2 emissions of the college farm
* Collaborated with Bucknell University and led PASA workshop on biogas integration on small farms

**RESEARCH EXPERINCE (cont.)**

National Science Foundation Research Experience for Undergraduates and Long Term Ecological Research *Fellow* Summer 2015 **University of Wisconsin-Madison,** Madison, WI, Advisor: Dr. Ankur Desai and Dr. David Reed

* Synthesized data from multiple lakes in multiple seasons and years to create a dynamic model of how heat moves through a lake and how lakes freeze and thaw
* Determined that CS616 soil water content sensors could measure ice thickness

**SKILLS**

* Computer: Vernier software, Campbell sensors, HOBOware, LabVIEW, Environmental Chambers, Microsoft Office, ExpressScribe, Python, Jupyter Notebooks
* Other: Research and development, grant writing, writing reports, analyzing scientific articles, sensor development, PID, soldering, qualitative research, event planning

**DICKINSON LEADERSHIP EXPERIENCE**

*Panelist* **Student Hearing Panelist** (Fall 2014-Present)

*Vice-President of Brotherhood* **Alpha Phi Omega** National Service Fraternity (Spring 2014-Present)

*Member* **Devil’s Advocates Student Philanthropy and Alumni Engagement Group**, (Spring 2015-Present)

* Communicated the importance of giving back to the college to students, alumni, and trustees
* Attended meetings and dinners with the board of trustees and the alumni council to provide a student voice
* Led and organized campus wide events such as Day of Giving and Red and White Day

*Member* **Senior Gift Drive Committee**(Fall 2016- Present)

*First Year/Senior Mentor* **New Student Programs** (Fall 2015-Present)

* Organized events, maintained a detailed budget, wrote recommendations, and met regularly with first years
* Assisted with 18 students’ transition to college life and residential college living
* Mentored a group of 10 First Year Mentors who reported up to me
* Gave advice and assistance to first years on issues ranging from forming clubs to mental health

*Board Member* **Neighborhood Community Board** (Fall 2013-Present)

* Personally interviewed the college president, and organized events with speakers and professors
* Worked with dorm members to develop better ways of living in a community environment, developed new protocols for problem resolution, raised funds for dorm events including formals and breakfasts

*Triton* **Admissions** (Fall 2014-Present)

* Sat on panels discussing student life and research opportunities at Dickinson
* Greeted prospective students and family and offered them insights into the Dickinson community

**SELECTED COMMITTEE WORK**

*Board Member* **Dickinson Sustainable Investment Group** (Spring 2016-Present)

* Standing subcommittee of the President’s Commission on Environmental Sustainability
* Created working definition of what sustainable investing means to the college
* Liaison between the Dickinson community and the Board of Trustees’ Committee on Investments
* Met with the Board of Trustees to discuss a report on our investment portfolio, provided input and shared policies, practices and goals of other higher education institutions and other relevant sectors

*Interviewer,* **Committee to find New College President** Fall 2016

*Interviewer,* **Committee to find****Director of****New Student Programs** Fall 2016

*Interviewer*, **Committee to find Director of Experiential and Outdoor Education** Spring 2016