

Shane Thirkell

Ocean Engineering

*"Quite often in nature, when waves are reflected from obstacles, not all wave energy is reflected: some is absorbed by the obstacle and some is transmitted past the obstacle."
- Dean and Dalrymple*

Education

2015-2018 **Bachelor of Science**, *University of Rhode Island*, Narragansett, RI, *GPA - 3.42.*
Ocean Engineering, Renewable Energy Track

Junior Spring Semester Project

2018 **Flow Mapping (Particle Image Velocimetry)**, *Research Experiment.*

This was an experiment in fluid dynamics with respect to a cylinder subjected to a constant flow. The water is seeded with small particles that are illuminated by a powerful laser. A cylinder is moved mechanically in various patterns mimicking theoretical 'free vibration' due to vortex shedding. The images are processed and analyzed in MATLAB and the resulting turbulence/vorticity can be visualized. The forces experienced by the body are widely applicable (energy generation, structural pile requirements). Results were used in graduate student Erdem Aktosun's research.

Certifications, Achievements, Interests

- 2013 Managing/maintaining small-scale hydroponic or aquatic systems
- 2014 Next Step Living volunteer, outreach representative for solar energy assessments
- 2015 Technical rock climbing safety logistics, forklift operation
- 2016 Member of National Society of Collegiate Scholars
- 2016 Member of Tau Kappa Epsilon Fraternity
- 2018 Dean's List 7 semesters
- 2018 Class IV Laser Radiation Safety Certification

Skills

Softwares: MATLAB, Excel/Office, STWAVE (modelling) PTC Creo (Limited), Python (Limited)

Equipment/Hardware Skills

Wave Tank: Hydraulic Wavemaker, Load cell, Wave-guage operation

Flow Map: Flow Tank, Dye pumps (visualization), Class IV Laser operation

Acoustics: Oscilloscope, Function Generator, Humminbird 1158c Transducer

Languages

English: First Language *(Strong writing skills)*

German: 5 years grammar coursework, exchange completed *(European Union Reference Level C1)*

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