

CAMERON R. WHALEN

Mechanical Engineer, Innovator, Leader

Check out Cameron's LinkedIn to contact » 



QUALIFICATIONS SUMMARY

- Proven leader with strong process and EQ oriented skill-set, focused on effective team dynamics
- Excellent organizational communication skills with a focus on strategic initiative development
- Integrated experience with novel nuclear, HVAC and mechatronic systems
- 4000+ hours of Python scripting, 3000+ hours of SolidWorks experience, 2000+ hours of Matlab scripting
- Proficient with Python automation of Finite Element Analysis Tools (FEA) - primarily ABAQUS
- Proficient with conjugate heat transfer methodology development and analysis
- Experience with product requirement generation, design qualification and methodology validation
- Sodium Fast Reactor (SFR) experience with static, thermal, seismic and buckling analysis of structures
- Experience with nuclear regulatory codes, NRC 10 CFR 50/52 and ASME NQA-1

EDUCATION

Bachelor of Science, Mechanical Engineering, Cum Lade University of Washington, Bothell, WA, June 2017, GPA 3.73, 2015 Annual Dean's List | 2016 Annual Dean's List | 2017 Annual Dean's List

Relevant Areas of Technical Knowledge:

Fluid Mechanics	Fracture Mechanics	Python/Matlab/Java/Mathcad
Thermodynamics	Statics and Dynamics	Engineering Economics
Heat Transfer	Mechanics of Materials	Power Generation/Elec. Power
3D Design and FEA	Mechanical Design	Requirement Development

RELEVANT EXPERIENCES

Founder, Technical Lead, PNW Energetics LLC 2016 - Present

- Founded a technical consulting company focused on leveraging best engineering practices to enable communities of startups to collectively achieve global sustainability
- PNW Energetics seeks out green startup companies who have requirement and strategic development needs of both a technical and non-technical nature.
- A strong track record of leading large groups of teams in technical and non-technical
- Specializes in the automation of novel heat transfer analysis techniques with scripting languages
- Currently seeking projects

Chapter Chair, Western Washington ASME (WW ASME) 2018 - Present

- Chair of local engineering society section with over 900 members
- Emphasis on membership growth, involvement and new initiative development
- Led multiple initiatives to establish Seattle area engineering mentorship programs for local university engineering programs
- Invited to participate in annual American Society of Mechanical Engineers (ASME) Group Leadership Development Conference (GLDC) 2018/2019.

Nuclear Science Engineer (NSE), Structural Mechanics, TerraPower Fall 2016 - Winter 2019

- Mechanical engineering consultant and FTE for TerraPower LLC's Travelling Wave Reactor (TWR)
- *Interfaced with systems and design group to coordinate effective analysis of components*
- Aided design decisions with methodology and software development of heat transfer techniques
- Conducted FEA, thermo-mechanical analysis of BPVC Section III, Division 1 and Division 5 components

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Intern, Abaqus FEA Automation with Python Scripting, TerraPower, Summer 2016

- Internship with TerraPower LLC with a focus on novel heat transfer analysis techniques for ASME BPVC Section III, Division 5 nuclear components.

Technical Lead, Mechanical Design and Analysis, Fall 2015 - Spring 2016

- Worked within constraints of a USDA grant to develop design and budget for an in-field, solar powered, walk in vegetable cooler for small farms in conjunction with SAgE Farms.
- Developed comprehensive heat transfer model to assess economic impact of annual, heat loading
- Developed ANSYS Fluent model to simulate transient, natural convection of the system.

Mechatronics Lead, Tribology ME Capstone Project (UW Bothell), Fall 2016 - Spring 2017

- Led mechatronics engineering efforts for an ASTM G133 linear wear tester
- The project serves to quantify sliding friction coefficients and wear rates of material pairs
- Worked to develop custom, single source data acquisition and function generation system to operate system drive train and sensors. Complete, open source, alternative to LabView and NI DAQ.

Principal Investigator and Founder, TilthConnection (UW Bothell), Winter 2015 - Present

- Developed an interdisciplinary team of both electrical and mechanical engineers as well as computer scientists to develop a ZigBee-based mesh network of soil sensors.
- Data from the sensors will be leveraged against historical soil and climate data and real-time climate data to provide horticultural recommendations to both the consumer and commercial markets using sparse-matrix algorithmic techniques.
- Real-time feedback regarding fertilization, watering and frost prevention strategies would enable farmers to make informed, strategic decisions about soil and plant maintenance.
- Submitted white paper proposal to Microsoft-sponsored, University of Washington Bothell (UWB) Internet of Things (IOT) Competition
- Pursued National Science Foundation (NSF) grant funding opportunities

ADDITIONAL EXPERIENCE

- 2018-2019 WW ASME Professional Chapter President
- 2017-2018 WW ASME Professional Chapter Vice President
- *Awarded ASME National, Charles T. Main Student Section Leadership Award, 2017 (One of eight student leaders awarded nationally)*
- *Founded UWB ASME Student Chapter in 2015-2016 and re-elected for 2016 - 2017 term*
- Helped to found the SME Student Chapter in Spring 2016
- Serves on the *UW Bothell Mechanical Engineering Advisory Board, 2015 - Present*
- *Founded the UWB Hackathon Series, focused on community informed innovation, and managed a \$20,000 grant to facilitate its growth*
- *Founded and served as ASME representative to the UW Bothell STEM Student Council*