COLIN WILSON

(425) 502-5582

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not sure about this section

SUMMARY OF QUALIFICATIONS

- ~~Fourteen years of~~ mechanical and structural design experience, working with SolidWorks and CATIA.
- Knowledgeable in static, dynamic, and thermal FEA.
- Strong interest in renewable energy, composite design and analysis, ~~and biocomposites~~.

Discuss research, MSME

EDUCATION

UNIVERSITY OF WASHINGTON, Seattle, WA

Master of Science in Mechanical Engineering, March 2023

- Courses: Renewable Energy (Wind, Waves, and Tides), Advanced Manufacturing and Energy Technologies, Composite Design and Analysis, Elasticity, Nanocomposites and Biocomposites, FEA, Mechanical Engineering Analysis.
- Thesis: Large Strain Finite Element Analysis of Spinodal Shell Structures → summarize

name

Bachelor of Science in Mechanical Engineering, Cum Laude, June 2006

- Courses: Materials and Structures, CAD, FEA, Renewable Energy, Design for Environment.
- Projects: Formula SAE drivetrain design, Fuel Cell capstone project.

RELEVANT EXPERIENCE

UNIVERSITY OF WASHINGTON, Seattle, WA *2020 - 2023*

Graduate Student Researcher in the Meza Research Group

discuss thesis

- ~~Investigating nano-scale 3D printed structures, designed for high toughness and energy absorption.~~
- Performing structural and thermal FEA analysis in Abaqus, automated with Python scripting.
- Developing automated nanostructure mesh generation using MATLAB and Python.

← discuss or dor thesis

Student Research Projects

combine

- Researched the material properties, manufacturing, and applications for fungus-based biocomposites.
- Studied the manufacture of cellulose fibers out of bacterial cellulose nanofibers.
- Studied ~~the potential for the use of nanoporous materials in~~ lithium-ion battery electrodes.

self-assembly and 3D printing of

DISCRETE LATTICE INDUSTRIES, Seattle, WA *2021*

Mechanical Engineer

- Produced trade studies regarding the use of lattice structure in a wind turbine blade.
- Conducted FEA analysis in Ansys to determine impact of different lattice parameters.
- Developed Python and MATLAB scripts for structural calculations and to interface with Ansys.

SAFRAN AEROSYSTEMS, Everett, WA *2015 - 2019*

Design and Integration Engineer

- Conducted root cause analysis of failed valves, disassembling failed specimens and testing to confirm the cause of failure.
- Developed a new 737 ~~airstair~~ with extra safety features and increased height.
- Designed an aircraft galley waste disposal system, producing designs for structural support of valves, a tank, sensors, and electrical components.
- Coordinated with customers and suppliers.

passenger boarding stair for the

BOEING COMMERCIAL AIRPLANES, Everett, WA *2006 – 2012, 2014*

Structural Design Engineer

- Designed aluminum and composite structural parts and assemblies on 747-8 and 767.
- Coordinated with production facilities from concept to production, to ensure ease of manufacture.
- Worked across groups and disciplines to manage design completion and define interfaces.
- Redesigned critical structural members to reduce weight and complexity.
- Implemented solutions to factory production problems by inspecting completed and installed parts.

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ADDITIONAL EXPERIENCE

KATERRA, Seattle, WA *2019 - 2020*

Manufactured Assemblies Design Engineer

- Designed building components for off-site fabrication, integrating structural, electrical, and plumbing components.
- Developed a bathroom kit in SolidWorks, providing detailed BOMs and drawings for assembly and installation.
- Created automated model, drawing, and CNC templates for steel wall panels using Catia 3DExperience.
- Built prototypes of manufactured building components to test part and assembly sizing, and to confirm tolerances.

KVICHAK MARINE INDUSTRIES, Seattle, WA *2012 – 2014*

Project Engineer

- Developed structure and mechanical system designs for aluminum hulled boats.
- Worked from concept to production providing designs and drawings in Solidworks.