Zekun Wu

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EDUCATION

Purdue University, West Lafayette, IN
Bachelor of Science in Mechanical Engineering   May 2022
GPA: 3.8 / 4.0

RELATED EXPERIENCE

Coil-Spring Suspension Design and Optimization, Purdue University   Fall 2018
- Developed a coil spring – struts-based suspension mechanism for a farm vehicle
- Completed its structural design using CATIA and optimized its material usages and manufacturability to reduce cost and production lead time
- The design concept is justified based on both FEA based strength analysis and manufacturing cost estimation
- Built and tested a 3D-printed functional prototype that fulfilled given constraints which limited budgets and materials

FOS Thermocouple Analysis Project, Purdue University   Spring 2019
- Developed an algorithm to conduct parameter analysis for thermocouples to optimize measurement accuracy and sensitivity
- Preformed statistical analysis on experiment data and design of experiments, used MATLAB plots to visualize the results for technical presentation (DOE)
- Met with leading industry standards of temperature measurement

Space Reducing Door Mechanism Design, Enigma Engineering, Purdue University   Spring 2020
- Developed a door mechanism that minimize operating area for users in limited space and/or mobility
- Created hand-drawn preliminary design sketches and finalized detail design in CATIA
- Evaluated and benchmarked multiple design concepts using kinetic analysis, market researches and financial analyses

RESEARCH PROJECT

Multiphysics Analysis of Laser-Based Nanoscale 3D Printing, Purdue University   Summer 2020
- Generated coupled, Multiphysics MATLAB code simulating chemical reactions, diffusion, and electromagnetic waves using finite difference method
- Compare results to simulation created with COMSOL Multiphysics
- Process optimization through machine learning integration

RELATED COURSEWORK

Linear Algebra & Differential Equations, Thermodynamics I, Statics, Dynamics, CATIA and GD&T, Fluid Mechanics, Mechanics of Materials, Measurement and Control Systems

SKILLS

Language Competency:
Chinese (Native)   English (Fluent)   German (Basic Knowledge, learning)
Design & Programing:
CATIA   Solidworks   MATLAB   C-Programming Language   Java
Microsoft Office (Word, PowerPoint and Excel)
Workshop Practices:
Basic Lathing   Basic Milling   3D Printing   Form Board Prototyping