

Chih-Yi (Jane) Chen

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SUMMARY: Purdue mechanical engineering student who takes on new challenges and explores innovations within the fields of control systems, design validation, and project management, and is seeking an internship for Summer 2022.

EDUCATION

Purdue University | West Lafayette, IN, USA
Bachelor of Science in Mechanical Engineering
Involvement: Society of Women Engineers Grand Prix

Expected Graduation: Dec 2022
GPA: 3.92/4.0

PROJECTS

Engineering Projects in Community Service: Children's Educational Demonstrations Aug 2019 – Present

Energy Team Design Lead (Fall 2021)

- Led team of four through specification development and prototyping of an interactive game on alternative energy sources
- Used SolidWorks FEA to simulate and predict part failure and longevity, and optimize part strength for use by children

Reflex Team Design Lead (Spring 2020)

- Led team of three through product design process to finalize prototype and manufacture models of the knee-jerk reflex
- Performed FMEA risk analysis of final product to ensure and maximize safety for use by children
- Mediated conflicts between teammates through active listening and maintaining open communication

Undergraduate Research Fellowship: High Temperature Characterization of Metal Hydrides Jun 2021 – Aug 2021

- Independently programmed GUI-based data analysis application in LabVIEW for thermal conductivity determination
- Adapted current transient hot-wire techniques for compatibility with electrically conducting samples at up to 1000 °C
- Designed experimental apparatus with special attention to geometric dimensioning and tolerancing (GD&T) concepts

ME 263: Developing an Affordable Wheelchair Suspension System Aug 2020 – Dec 2020

- Collaborated with teammates across four countries to develop a novel cost-effective in-wheel suspension system
- Leveraged graphic design background to create effective presentations, including final design renders and animations
- Generated shear failure analysis reports to demonstrate that the design meets industry safety standards
- Conducted engineering modeling of vibration structures to determine best spring damping values for prototype

WORK EXPERIENCE

Purdue ME 365: Control Systems & Measurements I | West Lafayette, IN, USA Aug 2021 – Present

Undergraduate Teaching Assistant

- Co-lead two laboratory sections and grade assignments on a weekly basis for introductory course in control systems
- Communicate and clarify system engineering concepts for students, and assist with debugging of LabVIEW programs

Purdue Davidson School of Chemical Engineering | West Lafayette, IN, USA Oct 2019 – Dec 2020

Digital Communications Assistant

- Worked in a fast-paced environment to design molecular animations and assets for official print and web publications
- Maintained website database to ensure display of up-to-date information on 30+ faculty pages
- Assisted faculty with video production needs during COVID-19 to smoothly transition into remote learning

DuPont | Hsinchu, Taiwan Jul 2020 – Aug 2020

Manufacturing Technology Intern

- Modeled CAD assemblies of up to 500 parts for use in finite element analyses and process visualizations
- Reconstructed and cleaned up engineering drawings as part of a company-wide initiative for documentation clarity
- Tracked and analyzed manufacturing defect rates in Minitab and Microsoft Excel to aid quality assurance efforts

SKILLS

Software: SolidWorks, CATIA, Creo Parametric, LabVIEW, MATLAB, Simulink, Java, Python, SPICE, Microsoft Office, Adobe Creative Suite (Photoshop, Premiere, After Effects)

Languages: Bilingual proficiency in English and Mandarin Chinese