ANDI ZHOU

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An aspiring 3rd year aerospace engineering student with extensive interests in structural design and analysis and is skilled in a variety of design and simulation softwares including Pointwise, Solidworks, CATIA, ANSYS, MSC NASTRAN and MATLAB

EDUCATION

UNIVERSITY OF MICHIGAN — Ann Arbor, MI
Undergraduate Aerospace Engineering / 3rd Year – Sept 2018 to present

- Overall GPA: **3.643**, Major GPA: **3.733**
- Dean's honor list

SKILLS

- Static and transient structural simulation using **ANSYS Structural**
- Two-way fluid-structure coupled simulation using **ANSYS System Coupling**
- Sub/Super/Hypersonic CFD using **ANSYS Fluent**
- Static/Dynamic structural and aeroelastic simulation using **MSC NASTRAN**
- Component design using **Solidworks** and **CATIA**
- Team **leadership** and **communication**

EXPERIENCE

MICHIGAN AERONAUTICAL SCIENCE ASSOCIATION — Ann Arbor, MI
Coordinating the design, simulation, manufacturing, and integration of the fin aerostructure on the Tangerine Space Machine, an amateur rocket that aims to be the first student-build liquid engine vehicle to reach space

Lead Aerodynamic Engineer, 2018 – present

- Communicating with the chief engineer/production manager to address any potential system problem, such as decreasing the fin surface area in order to readjust component weight and vehicle stability parameter
- Oversaw simulation, structure integration and manufacturing plan fabrication for the fin; ensuring project deadlines were promptly met
- Analyzed fins' structural characteristics by conducting static and transient FEA analysis using ANSYS simulation package, reducing structural stress and deformation to safety factor of 2 at Max-Q
- Performed CFD-Structure Two-Way Coupling simulations using ANSYS in order to investigate the dynamic aeroelastic behavior of the fin under different flight regimes, ensuring flutter does not occur during flight

ACTIVE AEROELASTICITY AND STRUCTURE RESEARCH LABORATORY — Ann Arbor, MI
Conducting comparison studies on the results between in-house aeroelasticity simulation software UM/NAST with commercially published simulation software MSC NASTRAN

Research Assistant, 2020 – present

- Evaluated BWB type aircraft with SOL 101, 103, 144, 145 and 400 in NASTRAN to study its structural, modal and aeroelastic behaviors under subsonic speed with varying angle of attack and compressibility factor
- Wrote finite element codes with MATLAB that allows NASTRAN to iteratively solve for varying loading conditions and organize the outputs into plots or tables
- Composed weekly formal reports and the final "end of the semester" report to the professor in LaTex regarding research progress and results

CERTIFICATE

PRIVATE PILOT LICENSE (PPL)