ANDI ZHOU

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An aspiring 3rd year aerospace engineering student with extensive interests in fluid flows, thermodynamics and structures and is skilled in a variety of design and simulation softwares including Solidworks, CATIA, ANSYS, and MSC NASTRAN

EDUCATION

UNIVERSITY OF MICHIGAN — Ann Arbor, MI

Undergraduate Aerospace Engineering / 3rd Year – Sept 2018 to present

- Overall GPA: 3.65, Major GPA: 3.86
- Dean's honor list

SKILLS

- Component design involving Solidworks and CATIA
- FEA utilizing ANSYS and MSC NASTRAN
- CFD analysis using ANSYS Fluent
- Data analysis leveraging MATLAB and C++
- Formal technical reports and presentations using MS PowerPoint and Overleaf LaTeX
- Team leadership

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

Fin Aerostructure Lead, 2018 – present

- Oversaw structural integration and manufacturing plan fabrication for the fin; ensuring manufacturing deadlines were promptly met
- Coordinated in team technical meetings issues regarding overall system engineering and design, such as reducing fin surface area to readjust component mass and rocket stability parameter
- Evaluated fin aerodynamic and thermodynamic behaviors by conducting supersonic CFD simulations
- Analyzed fins' structural characteristics by conducting static and transient FEA using ANSYS simulation package, reducing structural stress and deformation to safety factor of 2 at Max-Q
- Performed CFD – Structure coupling simulations using ANSYS in order to investigate thermal behaviors during flight, ensuring the structure does not fail under combined thermal and aerodynamic stress

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)
RESTRICTED RADIO OPERATOR CERTIFICATE – AERONAUTICAL (ROC-A)