Sean Wu

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Aerospace Engineering Master's Candidate (Dec. 2017) with emphasis in computational and experimental aerodynamics, conceptual aircraft design, and optimization.

- Wind Tunnel Testing
- LabVIEW
- MATLAB/ Simulink
- Chimera Grid Tools
- OVERFLOW
- Linux Command Line
- XFOIL, VLM Codes
- OpenVSP
- MS Office Suite, LaTeX
- Aircraft Homebuilding (RV-12)
- Aircraft Preliminary Design
- 14 CFR Parts 23, 25, 91, 107
- Private Pilot: Glider, Single-Engine Airplane
- Remote Pilot: sUAS

EDUCATION

M.S. in Mechanical and Aerospace Engineering - University of California, Davis, Dec 2017
Topic: Uncertainty in Experimental Wake-Based Drag Measurements
B.S. in Aerospace Engineering - University of Miami, FL, May 2014
Capstone Project: Advanced-Electric Light Sport Airplane

RELEVANT PROJECTS

- Micro-Jets for High Lift Flow and Load Control: Definition of the Wind Tunnel Test, *Boeing*, Nov 2017
- Improving Short-Term Wind Power Forecasting in the Tehachapi Wind Resource Area, Sept 2016
- Airfoil Shape Optimization Using a Gradient-Based Method, Mar 2015

EXPERIENCE

University of California, Davis 10/2014-present
Graduate Student Researcher
- Manage and maintain aeronautical wind tunnel facility.
  - Developed an improved pitot traverse control system.
  - Constructed a lab safety training syllabus and equipment safe operating procedures.
- Advised 6 undergraduate researchers on wind tunnel and CFD projects.
- Led a weather balloon field research team overseeing: logistics, training, and data collection.
- Developing a wind tunnel test proposal for a multi-element airfoil with trailing edge micro-jets.

University of California, Davis 09/2015-06/2016
Teaching Assistant: Aircraft Performance and Design
- Advised 11 student design teams participating in NASA and AIAA airplane design competitions.
- Furthered competence in airplane design researching and conveying methods for distributed electric propulsion and analysis.
- Ensured student design compliance with relevant 14 CFR Part 23, 25 regulations and ASTM (LSA) standards.

NASA Glenn Research Center 06/2015-08/2015
Intern
- Developed a helicopter performance prediction model for use in flight trajectory optimization.
- Contributed to the development of the open-source multidisciplinary design analysis and optimization framework, OpenMDAO.
- Strengthened coding abilities developing software in Python.