

Sean Wu

Master's in Aerospace Engineering with experience in Aerodynamics,
Aircraft Configuration Design, and Optimization

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Aerodynamics
Wind Tunnel Testing
Team Leadership

Aircraft Performance and Design
Computational Fluid Dynamics (CFD)
Technical Documentation and Presentation

MS, Mechanical and Aerospace Engineering, University of California, Davis (Dec 2017)

BS, Aerospace Engineering, University of Miami, FL (May 2014)

Computational
Programming
Productivity

OVERFLOW/ Chimera Grid Tools (2D/ steady), XFOIL, OpenVSP
LabVIEW, MATLAB/ Simulink, Linux (Bash), Git
MS Office (Excel, Word, PowerPoint), LaTeX

WORK HISTORY

Graduate Student Researcher, University of California, Davis

10/2014-12/2017

- Lab manager for the aeronautical wind tunnel
- Developed an experimental test proposal for an airfoil with active flow control under contract for Boeing
- Engineered an improved pitot-traverse system using LabVIEW
- Reduced uncertainty in the UCD wind tunnel wake-measured drag by one order of magnitude
- Created wind tunnel safety and training protocols in collaboration with 2 university safety officers
- Mentored 6 undergraduates in experimental testing and computational fluid dynamics analysis of airfoils
- Led a 7-person weather balloon research team in the Mojave Desert

Grader, University of California, Davis

06/2017-08/2017

From the Wright Brothers to Drones and Quadcopters

Teaching Assistant, University of California, Davis

09/2015-06/2016

Aircraft Performance and Design; Fluid Dynamics

- Advised 66 students divided into 11 teams in the preliminary design of aerobatic and distributed-electric aircraft for AIAA and NASA competitions
- Researched advanced engineering solutions such as boundary-layer ingestion and blown-flaps
- Demonstrated use of aerodynamic design tools for aircraft performance analysis

Intern, NASA Glenn Research Center, Cleveland, OH

06/2015-08/2015

- Contributed to the development of a flight trajectory optimization code in OpenMDAO
- Gained experience with professional software engineering practices

ADDITIONAL EXPERIENCE

Guest Lecturer, University of California, Davis

02/2017 and 02/2018

- Took students through the conceptual design of a sample aircraft in one interactive class period
- Drafted a 3D aircraft model in real time using OpenVSP
- Demonstrated preliminary aircraft aerodynamic analysis

RELEVANT PROJECTS

- Application of a Linear Magnetic Encoder for the Positioning of a Wind Tunnel Pitot-Static Traverse (2017)
- Microjets for High Lift Flow and Control: Definition of the Wind Tunnel Test (2017)
- Improving Short-Term Wind Power Forecasting through Measurements and Modeling of the Tehachapi Wind Resource Area (2016)
- Airfoil Optimization using an XFOIL-MATLAB Interface and PARSEC Shape Parameterization (2015)
- Design and Optimization of a Wind Energy Plant (2014)
- Electric Light Sport Aircraft- Senior Design Project (2014)
- Development of a 6-DOF Flight Simulator using MATLAB/ Simulink and FlightGear (2013)

HONORS AND AWARDS

- Dean's Graduate Support Fellowship, UC Davis College of Engineering (2014)
- Certificate in Scholarly Teaching Strategies, UC Davis Center for Educational Effectiveness (2017)

RELEVANT COURSES

- Advanced Aerodynamic Design and Optimization
- Aeroacoustics
- Intro. to Scientific Computing in Solid and Fluid Mechanics
- Composite Materials
- Manufacturing Technology and Machine Tools
- Wind Power Engineering

Equipment Manager, UC Davis Sailing Team

05/2016-09/2017

- Managed fleet of 9 collegiate racing sailboats
- Acquired 4 additional sailboats through donations and purchases
- Performed and taught composite laminate repairs
- Organized team regatta to Washington State with 17 participating teammates and over \$1600 in expenditures

FAA Private Pilot: Airplane Single-Engine Land; Glider
Airmen Medical Certificate- Class 3, exp. 02/2020

FAA Remote Pilot: Small Unmanned Aircraft Systems (sUAS)

Experimental Aircraft Homebuilding, Van's RV-12
Light Sport Aircraft Repairman-Inspection course completed