Logan Halstrom

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EDUCATION

University of California, Davis

- Ph.D. Candidate in Mechanical and Aerospace Engineering (GPA: ?.??) Sep 2013 – Jun 2019
  Thesis: Computational Fluid Dynamics Simulation and Validation of Parachute Pendulum Motion
  - CFD simulation of unsteady aerodynamics due pendulum motion of rigid parachute geometry
  - Validation and calibration by comparison to large-scale wind tunnel test
  - Insight into root cause of dynamic instability of fully-deployed parachutes

  Advisor: Dr. Stephen Robinson
- Aerospace Engineering, B.S. and Mechanical Engineering, B.S. (GPA: ?.??) Jun 2013
  - Graduated with College Honors

EXPERIENCE

Johnson Space Center, National Aeronautics and Space Administration

- Pathways Intern, Applied Aeroscience and CFD Branch (EG3) Jun 2014 – Present
  Projects:
  - Moving geometry CFD simulations of Orion parachute oscillations
  - CFD loads analysis of damage to wind tunnel by parachute test
  - Development of genetic algorithm and optimization of Orion Flush Air Data System (FADS) sensor array
  - Development of general-use FADS trajectory reconstruction algorithm
  - Transonic stability CFD analysis of RED-Data2 re-entry heating probe
  - Unsteady, moving geometry CFD simulation of proximity aerodynamics during capsule abort

  Supervisors: Steve Labbe, Mark Hammerschmidt, and Ben Kirk
- USRA Intern, Aircraft Operations Division (CC3) Jul 2013 – Sep 2013
  Projects:
  - Designed and conducted pitot-static calibration for WB-57 aircraft
  - Assisted in Reduced Gravity Operations safety inspections

  Supervisors: Gregory Johnson and Jack Woods

University of California, Davis

- Teaching Assistant, Department of Mechanical and Aerospace Engineering Sep 2013 – Present
  Courses:
  - *Applied Aerodynamics*: Compressible/transonic, viscous flow, finite wings, aircraft equilibrium, panel methods
  - *Computational Aerodynamics*: 2D finite difference Euler methods, transonic small-disturbance theory
  - *Stability and Control of Aerospace Vehicles*: State-space representation, longitudinal and lateral stability
  - *Rocket Propulsion*: Fluid and thermodynamics of liquid and solid rocket engines

  Supervisors: Dr. Stephen Robinson, Dr. Jean-Pierre Delplanque, Dr. Ron Hess, and Dr. Mohamed Hafez

CAMPUS ACTIVITIES

Advanced Modeling Aeronautics Team, UC Davis

- Captain Sep 2011 – Jun 2013
  - Competed in the Society of Automotive Engineers (SAE) 2013 Aero Design West Competition
  - Placed 2nd internationally in overall competition
  - Designed and manufactured a model aircraft optimized for specific mission requirements
  - Managed team members throughout all stages of the design process

PROFESSIONAL AFFILIATIONS & ACTIVITIES

American Institute of Aeronautics and Astronautics, UC Davis Chapter, Davis, California

- Member 2011 – Present

SKILLS

Documentation/Presentation

- LaTeX, Beamer, Microsoft Word, Power Point

Computing

- Linux, Python, MATLAB, FORTRAN, C++, High Performance Computing, MPI/OpenMP

Computational Fluid Dynamics

- OVERFLOW, OpenFOAM, Chimera Grid Tools, Pointwise, Tecplot 360, ParaView

AWARDS & SCHOLARSHIPS

- Group Achievement Award, National Aeronautics and Space Administration 2017
  For development of an advanced heatshield flight experiment as part of the Xby2016 effort, helping extend the knowledge of aerothermal and TPS modeling through flight
- Joseph L. Steger Fellowship, Joseph L. Steger Foundation 2016 – 2018
  Fellowship awarded in recognition of outstanding academic record and excellent work in the area of Computational Fluid Dynamics
- Outstanding Achievement, NASA Johnson Space Center Office of Education 2015
  For outstanding contributions as an intern for the Johnson Space Center
- Service Award, UC Davis Department of Mechanical Engineering 2013
  For service as the captain of the Advanced Modeling Aeronautics Team
- Regents' Scholar, University of California 2011 – 2013
  The most prestigious award on the UC Davis campus given to students entering with a GPA higher than 3.80
- Forrest Mitchell Award, Northern California Scholarship Federation 2012
  For maintaining the highest GPA of any Junior scholarship recipient
- Engineering Dean's List, University of California, Davis 2011
  For achieving a GPA in the top 16 percent of the College of Engineering
- Outstanding Achievement in Physics, Butte Community College 2011
  For exceptional performance in the field of physics

LANGUAGES

- English: Native language
- Spanish: Basic (speaking, reading, writing)
- Russian: Basic (speaking, reading, writing)

INTERESTS

Backpacking, running, digital photography, cooking

[*CV created on 06-10-2019*]