Jeffrey Chin

Education

Purdue University (Ongoing, part-time)
Coursework: Scientific Computing, Systems Engineering West Lafayette, Indiana
GPA 4.0

Case Western Reserve University Bachelor of Science, May 2012
Double Major: Aerospace and Mechanical Engineering, Cleveland, Ohio
Mechanical GPA: 3.5, Aerospace GPA: 3.5, Cumulative GPA: 3.4, Dean's Honor List

Publications

- *"Implementation of Enhanced Propulsion Control Modes for Emergency Flight Operation"*, Second Author AIAA 2011-1590, AIAA Infotech@Aerospace Conference, St. Louis MO, March 29-31, 2011.
- *"Simulating the Use of Alternative Fuels in a Turbofan Engine"*, Second Author NASA/TM—2013-216547, Sept 2012
- *"Open-Source Conceptual Sizing Models for the Hyperloop Passenger Pod"*, First Author, AIAA SciTech 2015, NASA/TM (under review)

Work Experience

NASA Glenn Research Center (RTM: Optimization Branch) Cleveland, OH
Civil Servant *Systems Analysis Team* May 2011– Present

- Modeled volume dynamics and transient performance of a commercial supersonic engine concept.
- Modeled and analyzed performance, noise and emissions of a commercial water injection system.
- Developed optimization models for Elon Musk's Hyperloop transportation concept and a next generation (n+1) ultra-high bypass aircraft within the OpenMDAO framework.

NASA Glenn Research Center (RHC: Controls and Dynamics Branch
Co-op *Integrated Vehicle Health Management Team* May 2010–August 2010

- Created, developed and validated a program that generates user defined steady state operating points, corresponding state space matrices and piecewise linear models for a turbofan engine.

USRP Intern *Integrated Resilient Aircraft Control Team* January 2010–April 2010

- Modified a non-linear jet engine simulation to model and investigate the transient and steady state effects of operating an unmodified turbofan engine using biofuels.
- Implemented a Risk Management Architecture for enhanced engine control.

Department of Mechanical Engineering, Northeastern University Boston, MA
Intern June 2009-August 2009

- Independently researched reluctance coil launchers and built a working prototype
- Generated various electromagnetic models and calculated magnetomotive forces in ANSYS

Awards & Honors

Civic Engagement Scholar, Case Alumni Association Scholarship, John and Abigail Adams Scholarship, Pearl Wilmarth Beals Memorial Scholarship, Cambridge Savings Bank Scholarship

Leadership

Project lead of an 11 person team for a high altitude balloon avionics payload
Center director of the NASA Glenn Co-op Agency Connection
President of the Case Cycling Club
Project lead of a 12 person team for a semester long aerospace design capstone