MILES CHAN

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EDUCATION

12/24 PhD Aerospace Engineering, California Institute of Technology *3.6/4.0*
6/20 MS Aeronautics, California Institute of Technology *3.6/4.0*
5/19 BS Mechanical Engineering, Georgia Institute of Technology *3.89/4.00*

WORK EXPERIENCE

6/20 – Graduate Research Assistant, Advisor: Dr. Beverley McKeon, California Institute of Technology
Reduced order modeling of turbulent flow over smooth and rough surfaces

5/17 – 5/19 Researcher, Hu Biolocomotion Lab, Georgia Institute of Technology
Characterized and explored the root cause of the cubic shape of wombat feces

1/15 – 12/15 Researcher, INTACT Lab, Georgia Institute of Technology
Generated representations of soft tissue and metal matrix nanocomposites with varying process parameters

8/17 – 12/17 Stress Analyst Co-Op, Honda Aircraft Company
Automated methods for calculating plastic bending, buckling, and crippling allowables using Python. Created point loads validation tool which computes shear-moment distributions in aircraft structure. Conducted design study for efficient I-beam section design under bending load. Analyzed theoretical and NASTRAN finite element panel buckling results.

1/17 – 5/17 Flight Sciences Analyst Co-Op, Honda Aircraft Company
Calculated angle of attack limits for takeoff flight tests by forming analytical ground effect model in aircraft aerodynamic coefficients. Created an analytical model for landing gear effect on aircraft lift, pitching moment, and drag. Extracted wind tunnel and flight test data to validate analytical models.

5/16 – 8/16 Design Engineer Co-Op, Honda Aircraft Company
Improved fault isolation methods by creating decision trees, written procedures, and dedicated Garmin avionics page for flap actuation diagnostics. Investigated and categorized production defects for root cause analysis and redesign.

5/15 – 8/15 Robotics Alliance Project Intern, NASA Ames Research Center
Evaluated methods for detecting high speed multi-rotors using Arduinos and sensors. Implemented hardware for sensor mounting and arena element parts using 3D printing and CAD.

SKILLS

Fluid Dynamics: CFD (LES), Reduced Order Modeling
Programming: MATLAB, Python, Mathematica
Linux: Shell scripting, SLURM
Mechanical Design: SolidWorks, Autodesk Inventor, Fusion 360
Aerospace Analysis: XFOIL, AVL, FEMAP, NASTRAN
Fabrication: waterjet, laser cutter, mill, lathe, 3D printing, CNC router, soldering, hand tools
Mechatronics: Arduino

AWARDS AND HONORS

9/19 Ig Nobel Physics Prize
4/19 National Science Foundation Graduate Research Fellowship Honorable Mention

OTHER

Hobbies: violin, running, cycling