

**Andrew Carpenter**  
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**OBJECTIVE** Obtain a full-time position in the military or civilian flight testing field.

**EDUCATION** Doctor of Philosophy in Aerospace Engineering, Texas A&M University, College Station, TX. Anticipated graduation date: August 2008, Advisor: Dr. William Saric, GPR 3.18. Dissertation: "In-Flight Receptivity Experiments on a 30-Degree Swept-Wing using Micron-Sized Distributed Roughness Elements".

Bachelor of Science in Aerospace Engineering, Arizona State University, Tempe, AZ, GPA 3.78, Magna Cum Laude.

**EXPERIENCE** **Texas A&M University, College Station, TX**  
**Graduate Research Assistant** for the Flight Research Laboratory (Jan. 2005 – present)

- Designed instrumentation and served as Flight Test Engineer for laminar flow control experiments on a Cessna O-2A aircraft under the SWIFT program
  - Built a real-time angle of attack, angle of sideslip, and Reynold's Number display for O-2A aircraft
  - Created data acquisition programs in Labview for in-flight experiments
  - Built a computer controlled pressure and vacuum system for variable height Distributed Roughness Elements
- Measured upper wing surface roughness on Global Hawk aircraft
- Served as Flight Test Engineer and setup experiments for in-flight measurements of NO<sub>x</sub>, O<sub>3</sub>, and SO<sub>2</sub> gas concentrations

**Arizona State University, Tempe, AZ**  
**Undergraduate Laboratory Assistant** at the ASU Unsteady Wind Tunnel (Sept. 2001- Dec. 2004)

- Designed experiments using Infrared Thermography and Constant Temperature Anemometry for both subsonic and supersonic wind tunnel experiments at ASU
- Participated in flight test experiments on a NASA Dryden F-15B aircraft and wind tunnel experiments in the NASA Langley Unitary Plan supersonic wind tunnel under the Quiet Supersonic Platform program
- Designed a return duct and sized a new fan motor for a low-speed flow visualization wind tunnel
- Performed boundary layer stability experiments on a swept-wing in the Northrop Grumman 7' x 10' low turbulence wind tunnel
- Performed boundary layer stability experiments on a swept-wing in the IIT National Diagnostics Facility
- Measured freestream turbulence levels at NASA Ames 11-foot transonic wind tunnel

**Arizona State University, Tempe, AZ**  
**Structures Leader** for the High-Speed Autonomous Rotorcraft Vehicle project (Sept. 2000 – Dec. 2002)

- Designed and constructed composite wings, fuselages, and wing molds for a small autonomous tilt-wing aircraft

**Program Manager** for the High-Speed Autonomous Rotorcraft Vehicle project (Dec. 2001- Dec. 2002)

- Flight tested the HARVee tilt-wing vehicle in autonomous hover mode

**Honeywell, Engines Systems & Accessories, Tempe, AZ**  
**ASU Undergraduate Intern** (Jan. 2001 – Sept. 2001)

- Designed and wrote lab instructions for the space systems clean room
- Performed stress analysis on fuel pumps, valves, and actuators for rocket motors

**PUBLICATIONS** Saric WS, Carpenter AL, Hunt LE, Kluzek CD 2006. "SWIFT Flight Test Plan for Swept-Wing Experiments." *TAMUS-AE-TR-06-001*, Technical Report, January 2006

Saric WS, Carpenter AL, Hunt LE, McKnight CW, Schouten SM 2006. "SWIFT – Safety Analysis for Swept-Wing Experiments." *TAMUS-AE-TR-06-002*, Technical Report, January 2006

Saric WS, Carpenter AL, Hunt LE, Kluzek CD 2006. "Cessna O-2 General Flight Test Procedures: Operations for the Flight Research Laboratory." *TAMUS-AE-TR-06-003*, Technical Report, January 2006

**COMPUTER SKILLS** Familiar with: ANSYS, C++, Maple, Pro Engineer  
Experienced with: Labview, MATLAB, Microsoft Office, Solidworks, ThermaCam Researcher

**ACTIVITIES**

*Private Pilot* (1999-present)

- 300 hours total time (complex, high performance, tailwheel, glider)

*A&P Mechanic Apprentice* (Oct. 2005 – present)

- Assist with annual inspections and maintenance on Cessna O-2A, Velocity, and Stemme aircraft
- Responsible for Restricted and Experimental airworthiness certificates on O-2A and Velocity aircraft
- Designed and constructed an induction air system for Experimental Velocity aircraft