

Jeremy Sotzen

EDUCATION

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY Bachelor of Science in Aerospace Engineering Honors Program, Concentration in Astronautics	Daytona Beach, FL Magna Cum Laude	(2003-2007) (GPA: 3.7)
HOCHSCHULE BREMEN Study Abroad program in Bremen, Germany	Bremen, Germany	(2005)

EXPERIENCE

BAKER HUGHES – INTEQ Lead MWD Field Engineer	Lafayette, LA	(1/2008 - Present)
<ul style="list-style-type: none">Responsible for leading a team of engineers in the operation of advanced oil drilling equipmentDecode and interpret telemetry data, create well logs for formation evaluation, handle nuclear sourcesMonitor drilling operations in extreme environments and provide customer with real-time solutionsTools: Acoustic seismology, directional telemetry, gamma ray emission, resistivity, neutron porositySelected as the 2008 North American representative for the Baker Hughes Leadership Excellence and Development (LEAD) Program in Dubai, UAE. (An intensive global leadership program designed to accelerate potential candidates to executive positions within the company)		
NASA – FLUIDS SYSTEMS DESIGN BRANCH Design Engineer / Lead Engineer	Kennedy Space Center, FL	(8/2006 – 9/2007)
<ul style="list-style-type: none">Fluid, cryogenic, and hypergolic propellant ground system design for the Ares I Constellation ProgramLead Engineer for the Ares I-X Reaction Control System cryogenic propellant loadingConducted a comprehensive study of AL6XN, a super-austenitic stainless steel, which led to material replacement of all launch pad fluid infrastructure at Kennedy Space Center		
BOEING – INTEGRATED DEFENSE SYSTEMS Test Engineer	Huntsville, AL	(Intern, 5/2006 - 8/2006)
<ul style="list-style-type: none">Ground Based Midcourse Defense Program - Interceptor Missile Integration & Test EngineeringGround control operator conducting integrated simulations of missile launchesConducted hardware integration tests in lab environment; insertion of missile flight hardware into silo		
4FRONTIERS CORPORATION Technical Specialist – Generation II Design		(Contractor, 9/2006 – 8/2008)
<ul style="list-style-type: none">Lead Design Engineer of the spaceport for a human settlement on MarsLed the Martian entry, descent, and landing (EDL) mission architecture		
ZERO GRAVITY CORPORATION Flight Coach	Titusville, FL	(Part time, 8/2006 - Present)
<ul style="list-style-type: none">Assist passengers & conduct experiments and flight operations on zero-gravity parabolic flights		
MCLAREN PERFORMANCE TECHNOLOGIES Design Engineer / Assistant Project Manager	Livonia, MI	(Intern, 1/2003 - 9/2004)
<ul style="list-style-type: none">Research and development, rapid prototyping, and concept engineering of high performance racing enginesDesigned engine components for the 2008 Dodge Viper utilizing CATIA & FLUENTAssistant Project Manager over transmission endurance tests and failure evaluation		

PUBLICATIONS / PRESENTATIONS

- Andreas, D., Bonin G., Sotzen, J., "Martian Entry Descent and Landing," 4Frontiers Corporation, 2006
- Sotzen, J., "Generation II Space Transportation Concept," 4Frontiers Corporation, 2006
- Sotzen, J., "Economic Realities of Commercial Space," 2009
- Showalter, K., Sotzen, J., "Satellite Design and Management," Space Generation Congress 2006, Valencia, Spain
- Sotzen, J., "Martian Entry Descent and Landing," International Space Development Conference 2007

PROJECTS

COMBINED-CYCLE HYPERSONIC PROPULSION (2008-Present)

- Conducting research, designing, and fabricating an air breathing, pre-cooled, liquid rocket engine prototype utilizing CATIA, NASTRAN, FLUENT, and MATLAB.

PAYLOAD RE-ENTRY SYSTEM (2007)

- Designed, built, and tested a re-entry system for the Super-LOKI meteorological sounding rocket
- Embry-Riddle capstone design project; Project Manager

ELECTROHYDRODYNAMIC (EHD) PROPULSION (2006-2007)

- Awarded a grant to conduct research on electric atmospheric propulsion utilizing asymmetrical capacitors
- Awarded 2nd Place in the Embry-Riddle Undergraduate Research Competition

MARS DESERT RESEARCH STATION - UTAH (2005)

- Operational test-bed for future Mars missions in a simulated Martian human habitat
- Conducted research in field exploration strategies, habitat design, tools, and EVA operations

EMBRY-RIDDLE SATELLITE DEVELOPMENT GROUP (2003-2006)

- Founder and General Manager of satellite operations
- Advisor to 3 satellite projects; supervised satellite lab, ground station, and development operations
- Managed the operations of 7 subsystems and over 50 student members

EAGLE-EYE (2003 - 2006)

- Designed, developed, and constructed a LEO, micro-satellite demonstrating the value of Internet Protocol (IP) in space through user controlled remote sensing
- Project Manager and structures Team Leader; designed the satellite bus utilizing CATIA and NASTRAN

STRIKE EAGLE (2004 - 2006)

- Designed, developed, and constructed a LEO, pico-satellite which detected and mapped lightning strikes
- Winner of the 2005 Florida FUNSAT satellite design competition; awarded \$15,000 and a Dnieper launch

SKILLS

Software: Computer Aided Design (CAD): CATIA V5, ProEngineer, SolidWorks
Finite Element Analysis (FEA): NASTRAN
Computational Fluid Dynamics (CFD): FLUENT (ANSYS)
Other: Satellite Tool Kit (STK), MATLAB, C Programming, UNIX, all Microsoft Office programs

Languages: German (Intermediate) Other: Interim Secret Security Clearance
 French (Intermediate) Class-100 & 1000 clean room experience (trained)
 Russian (Beginner) Amateur Radio Operator's License
 Composites & metal fabrication; soldering & circuits

AWARDS / HONORS

- 2008 North American representative for the Baker Hughes Leadership Excellence and Development (LEAD) Program in Dubai, UAE
- Embry-Riddle Aeronautical University Presidential Scholarship (2003-2007)
- Embry-Riddle Aeronautical University Honors Program
- Awarded 'Most Outstanding Honors Program Graduate' of 2007 from Embry-Riddle
- Boeing Academic Scholarship (2004 - 2007)
- Experimental Aircraft Association Scholarship (2003)
- Eagle Scout

PROFESSIONAL MEMBERSHIPS

- American Institute of Aeronautics and Astronautics
- National Space Society
- Sigma Gamma Tau - Aerospace Engineering National Honor Society

INTERESTS / ACTIVITIES

- Building and designing RC aircraft / UAVs (15 years experience, 17 aircraft)
- Golf, racquetball, snowboarding