Michael E Trevino

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Experience

05/2008 – Present   **Engineer, Odyssey Space Research, Houston, TX**

- Orion Fault Management Validation, Technical Co-Lead
    - Support the implementation of an object oriented test system
    - Manage and maintain the database supporting the data driven system
    - Significantly reduces the amount of personnel hours necessary to test common code and increases maintainability
- Orion Cross Element Integration, Lead
    - Reduces risk to hardware by testing products in an integrated software environment before roll out to hardware platforms
    - Interfaces with system experts and test developers to address possible product issues or deficiencies
    - Provides configuration status updates including regression results, issues, and recommendations regarding integrated product configurations
    - Increased efficiency with the capability to semi-autonomously run regression suite
- Developed, integrated, and maintained simulation models.
    - Osiris (Lockheed Martin Crew Exploration Vehicle GNC simulation)
        - Environment and vehicle systems models
    - TS21 (NASA JSC Manned Spaceflight Training Facility)
        - Propulsion system, functional flight software, GPS models
    - Orbital Cygnus (IV&V)
        - GNC models
- Verified and validated simulation models.
    - Osiris unit testing verification and documentation
    - Osiris Pad Abort-1 validation
    - TS21 unit testing verification
    - Orbital Cygnus IV&V
- Perform and present engineering trade studies for system optimization.
    - Altair Lunar Lander BAA
- Research vehicle guidance algorithms.

01/2007 – 05/2008   **Engineer, United Space Alliance, Houston, TX**

- Constructed and Analyzed Space Shuttle and CEV ISS rendezvous trajectories.
- Utilized in house tools to perform statistical analysis of trajectory dispersions.
- Developed engineering case study algorithms, routines, and scripts.
- Generated rendezvous trajectory products and documentation.
- Obtained certification as a rendezvous analyst.
- Served as Principal Functions Manager for Orbit Flight Design division.
- Trained for contingency operations console position – Profile.
- IRAD Earth-Moon minimum energy transfers

Academic Experience	**Teaching Assistant, The University of Texas at Austin**

- Prepared and coordinated undergraduate fluid dynamics laboratory projects/setups.
- Prepared and coordinated undergraduate GPS laboratory projects.
- Supervised introductory MATLAB course activities.
- Graded fluid dynamics, GPS, MATLAB, and engineering materials laboratory reports and assignments.

Education	**Master of Science in Engineering, Aerospace Engineering, December 2006**

The University of Texas at Austin
Overall GPA: 3.30/4.00

Bachelor of Science in Engineering, Aerospace Engineering, December 2004
The University of Texas at Austin
Overall GPA: 3.51/4.00

Related Courses

Space Mission Design, Advanced Space Mission Design, Spacecraft Dynamics, Advanced Spacecraft Dynamics, Applied Orbital Mechanics, Celestial Mechanics, Optimal Spacecraft Trajectories, Statistical Estimation Theory, Synthetic Aperture Radar, Optimal Control Theory, Satellite Control Systems, Satellite Geodesy, Satellite Navigation (GPS), Space Applications,

Determination of Time Systems, Probability, Structural Dynamics, Advanced Structural Dynamics, Engineering Materials, Acoustics, Fourier and Laplace Transforms

Skills	Proficient in MATLAB, Microsoft Office, Open Office, Windows & Linux OS

Experienced in C/C++, SQL, JavaScript, HTML, CSS
Familiar with Razor, ClearCase, Subversion, Git software configuration management tools
Experience with STK, FreeFlyer, Copernicus, NASA JSC TRICK based simulations
Knowledge of AutoCAD & Solid Works
Vocal communication and customer interaction
Spanish (Elementary Proficiency)
Japanese (Starter Memorized Proficiency)

Awards	Rigel Award, Lockheed Martin's Orion Subcontractor of the Year, Team Award, February 2011

Pad Abort-1 Osiris Validation Team Award, August 2009

Employability Status: **US Citizen**
Security Clearances & Investigations: **SSBI**