Astronautical Engineering: Ph.D. Dissertation Topics

2019 Dissertation Titles

- The Space Environment near the Sun and its Effects on Parker Solar Probe Spacecraft and FIELDS Instrumentation, Principal Investigator (P.I): Michael Gruntman, Professor
- Cooperative Localization of a Compact Spacecraft Group using Computer Vision, P.I: Joseph Kunc, Professor
- Spacecraft Trajectory Optimization: Multiple-Impulse to Time-Optimal Finite-Burn Conversion, P.I: Mike Gruntman, Professor
- Particle Simulations of Colloid Thruster Beam, P.I: Joseph Wang, Professor

2018 Dissertation Titles

- Hydrogen Peroxide Vapor for Small Satellite Propulsion, P.I: Paul Ronney, Professor
- Techniques for Analysis and Design of Temporary Capture and Resonant Motion in Astrodynamics, P.I: Daniel Erwin, Professor
- Thermal and deformation analysis of multiphase sulfur concrete extrusion for planetary construction, P.I: Behrokh Khoshnevis, Professor
- COSYSMO 3.0: An Extended, Unified Cost Estimating Model for Systems Engineering, P.I: Barry Boehm, Professor

2017 Dissertation Titles

- Kinetic Studies of Collisionless Mesothermal Plasma Flow Dynamics, P.I: Joseph Wang, Professor
- Extending Systems Architecting for Human Considerations Through Model-Based Systems Engineering, P.I: Azad Madni, Professor
- An Analytical and Experimental Study of Evolving 3D Deformation Fields Using Vision-Based Approaches, P.I: Joseph Kunc, Professor
- Numerical and Experimental Investigations of Dust-Plasma-Asteroid Interactions, P.I: Joseph Wang, Professor
- Experimental Investigation on Dusty Surface Charging in Plasma, P.I: Joseph Wang, Associate Professor