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G06-107 Optimal Finite-Time Feedback Controllers for Nonlinear Systems with Terminal Constraints
G06-018 Energy Suboptimal Collision-Free Path Reconfiguration for Spacecraft Formation Flying
G06-057 Precise Lunar Gravity Assist Transfers to Geostationary Orbits
G06-036 Linear Programming and Language Processing for Human-Unmanned Aerial-Vehicle Team Missions
G06-035 Nonlinear Trajectory Generation for Autonomous Vehicles via Parametrized Maneuver Classes
G06-041 Optimization of a Broad Class of Ephemeris Model Earth-Mars Cyclers
G06-122 Optimization and Implementation of Periodic Cruise for a Hypersonic Vehicle
G06-125 Game Optimal Support Time of a Medium Range Air-to-Air Missile
G06-076 Improved Indirect Method for Air-Vehicle Trajectory Optimization
G06-084 Adaptive Guidance and Control for Autonomous Hypersonic Vehicles

UAVs

G06-076 Improved Indirect Method for Air-Vehicle Trajectory Optimization
G06-036 Linear Programming and Language Processing for Human-Unmanned Aerial-Vehicle Team Missions
G06-092 Modeling, Control, and Flight Testing of a Small-Ducted Fan Aircraft
G06-068 Free-Wing Unmanned Aerial Vehicle as a Microgravity Facility
G06-110 Unmanned Aerial Vehicle Dynamic-Target Pursuit by Using Probabilistic Threat Exposure Map
G06-077 Feasible Flight Paths for Cooperative Generation of a Phantom Radar Track
G06-034 Optimal Path Planning for Unmanned Combat Aerial Vehicles to Defeat Radar Tracking
G06-089 Algorithms for Geolocation of an Ad Hoc Network of Unmanned Systems
G06-153 Affine Parameter-Dependent Preview Control for Rotorcraft Terrain Following Flight
G06-055 Design and Flight Testing of an H00 Controller for a Robotic Helicopter
G06-128 Unmanned Aerial Vehicle Path Following for Target Observation in Wind
G06-124 Fault-Detection Design for Uninhabited Aerial Vehicles

INTERDISCIPLINARY TOPICS

Analytical and Numerical Methods

G06-170 Collision Probability for Larger Bodies Having Nonlinear Relative Motion
G06-161 Solving Linear and Quadratic Quaternion Equations
G06-039 Evolutionary Search for Deep-Space Science Mission Orbits
G06-090 Integral Evaluations Enabling Performance Tradeoffs for Two-Confidence-Region-Based Failure Detection
G06-065 Parking a Spacecraft near an Asteroid Pair
G06-069 Satellite Collision Probability Enhancements
G06-059 Numerical Continuation of Torque--Free Motions of Gyrostats
G06-011 Phase Space Structure Around Oblate Planetary Satellites

Safety

G06-070 Health Monitoring of a Satellite System
G06-075 Fault-Tolerant Structured Adaptive Model Inversion Control
G06-123 International Space Station Leak Localization Using Attitude Response Data

LAUNCH VEHICLE AND MISSILE (LV/M) TECHNOLOGY

Configuration Design

G06-088 Optimal Design of Octo-Strut Vibration Isolation Platform

Trajectories and Tracking Systems

G06-096 In-Plane Payload Capture with an Elastic Tether

PROPULSION

Advanced Space Propulsion

G06-136 Parametric Model and Optimal Control of Solar Sails with Optical Degradation

Electric Propulsion

G06-118 Indirect Optimization of Low-Thrust Capture Trajectories

REAL-TIME SYSTEMS

Systems Engineering

G06-108 Real-Time Dynamic Optimization of Controllable Linear Systems

Unmanned Systems

G06-125 Game Optimal Support Time of a Medium Range Air-to-Air Missile
G06-127 Modeling Air Combat by a Moving Horizon Influence Diagram Game
G06-080 Software-Enabled Receding Horizon Control for Autonomous Unmanned Aerial Vehicle Guidance

SPACE TECHNOLOGY

Aerobraking Flight Mechanics

G06-078 Asymptotic Analysis of Quasi-Equilibrium Glide in Lifting Entry Flight

Global Positioning System

G06-126 Batch Algorithm for Global-Positioning-System Attitude Determination and Integer Ambiguity Resolution

Mission Design and Analysis

G06-011 Phase Space Structure Around Oblate Planetary Satellites
G06-058 Evaluating Accessibility of near-Earth Asteroids Via Earth Gravity Assists
G06-069 Satellite Collision Probability Enhancements
G06-065 Parking a Spacecraft near an Asteroid Pair
G06-066 Proximity Operations of Formation-Flying Spacecraft Using an Eccentricity/Inclination Vector Separation
G06-024 Optimal Missions with Mini-Magnetospheric Plasma Propulsion
G06-014 Formation Design in Eccentric Orbits Using Linearized Equations of Relative Motion
G06-144 Minimagnetospheric Plasma Propulsion for Outer Planet Missions
G06-016 Trajectory Estimation for Satellite Clusters
G06-145 Lambert's Problem for Exponential Sinusoids

Mission Trajectories (Earth and Interplanetary)

G06-144 Minimagnetospheric Plasma Propulsion for Outer Planet Missions
G06-134 Design of Science Orbits About Planetary Satellites: Application to Europa
G06-016 Trajectory Estimation for Satellite Clusters
G06-165 Ant Colony Algorithms for Two Impluse Interplanetary Trajectory Optimization
G06-132 Periodic Orbits with Low-Thrust Propulsion in the Restricted Three-body Problem
G06-154 Indirect Optimization of Spiral Trajectories
G06-142 Orbit Design for Ground Surveillance Using Genetic Algorithms
G06-118 Indirect Optimization of Low-Thrust Capture Trajectories
G06-012 Spacecraft Formation Dynamics and Design
G06-024 Optimal Missions with Mini-Magnetospheric Plasma Propulsion
G06-058 Evaluating Accessibility of near-Earth Asteroids Via Earth Gravity Assists
G06-041 Optimization of a Broad Class of Ephemeris Model Earth-Mars Cyclers
G06-131 Spacecraft Formation Flight About Libration Points Using Impulsive Maneuvering

Space Systems

G06-005 Spacecraft Navigation Using X-Ray Pulsars
G06-170 Collision Probability for Larger Bodies Having Nonlinear Relative Motion

Spacecraft Attitude Determination

G06-161 Solving Linear and Quadratic Quaternion Equations
G06-151 Attitude Determination Using a Single Star Sensor and a Star Density Table
G06-103 Attitude Estimation from Vector Observations Using a Genetic-Algorithm-Embedded Quaternion Particle Filter
G06-126 Batch Algorithm for Global-Positioning-System Attitude Determination and Integer Ambiguity Resolution
G06-006 Fast Star-Pattern Recognition Using Planar Triangles
G06-095 Spin Axis Attitude Determination Accuracy Model in Presence of Biases
G06-026 General Formula for Extracting the Euler Angles

Spacecraft Data Sensing, Processing, and Transmission

G06-070 Health Monitoring of a Satellite System

Spacecraft Power

G06-027 Robust Reorientation and Power Controller Using Flywheels and Control Moment Gyroscopes

Spacecraft Sensor Systems

G06-095 Spin Axis Attitude Determination Accuracy Model in Presence of Biases
G06-006 Fast Star-Pattern Recognition Using Planar Triangles
G06-104 Adaptive Output Feedback Control for Spacecraft Rendezvous and Docking Under Measurement Uncertainty

STRUCTURAL MECHANICS AND MATERIALS

Aeroelasticity and Control

G06-017 Closed-Loop Aeromechanical Stability of Hingeless Rotor Helicopters with Higher Harmonic Control
G06-045 Tensor Product Model-Based Control of Two-Dimensional Aeroelastic System
G06-021 Aeroelastic Response of Flapped-Wing Systems Using Robust Estimation Control Methodology
G06-087 Adaptive Control for a Nonlinear Wing Section with Multiple Flaps
G06-044 Nonlinear Adaptive Control of an Aeroelastic Two-Dimensional Lifting Surface
G06-091 Output Feedback Control of Two-Dimensional Aeroelastic System

Dynamic Model Analysis

G06-043 Nonlinear Aeroelastic System Identification with Application to Experimental Data

Flexible and Active Structures

G06-046 Optimal Control of an Aircraft-Towed Flexible Cable System
G06-028 Energy Rate Feedback for Libration Control of Electrodynamic Tethers
G06-166 Deadbeat Predictive Control on a Space Truss Structure
G06-097 Switching Control for Guaranteeing the Safety of a Tethered Satellite

Structural Dynamics and Characterization

G06-099 Dynamic Testing of an Inflatable, Self-Supporting, Unpressurized Thin-Film Torus
G06-048 System Identification of a Nonlinear Mode for the Shuttle Radar Topography Mission

Structural Modeling

G06-048 System Identification of a Nonlinear Mode for the Shuttle Radar Topography Mission