

Chronological Index

- G07-149 Three-Dimensional Ascent Trajectory Optimization for Stratospheric Airship Platform in the Jet Stream.** Sangjong Lee, *Korea Aerospace Research Institute, ROK*; and Hyochoong Bang, *Korea Advanced Institute of Science and Technology, ROK* (30, 5, p. 1341) Article
Technical Comment by Nathan Slegers, *University of Alabama in Huntsville*; and Ainsmar X. Brown, *National Institute of Aerospace* (32, 5, p. 1692)
Reply by Authors to Slegers and Brown (32, 5, p. 1693)
- G09-001 Quantized Control Allocation of Reaction Control Jets and Aerodynamic Control Surfaces.** David B. Doman, Brian J. Gamble, and Anhtuan D. Ngo, *U.S. Air Force Research Laboratory* (32, 1, p. 13) Article based on AIAA Paper 2007-6778
- G09-002 Nonlinear Adaptive Trajectory Control Applied to an F-16 Model.** L. Sonneveldt, E. R. van Oort, Q. P. Chu, and J. A. Mulder, *Delft University of Technology, The Netherlands* (32, 1, p. 25) Article based on AIAA Paper 2008-6788
- G09-003 Deployment Control of Spinning Space Webs.** Mattias Gärdback and Gunnar Tibert, *Royal Institute of Technology, Sweden* (32, 1, p. 40) Article
- G09-004 Numerical Study of Optimal Trajectories with Singular Arcs for an Ariane 5 Launcher.** Pierre Martinon and Frederic Bonnans, *Institut National de Recherche en Informatique et en Automatique, France*; Julien Laurent-Varin, *Centre National d'Etudes Spatiales, France*; and Emmanuel Trelat, *Universite d'Orleans, France* (32, 1, p. 51) Article
- G09-005 Coordinated Standoff Tracking of Moving Targets: Control Laws and Information Architectures.** Tyler H. Summers and Maruthi R. Akella, *University of Texas at Austin*; and Mark J. Mears, *U.S. Air Force Research Laboratory* (32, 1, p. 56) Article
- G09-006 Fast Particle Filtering for Attitude and Angular-Rate Estimation from Vector Observations.** Avishey Carmi and Yaakov Oshman, *Technion-Israel Institute of Technology, Israel* (32, 1, p. 70) Article based on AIAA Paper 2006-6597
- G09-007 Integrated Higher-Order Sliding Mode Guidance and Autopilot for Dual Control Missiles.** Yuri B. Shtessel, *University of Alabama in Huntsville*; and Christian H. Tournes, *Davidson Technologies, Inc.* (32, 1, p. 79) Article based on AIAA Paper 2006-6784
- G09-008 Shape-Based Approach to Low-Thrust Rendezvous Trajectory Design.** Bradley J. Wall, *Embry-Riddle Aeronautical University*; and Bruce A. Conway, *University of Illinois at Urbana-Champaign* (32, 1, p. 95) Article
- G09-009 Event Triggers in Linear Covariance Analysis with Applications to Orbital Rendezvous.** David K. Geller, M. B. Rose, and David C. Woffinden, *Utah State University* (32, 1, p. 102) Article
- G09-010 Distributed Formation Flight Control Using Constraint Forces.** Yunfei Zou and Prabhakar R. Pagilla, *Oklahoma State University*; and Ryan T. Ratliff, *The Boeing Company* (32, 1, p. 112) Article
- G09-011 Multicriteria Comparison Among Several Mitigation Strategies for Dangerous Near-Earth Objects.** Pau Sanchez, Camilla Colombo, Massimiliano Vasile, and Gianmarco Radice, *University of Glasgow, Great Britain* (32, 1, p. 121) Article
- G09-012 Cycloidal Trajectories in Planetary Moon Systems.** Ryan P. Russell and Nathan J. Strange, *Jet Propulsion Laboratory, California Institute of Technology* (32, 1, p. 143) Article
- G09-013 Flutter-Prediction Tool for Flight-Test-Based Aeroelastic Parameter-Varying Models.** Dario H. Baldelli and Jie Zeng, *ZONA Technology, Inc.*; Rick Lind, *University of Florida*; and Chuck Harris, *U.S. Air Force Flight Test Center* (32, 1, p. 158) Article based on AIAA Paper 2007-6301
- G09-014 Autonomous Inertial Relative Navigation with Sight-Line-Stabilized Sensors for Spacecraft Rendezvous.** Hari B. Hablani, *The Boeing Company* (32, 1, p. 172) Article based on AIAA Paper 2003-5355
- G09-015 Tactical Conflict Alerting Aid for Air Traffic Controllers.** Russell A. Paielli, *NASA Ames Research Center*; Heinz Erzberger, *University of California, Santa Cruz*; Danny Chiu and Karen R. Heere, *University of California, Santa Cruz*; and Karen R. Heere, *University of California, Santa Cruz* (32, 1, p. 184) Article
- G09-016 Correlation of Optical Observations of Objects in Earth Orbit.** Jared M. Maruskin, *San Jose State University*; Daniel J. Scheeres, *University of Colorado*; and Kyle T. Alfriend, *Texas A&M University* (32, 1, p. 194) Article based on AIAA Paper 2007-392
- G09-017 Describing Airspace Complexity: Airspace Response to Disturbances.** Keumjin Lee, Eric Feron, and Amy Pritchett, *Georgia Institute of Technology* (32, 1, p. 210) Article
- G09-018 Control of Science Orbits About Planetary Satellites.** Marci Paskowitz Possner, *GMV Space Systems Inc.*; and Daniel J. Scheeres, *University of Colorado at Boulder* (32, 1, p. 223) Article
- G09-019 Adaptive Particle Filtering for Spacecraft Attitude Estimation from Vector Observations.** Avishey Carmi and Yaakov Oshman, *Technion-Israel Institute of Technology, Israel* (32, 1, p. 232) Article
- G09-020 Spacecraft Momentum Dumping Using Fewer than Three External Control Torques.** Mohammad A. Karami, *Virginia Polytechnic Institute and State University*; and Farokh Sassani, *University of British Columbia, Canada* (32, 1, p. 242) Article
- G09-021 Envelope Protection for Autonomous Unmanned Aerial Vehicles.** Ilkay Yavrucuk, *Middle East Technical University, Turkey*; Suraj Unnikrishnan, *Guided Systems Technologies, Inc.*; and J. V. R. Prasad, *Georgia Institute of Technology* (32, 1, p. 248) Article
- G09-022 Sensor Fusion Applied to Autonomous Aerial Refueling.** Walton R. Williamson, Gregory J. Glenn, Vu T. Dang, and Jason L. Speyer, *SySense, Inc.*; Stephen M. Stecko and John M. Takacs, *The Boeing Company* (32, 1, p. 262) Article
- G09-023 Modal Transformation Method for Deformable Membrane Mirrors.** Richard G. Cobb, Michael J. Shepherd, Anthony N. Palazotto, and William P. Baker, *Air Force Institute of Technology* (32, 1, p. 276) Article
- G09-024 Neighboring Optimum Feedback Control Law for Earth-Orbiting Formation-Flying Spacecraft.** Jean-Francois Hamel and Jean de Lafontaine, *Université de Sherbrooke, Canada* (32, 1, p. 290) Article
- G09-025 Trajectory Shaping of Projectile Through Cross-Entropy-Minimization-Based Search.** Nicolas Léchevin, *Numerica Technologies Inc., Canada*; Franklin Wong and Camille Alain Rabbath, *Defense Research and Development Center - Valcartier, Canada* (32, 1, p. 300) Technical Note
- G09-026 Lateral-Directional Aircraft Dynamics Under Static Moment Nonlinearity.** Tiauw H. Go, *Nanyang Technological University, Singapore* (32, 1, p. 305) Technical Note
- G09-027 Nonlinear Optimal Control Analysis Using State-Dependent Matrix Exponential and Its Integrals.** Chang-Joo Kim, Soo H. Park, Sang K. Sung, and Sung-Nam Jung, *Konkuk University, ROK* (32, 1, p. 309) Technical Note
- G09-028 Rotations as Double Reflections and Geometrical Derivation of Euler-Rodrigues Parameters.** Marco W. Soijer, *Delft University of Technology, Germany* (32, 1, p. 313) Technical Note

- G09-029 Control of Solar Sail Periodic Orbits in the Elliptic Three-Body Problem.** James D. Biggs and Colin R. McInnes, *University of Strathclyde*, Great Britain; and Thomas Waters, *National University of Ireland* (32, 1, p. 318) Technical Note
- G09-030 State-Dependent Riccati-Equation-Based Guidance Law for Impact-Angle-Constrained Trajectories.** Ashwini Ratnoo and Debasish Ghose, *Indian Institute of Science*, India (32, 1, p. 320) Technical Note based on AIAA Paper 2007-6539
- G09-031 Inertial Measurements from Flight Data of a Flapping-Wing Ornithopter.** Jared A. Grauer and James E. Hubbard, *University of Maryland* (32, 1, p. 326) Technical Note based on AIAA Paper 2008-224
- G09-032 Experiments with Small Unmanned Helicopter Nose-Up Landings.** Selcuk Bayraktar, *Baykar Technologies*, Turkey; and Eric Feron, *Georgia Institute of Technology* (32, 1, p. 332) Technical Note
- G09-033 Robust Aeroelastic Control of Lifting Surfaces with Uncertainty via Multi-Objective Synthesis.** Sungsoo Na, In-Joo Jeong, and Gwon-Chan Yoon, *Korea University*, ROK; and Pier Marzocca, *Clarkson University* (32, 1, p. 337) Technical Note
- G09-034 Time-Optimal Low-Thrust Formation Maneuvering Using a Hybrid Linear/Nonlinear Controller.** Balaji Shankar Kumar and Alfred Ng, *Canadian Space Agency*, Canada (32, 1, p. 343) Technical Note
- G09-035 Robust Control Design for Linear Systems Using an Ecological Sign-Stability Approach.** Rama K. Yedavalli, *The Ohio State University* (32, 1, p. 348) Technical Note based on AIAA Paper 2005-6262
- G09-036 Survey of Technology Developments in Flywheel Attitude Control and Energy Storage Systems.** Jerry Fausz and Brian Wilson, *U.S. Air Force Research Laboratory*; Chris Hall, *Virginia Polytechnic Institute and State University*; David Richie and Vaios Lappas, *University of Surrey*, Great Britain (32, 2, p. 354) Article
- G09-037 Use of Pitch and Heave Motion Cues in a Pitch Control Task.** Peter M. Zaal, Daan M. Pool, Jaap de Bruin, M. Mulder, and M. M. van Paassen, *Delft University of Technology*, The Netherlands (32, 2, p. 366) Article based on AIAA Paper 2008-6537
- G09-038 Spin-Yaw Lock-In of a Rotationally Symmetric Missile.** Charles H. Murphy and William H. Mermagen (32, 2, p. 378) Article based on AIAA Paper 2007-6491
- G09-039 Path-Planning with Avoidance Using Nonlinear Branch-and-Bound Optimization.** Alison J. Eele and Arthur Richards, *University of Bristol*, Great Britain (32, 2, p. 384) Article based on AIAA Paper 2007-6793
- G09-040 Vibration Isolation of Precision Payloads: A Six-Axis Electromagnetic Relaxation Isolator.** Bruno de Marneffe, More Avraam, Arnaud Deraemaeker, Mihaita Horodincu, and André Preumont, *Université Libre de Bruxelles*, Belgium (32, 2, p. 395) Article
- G09-041 Nonlinear Robust Adaptive Control of Flexible Air-Breathing Hypersonic Vehicles.** Lisa Fiorentini and Andrea Serrani, *The Ohio State University*; Michael A. Bolender and David B. Doman, *U.S. Air Force Research Laboratories* (32, 2, p. 402) Article
- G09-042 Lorentz-Augmented Jovian Orbit Insertion.** Justin A. Atchison and Mason A. Peck, *Cornell University* (32, 2, p. 418) Article based on AIAA Paper 2006-6596
- G09-043 Circulating Eccentric Orbits Around Planetary Moons.** Ryan P. Russell and Adam T. Brinckerhoff, *Georgia Institute of Technology* (32, 2, p. 424) Article
- G09-044 Designing Trajectories in a Planet-Moon Environment Using the Controlled Keplerian Map.** Piyush Grover and Shane D. Ross, *Virginia Polytechnic Institute and State University* (32, 2, p. 437) Article
- G09-045 Indirect Optimization of Three-Dimensional Finite-Burn-Interplanetary Transfers Including Spiral Dynamics.** Christopher L. Ranieri and Cesar A. Ocampo, *University of Texas at Austin* (32, 2, p. 445) Article
- G09-046 Solar Sail Near-Optimal Circular Transfers with Plane Change.** Giovanni Mengali and Alessandro A. Quarta, *University of Pisa*, Italy (32, 2, p. 456) Article
- G09-047 Gust Energy Extraction for Mini and Micro Uninhabited Aerial Vehicles.** Jack W. Langelaan, *Pennsylvania State University* (32, 2, p. 464) Article based on AIAA Paper 2008-223
- G09-048 Numerical Solution of the Three-Dimensional Orbital Pursuit-Evasion Game.** Bruce A. Conway and Mauro Pontani, *University of Illinois at Urbana-Champaign* (32, 2, p. 474) Article
- G09-049 Sequential Multiresolution Trajectory Optimization Schemes for Problems with Moving Targets.** Sachin Jain and Panagiotis Tsiotras, *Georgia Institute of Technology* (32, 2, p. 488) Article based on AIAA Paper 2008-6980
- G09-050 Bifurcation and Stability Analysis of Aircraft Turning on the Ground.** James Rankin, *University of Bristol*, Great Britain; Etienne Coetzee, *Airbus*, Great Britain; Bernd Krauskopf and Mark Lowenberg, *University of Bristol*, Great Britain (32, 2, p. 500) Article
- G09-051 Application of Synchronization to Formation Flying Spacecraft: Lagrangian Approach.** Soon-Jo Chung, *Iowa State University*; Umair Ahsun and Jean-Jacques E. Slotine, *Massachusetts Institute of Technology* (32, 2, p. 512) Article based on AIAA Paper 2007-6861
- G09-052 Extension of the Cucker-Smale Control Law to Space Flight Formations.** Laura Perea and Pedro Elosegui, *Instituto de Ciencias del Espacio* and *Institut d'Estudis Espacials de Catalunya*, Spain; and Gerard Gómez, *Universitat de Barcelona* and *Institut d'Estudis Espacials de Catalunya*, Spain (32, 2, p. 527) Article
- G09-053 Motion and Parameter Estimation of Space Objects Using Laser-Vision Data.** Farhad Aghili and Kourosh Parsa, *Canadian Space Agency*, Canada (32, 2, p. 538) Article based on AIAA Paper 2008-7317
- G09-054 Three-Dimensional Trajectory Optimization Satisfying Waypoint and No-Fly Zone Constraints.** Timothy R. Jorris and Richard G. Cobb, *Air Force Institute of Technology* (32, 2, p. 551) Article
- G09-055 Modeling of Generic Slung Load System.** Morten Bisgaard, Jan D. Bendtsen, and Anders la Cour-Harbo, *Aalborg University*, Denmark (32, 2, p. 573) Article based on AIAA Paper 2006-6816
- G09-056 Derivation of the Dynamics Equations of Receiver Aircraft in Aerial Refueling.** Jayme Waishek and Atilla Dogan, *University of Texas at Arlington*; and William Blake, *U.S. Air Force Research Laboratory* (32, 2, p. 586) Article based on AIAA Paper 2007-251
- G09-057 Optimal Design of Satellite Formation Relative Motion Orbits Using Least-Squares Methods.** Hui Yan, Kyle T. Alfriend, Srinivas R. Vadali, and Prasenjit Sengupta, *Texas A&M University* (32, 2, p. 599) Article
- G09-058 Flight Trajectory Optimization to Minimize Ground Noise in Helicopter Landing Approach.** Takeshi Tsuchiya, *University of Tokyo*, Japan; Hirokazu Ishii, *Japan Aerospace Exploration Agency*, Japan; Junichi Uchida and Hiroshi Ikaida, *University of Tokyo*, Japan; Hiromi Gomi, Naoki Matayoshi, and Yoshinori Okuno, *Japan Aerospace Exploration Agency*, Japan (32, 2, p. 605) Article
- G09-059 Evolutionary Neurocontrol: A Novel Method for Low-Thrust Gravity-Assist Trajectory Optimization.** Ian Carnelli, *ESA*, The Netherlands; Bernd Dachwald, *DLR, German Aerospace Center*, Germany; and Massimiliano Vasile, *University of Glasgow*, Great Britain (32, 2, p. 616) Article

- G09-060 Fast Model Predictive Control of the Nadir Singularity in Electro-Optic Systems.** David Anderson and Meghan McGookin, *University of Glasgow*, Great Britain; and Nick Brignall, *SELEX Sensors and Airborne Systems*, Great Britain (32, 2, p. 626) Article
- G09-061 Flying: With Strings Attached.** Peter L. Laphorne and Pavel Trivailo, *RMIT University*, Australia (32, 2, p. 633) Technical Note
- G09-062 Rotational Motion Control by Feedback with Minimum L1-Norm.** Minoru Majima and Akira Ichikawa, *Kyoto University*, Japan (32, 2, p. 635) Technical Note
- G09-063 Filter QUEST or REQUEST.** Malcolm D. Shuster, *Acme Spacecraft Company* (32, 2, p. 643) Technical Note
- G09-064 Recursive Bias Estimation and Orbit Determination.** Michael E. Hough, *Raytheon Company* (32, 2, p. 645) Technical Note
- G09-065 Interior Parameters, Exterior Parameters, and a Cayley-Like Transform.** John E. Hurtado, *Texas A&M University* (32, 2, p. 653) Technical Note
- G09-066 Short-Term National Airspace System Delay Prediction Using Weather Impacted Traffic Index.** Banavar Sridhar and Neil Chen, *NASA Ames Research Center* (32, 2, p. 657) Technical Note
- G09-067 Minimality of Variable-Thrust Subarcs in Optimal Chemical Rocket Trajectories.** David G. Hull, *University of Texas at Austin* (32, 2, p. 662) Technical Note based on AIAA Paper 07-413
- G09-068 Novel Expressions of Equations of Relative Motion and Control in Keplerian Orbits.** Hyunjoo Yoon and Brij N. Agrawal, *Naval Postgraduate School* (32, 2, p. 664) Technical Note
- G09-069 Collision-Geometry-Based Pulsed Guidance Law for Exoatmospheric Interception.** Ashwini Ratnoo and Debasish Ghose, *Indian Institute of Science*, India (32, 2, p. 669) Technical Note
- G09-070 Solar Pressure Effects for a Constellation in a Highly Elliptical Orbit.** Pedro A. Capo-Lugo, *NASA Marshall Space Flight Center*; and Peter M. Bainum, *Howard University* (32, 2, p. 675) Technical Note
- G09-071 Reduced-Order Kalman Filtering with Relative Measurements.** David S. Bayard, *Jet Propulsion Laboratory*, *California Institute of Technology* (32, 2, p. 679) Technical Note
- G09-072 Quaternion Analysis Tools for Engineering and Scientific Applications.** James D. Turner, *Texas A&M University* (32, 2, p. 686) Technical Note based on AIAA Paper 2006-6160
- G09-073 Semiglobal Trajectory Tracking Control Law for a Nonlinear Nonminimum Phase Three-Degree-of-Freedom Flight Vehicle.** Saif A. Al-Hiddabi, *Sultan Qaboos University*, Oman (32, 2, p. 693) Technical Note
- G09-074 Numerical State-Dependent Riccati Equation Approach for Missile Integrated Guidance Control.** Sai Vaddi and Padmanabhan K. Menon, *Optimal Synthesis Inc.*; and Ernest J. Ohlmeyer, *Naval Surface Warfare Center* (32, 2, p. 699) Technical Note based on AIAA Paper 2007-6672
- G09-075 Properties of a Real-Time Guidance Method for Preventing a Collision.** David J. Gates, *Commonwealth Scientific and Industrial Research Organization*, Australia (32, 3, p. 705) Article
- G09-076 L1 Adaptive Output-Feedback Controller for Non-Strictly-Positive-Real Reference Systems: Missile Longitudinal Autopilot Design.** Chengyu Cao, *University of Connecticut*; and Naira Hovakimyan, *University of Illinois at Urbana-Champaign* (32, 3, p. 717) Article based on AIAA Paper 2008-7288
- G09-077 Nonlinear Reconfiguring Flight Control Based on Online Physical Model Identification.** Thomas Lombaerts, Herve Huisman, Ping Chu, Jan A. Mulder, and Diederick Joosten, *Delft University of Technology*, The Netherlands (32, 3, p. 727) Article based on AIAA Paper 2008-7435
- G09-078 Piecewise Global Volterra Nonlinear Modeling and Characterization for Aircraft Dynamics.** Ashraf K. Omran and Brett Newman, *Old Dominion University* (32, 3, p. 749) Article based on AIAA Paper 2008-6874
- G09-079 Analytical Assessment of Flight Simulator Fidelity Using Pilot Models.** Ronald A. Hess, *University of California, Davis*; and Federico Marchesi, *University of Brescia*, Italy (32, 3, p. 760) Article based on AIAA Paper 2008-6682
- G09-080 Stabilization of Collective Motion in a Time-Invariant Flowfield.** Derek A. Paley and Cameron Peterson, *University of Maryland* (32, 3, p. 771) Article
- G09-081 Reduction of Low-Thrust Continuous Controls for Trajectory Dynamics.** Jennifer S. Hudson, *University of Michigan*; and Daniel J. Scheeres, *University of Colorado* (32, 3, p. 780) Article based on AIAA Paper 2008-6617
- G09-082 High-Capacity Tube Network Design Using the Hough Transform.** Min Xue, *University of California, Santa Cruz*; and Parimal H. Kopardekar, *NASA Ames Research Center* (32, 3, p. 788) Article based on AIAA Paper 2008-7396
- G09-083 Semi-Analytical Solution for the Optimal Low-Thrust Deflection of Near-Earth Objects.** Massimiliano Vasile, Camilla Colombo, and Gianmarco Radice, *University of Glasgow*, Great Britain (32, 3, p. 796) Article
- G09-084 Sequential Traffic Flow Optimization with Tactical Flight Control Heuristics.** Shon Grabbe and Banavar Sridhar, *NASA Ames Research Center*; and Avijit Mukherjee, *University of California, Santa Cruz* (32, 3, p. 810) Article based on AIAA Paper 2008-6823
- G09-085 Force-Stiffness Feedback in Uninhabited Aerial Vehicle Teleoperation with Time Delay.** Thanh M. Lam, Max Mulder, Marinus M. Van Paassen, Jan A. Mulder, and Frans C. Van der Helm, *Delft University of Technology*, The Netherlands (32, 3, p. 821) Article
- G09-086 Terminal-Area Aircraft Tracking Using Hybrid Estimation.** Chze Eng Seah and Inseok Hwang, *Purdue University* (32, 3, p. 836) Article based on AIAA Paper 2007-6691
- G09-087 Nonlinear H_{infinity} Control Designs with Axisymmetric Spacecraft Control.** Qian Zheng and Fen Wu, *North Carolina State University* (32, 3, p. 850) Article
- G09-088 Designing Natural Formations of Low-Earth-Orbiting Satellites.** Phil Palmer and Mark Halsall, *Surrey Space Centre*, Great Britain (32, 3, p. 860) Article
- G09-089 Autonomous Observability of Networked Multisatellite Systems.** Wei Kang and Isaac M. Ross, *Naval Postgraduate School*; Khanh Pham, *U.S. Air Force Research Laboratory*; and Qi Gong, *University of California, Santa Cruz* (32, 3, p. 869) Article
- G09-090 Optimal Timing of Control-Law Updates for Unstable Systems with Continuous Control.** Eric D. Gustafson, *University of Michigan*; and Daniel J. Scheeres, *University of Colorado at Boulder* (32, 3, p. 878) Article
- G09-091 Analytical Model to Find Frozen Orbits for a Lunar Orbiter.** Alberto Abad, Antonio Elipse, and Eva Tresaco, *Universidad de Zaragoza*, Spain (32, 3, p. 888) Article based on AIAA Paper 08-184
- G09-092 Simple Method to Determine Globally Optimal Orbital Transfers.** Mauro Pontani, *University of Rome "La Sapienza," Italy* (32, 3, p. 899) Article

- G09-093 Analytical Lunar Descent Guidance Algorithm.** Christina T. Chomel and Robert H. Bishop, *University of Texas at Austin* (32, 3, p. 915) Article
- G09-094 Aeroassisted Orbital Transfer Trajectory Optimization Considering Thermal Protection System Mass.** Christian Gogu, Taiki Matsumura, Rafael T. Haftka, and Anil V. Rao, *University of Florida* (32, 3, p. 927) Article based on AIAA Paper 2008-898
- G09-095 Low-Thrust Control of a Lunar Mapping Orbit.** Nathan R. Harl and Henry J. Pernicka, *Missouri University of Science and Technology* (32, 3, p. 939) Article
- G09-096 Flight-Test Experiment Design for Characterizing Stability and Control of Hypersonic Vehicles.** Eugene A. Morelli, *NASA Langley Research Center* (32, 3, p. 949) Article based on AIAA Paper 2008-1682
- G09-097 Fuel-Optimal Maneuvers for Constrained Relative Satellite Orbits.** David J. Irvin and Richard G. Cobb, *Air Force Institute of Technology*; and Thomas A. Lovell, *U.S. Air Force Research Laboratory* (32, 3, p. 960) Article based on AIAA Paper 07-271
- G09-098 Solar Sail Dynamics and Coning Control in Circular Orbits.** Dale A. Lawrence, *University of Colorado*; and Mark S. Whorton, *Teledyne Brown Engineering, Inc.* (32, 3, p. 974) Article
- G09-099 Missile Autopilot Design: Gain-Scheduling and the Gap Metric.** Spilios Theodoulis and Gilles Duc, *Ecole Supérieure d'Electricité, France* (32, 3, p. 986) Article
- G09-100 Structure-Preserving Stabilization for Hamiltonian System and its Applications in Solar Sail.** Ming Xu and Shijie Xu, *Beijing University of Aeronautics and Astronautics, PRC* (32, 3, p. 997) Article
- G09-101 Automatic Mass Balancing of Air-Bearing-Based Three-Axis Rotational Spacecraft Simulator.** Jae Jun Kim and Brij N. Agrawal, *Naval Postgraduate School* (32, 3, p. 1005) Article based on AIAA Paper 2006-6595
- G09-102 Escape from Elliptic Orbit Using Constant Radial Thrust.** Giovanni Mengali and Alessandro A. Quarta, *University of Pisa, Italy* (32, 3, p. 1018) Technical Note
- G09-103 Modelling of Actuator Dynamics for Spacecraft Attitude Control.** Raymond Kristiansen, *Narvik University College, Norway*; and David Hagen, *Kongsberg Seatex AS, Norway* (32, 3, p. 1022) Technical Note
- G09-104 Optimal Aircraft Routing in General Wind Fields.** Sake J. Bijlsma, *Netherlands Meteorological Institute, The Netherlands* (32, 3, p. 1025) Technical Note
- G09-105 Regularization of Minimum Parameter Attitude Estimation.** Luc Fraiture, *Germany* (32, 3, p. 1029) Technical Note
- G09-106 Three-Dimensional Validation of an Integrated Estimation/Guidance Algorithm Against Randomly Maneuvering Targets.** Josef Shinar and Vladimir Turetsky, *Technion-Israel Institute of Technology, Israel* (32, 3, p. 1034) Technical Note
- G09-107 Pseudospectral Motion Planning for Autonomous Vehicles.** Qi Gong, *University of California, Santa Cruz*; Ryan Lewis and Michael Ross, *Naval Postgraduate School* (32, 3, p. 1039) Technical Note
- G09-108 Effect of Kinematic Rotation-Translation Coupling on Relative Spacecraft Translational Dynamics.** Shay Segal and Pini Gurfil, *Technion-Israel Institute of Technology, Israel* (32, 3, p. 1045) Technical Note
- G09-109 Computational Nonlinear Stochastic Control.** Mrinal Kumar, Suman Chakravorty, and John L. Junkins, *Texas A&M University* (32, 3, p. 1050) Technical Note
- G09-110 Approach and Landing Flight Evaluation of Smart-Cue and Smart-Gain Concepts.** David H. Klyde and Chi Ying-Liang, *Systems Technology, Inc.* (32, 4, p. 1057) Article based on AIAA Paper 2008-6210
- G09-111 New Results for Time-Optimal Three-Axis Reorientation of a Rigid Spacecraft.** Xiaoli Bai and John L. Junkins, *Texas A&M University* (32, 4, p. 1071) Article
- G09-112 Deterministic Relative Attitude Determination of Three-Vehicle Formations.** Michael S. Andrie, John L. Crassidis, Richard Linares, and Yang Cheng, *University at Buffalo, State University of New York*; and Baro Hyun, *University of Michigan* (32, 4, p. 1077) Article
- G09-113 Modeling Human Multimodal Perception and Control Using Genetic Maximum Likelihood Estimation.** Peter M. Zaal, Daan M. Pool, Q. P. Chu, M. Mulder, M. M. Van Paassen, and J. A. Mulder, *Delft University of Technology, The Netherlands* (32, 4, p. 1089) Article
- G09-114 Immersion- and Invariance-Based Adaptive Control of a Nonlinear Aeroelastic System.** Keum W. Lee, *University of Kwandong, ROK*; and Sahjendra N. Singh, *University of Nevada, Las Vegas* (32, 4, p. 1100) Article
- G09-115 Computation and Applications of an Orbital Dynamics Symplectic State Transition Matrix.** Yuichi Tsuda, *Japan Aerospace Exploration Agency, Japan*; and Daniel J. Scheeres, *University of Colorado at Boulder* (32, 4, p. 1111) Article
- G09-116 Extracting Energy from Downdraft to Enhance Endurance of Uninhabited Aerial Vehicles.** Yiyuan J. Zhao, *University of Minnesota* (32, 4, p. 1124) Article
- G09-117 Feedback Dual Controller Design and Its Application to Monocular Vision-Based Docking.** Jinwhan Kim, *Optimal Synthesis, Inc.*; and Stephen Rock, *Stanford University* (32, 4, p. 1134) Article based on AIAA Paper 2006-6090
- G09-118 Proportional Navigation Miss Distance in the Presence of Bounded Inputs.** Shaul Gutman and Orly Ben-Aharon, *Technion-Israel Institute of Technology, Israel* (32, 4, p. 1143) Article
- G09-119 Stochastic and Dynamic Routing Problems for Multiple Uninhabited Aerial Vehicles.** John J. Enright, Ketan Savla, and Emilio Frazzoli, *Massachusetts Institute of Technology*; and Francesco Bullo, *University of California, Santa Barbara* (32, 4, p. 1152) Article
- G09-120 Inertia-Free Spacecraft Attitude Tracking with Disturbance Rejection and Almost Global Stabilization.** Amit Sanyal, *University of Hawaii at Manoa*; Adam Fosbury, *U.S. Air Force Research Laboratory*; Nalin Chaturvedi, *Robert Bosch LLC*; and Dennis Bernstein, *University of Michigan* (32, 4, p. 1167) Article
- G09-121 Prediction Procedures Used in Satellite Catalog Maintenance.** Vladimir F. Boikov, G. N. Makhonin, A. V. Testov, Zakhary N. Khutorovsky, and A. N. Shogin, *Vympel International Corporation, Russia* (32, 4, p. 1179) Article
- G09-121E Erratum on "Prediction Procedures Used in Satellite Catalog Maintenance."** Vladimir F. Boikov, G. N. Makhonin, A. V. Testov, Zakhary N. Khutorovsky, and A. N. Shogin, *Vympel International Corporation, Russia* (32, 6, p. 1966) Erratum
- G09-122 Periodic Orbits of Nonlinear Relative Dynamics and Satellite Formation.** Mai Bando and Akira Ichikawa, *Kyoto University, Japan* (32, 4, p. 1200) Article
- G09-123 Spacecraft Trajectory Optimization Based on Discrete Sets of Pseudoimpulses.** Yuri Ulybyshev, *Rocket-Space Corporation "Energia," Russia* (32, 4, p. 1209) Article based on AIAA Paper 2008-6276
- G09-124 Navigation Algorithms and Observability Analysis for Formation Flying Missions.** Paul J. Huxel and Robert H. Bishop, *University of Texas at Austin* (32, 4, p. 1218) Article
- G09-125 Optimal Ascent Trajectories for Stratospheric Airships Using Wind Energy.** Joseph B. Mueller, Yiyuan J. Zhao, and William L. Garrard, *University of Minnesota* (32, 4, p. 1232) Article

- G09-126 Simulating Active Vibration Attenuation in Underactuated Spatial Structures.** Simon Woods and Walerian Szyzkowski, *University of Saskatchewan, Canada* (32, 4, p. 1246) Article based on AIAA Paper 2008-6076
- G09-127 Libration Control of Electrodynamic Tethers Using Predictive Control with Time-Delayed Feedback.** Paul Williams, *Delft University of Technology, Australia* (32, 4, p. 1254) Article
- G09-128 Redundant Reaction Wheel Torque Distribution Yielding Instantaneous L2 Power-Optimal Spacecraft Attitude Control.** Hanspeter Schaub, *University of Colorado at Boulder*; and Vaios J. Lappas, *Surrey Space Centre, Great Britain* (32, 4, p. 1269) Article based on AIAA Paper 2008-6259
- G09-129 Static Formations Using Momentum Exchange Between Satellites.** Steven G. Tragesser, *University of Colorado* (32, 4, p. 1277) Article based on AIAA Paper 08-7509
- G09-130 Nearly Circular Equatorial Orbits About an Oblate Body with Atmosphere.** Mayer Humi, *Worcester Polytechnic Institute*; and Thomas E. Carter, *Eastern Connecticut State University* (32, 4, p. 1287) Article
- G09-131 Active Flutter Suppression for a Three-Surface Transport Aircraft by Recurrent Neural Networks.** Mattia Mataboni, Giuseppe Quaranta, and Paolo Mantegazza, *Politecnico di Milano, Italy* (32, 4, p. 1295) Article based on AIAA Paper 2007-2136
- G09-132 Nonlinear Robust Stochastic Control for Unmanned Aerial Vehicles.** Yunjun Xu, *University of Central Florida* (32, 4, p. 1308) Article
- G09-133 Solar-Powered Aircraft: Energy-Optimal Path Planning and Perpetual Endurance.** Andrew T. Klesh and Pierre T. Kabamba, *University of Michigan* (32, 4, p. 1320) Article
- G09-134 Point Targeting of Multisatellites via a Virtual Structure Formation Flight Scheme.** Youdan Kim and Chaeik Ahn, *Seoul National University, ROK* (32, 4, p. 1330) Article based on AIAA Paper 2008-6471
- G09-135 Verification of Optimality and Costate Estimation Using Hilbert Space Projection.** Baljeet Singh, Raktim Bhattacharya, and Srinivas R. Vadali, *Texas A&M University* (32, 4, p. 1345) Article
- G09-136 Stochastic Observability Test for Discrete-Time Kalman Filters.** Vibhor L. Bageshwar, Demoz Gebre-Egziabher, William L. Garrard, and Tryphon T. Georgiou, *University of Minnesota* (32, 4, p. 1356) Article
- G09-137 Nonlinear Optimization of Low-Thrust Trajectory for Satellite Formation: Legendre Pseudospectral Approach.** Baolin Wu and Danwei Wang, *Nanyang Technological University, Singapore*; Eng Kee Poh, *Defence Science Organization National Laboratories, Singapore*; and Guangyan Xu, *Nanyang Technological University, Singapore* (32, 4, p. 1371) Article
- G09-138 Optimal Orbital Rendezvous Maneuvering for Angles-Only Navigation.** David C. Woffinden, *Charles Stark Draper Laboratory, Inc.*; and David K. Geller, *Utah State University* (32, 4, p. 1382) Technical Note
- G09-139 Quaternion-Based Inverse Dynamics Model for Expressing Aerobatic Aircraft Trajectories.** Rick G. Drury and James F. Whidborne, *Cranfield University, Great Britain* (32, 4, p. 1388) Technical Note
- G09-140 Hermite-Legendre-Gauss-Lobatto Direct Transcription in Trajectory Optimization.** Paul Williams, *Delft University of Technology, The Netherlands* (32, 4, p. 1392) Technical Note
- G09-141 Hybrid Genetic Algorithm Collocation Method for Trajectory Optimization.** Kamesh Subbarao and Brandon M. Shippey, *University of Texas at Arlington* (32, 4, p. 1396) Technical Note
- G09-142 Quasi-Periodic Relative Trajectory Generation for Formation Flying Satellites.** Jesse K. Eyer and Christopher J. Damaren, *University of Toronto Institute for Aerospace Studies, Canada* (32, 4, p. 1403) Technical Note
- G09-143 Smart-Cue and Smart-Gain Concepts to Alleviate Loss of Control.** David H. Klyde and Duane McRuer, *Systems Technology, Inc.* (32, 5, p. 1409) Article based on AIAA Paper 2008-6209
- G09-144 Multimodal Pilot Control Behavior in Combined Target-Following Disturbance-Rejection Tasks.** P. M. Zaal, D. M. Pool, M. Mulder, and M. M. van Paassen, *Delft University of Technology, The Netherlands* (32, 5, p. 1418) Article based on AIAA Paper 2009-6027
- G09-145 Investigation into Crossover Regression in Compensatory Manual Tracking Tasks.** G. C. Beerens, H. J. Damveld, M. Mulder, M. M. van Paassen, and J. C. van der Vaart, *Delft University of Technology, The Netherlands* (32, 5, p. 1429) Article based on AIAA Paper 2008-7112
- G09-146 Engineless Unmanned Aerial Vehicle Propulsion by Dynamic Soaring.** Markus Deittert, *University of the West of England, Great Britain*; Arthur Richards, *Bristol University, Great Britain*; Chris A. Toomer, *University of the West of England, Great Britain*; and Anthony Pipe, *Bristol Robotics Laboratory, Great Britain* (32, 5, p. 1446) Article
- G09-147 Norm-Constrained Kalman Filtering.** Renato Zanetti, *The University of Texas at Austin*; Manoranjan Majji, *Texas A&M University*; Robert H. Bishop, *The University of Texas at Austin*; and Daniele Mortari, *Texas A&M University* (32, 5, p. 1458) Article based on AIAA Paper 2006-6164
- G09-148 Propellantless Stationkeeping at Enceladus via the Electromagnetic Lorentz Force.** Joseph W. Gangestad, George E. Pollock, and James M. Longuski, *Purdue University* (32, 5, p. 1466) Article
- G09-149 Quaternion Observer-Based Model-Independent Attitude Tracking Control of Spacecraft.** Y. D. Song, *Beijing Jiaotong University, PRC*; and Wenchuan Cai, *North Carolina A&T State University* (32, 5, p. 1476) Article
- G09-150 Control and Robustness Analysis for a High-Infinity Maneuverable Thrust-Vectoring Aircraft.** Özgür Atesoglu, *Aselsan Inc., Turkey*; and M. Kemal Özgören, *Middle East Technical University, Turkey* (32, 5, p. 1483) Article based on AIAA Paper 2008-6488
- G09-151 Optimal Control of a Librating Electrodynamic Tether Performing a Multirevolution Orbit Change.** Robert E. Stevens, *U.S. Naval Academy*; and William P. Baker, *Air Force Institute of Technology* (32, 5, p. 1497) Article
- G09-152 Optimal Satellite Transfers Using Relative Motion Dynamics.** Yohannes Ketema, *University of Minnesota* (32, 5, p. 1508) Article
- G09-153 Optimal Deployment Control of Spinning Space Webs and Membranes.** Mattias Gärdback and Gunnar Tibert, *Royal Institute of Technology, Sweden* (32, 5, p. 1519) Article
- G09-154 Path Planning Algorithms for Skid-to-Turn Unmanned Aerial Vehicles.** Nobuhiro Yokoyama and Yoshimasa Ochi, *National Defense Academy, Japan* (32, 5, p. 1531) Article based on AIAA Paper 2008-6637
- G09-155 Design of Distributed Engine Control Systems for Stability Under Communication Packet Dropouts.** Rama K. Yedavalli and Rohit K. Belapurkar, *The Ohio State University*; and Alireza Behbahani, *U.S. Air Force Research Laboratory* (32, 5, p. 1544) Article based on AIAA Paper 2008-4580
- G09-156 Stability of Sun-Synchronous Orbits in the Vicinity of a Comet.** Sharyl M. Byram, *University of Michigan*; and Daniel J. Scheeres, *University of Colorado* (32, 5, p. 1550) Article based on AIAA Paper 2008-7202
- G09-157 Measured and Simulated Motion of a Hopping Rotocute.** Eric Beyer and Mark Costello, *Georgia Institute of Technology* (32, 5, p. 1560) Article
- G09-158 Fault Detection and Isolation for Deep Space Satellites.** Walton R. Williamson, Jason L. Speyer, Vu T. Dang, and James Sharp, *SySense Inc.* (32, 5, p. 1570) Article based on AIAA Paper 2008-7475

- G09-159 Maneuvering Spacecraft Formations Using a Dynamically Adapted Finite Element Methodology.** Laura Garcia-Taberner, *Universitat de Girona, Spain*; and Josep J. Masdemont, *Universitat Politècnica de Catalunya, Spain* (32, 5, p. 1585) Article based on AIAA Paper 07-296
- G09-160 Spin-Axis Attitude Determination from Earth Chord-Angle Variations for Geostationary Satellites.** Jozef C. van der Ha, *Kyushu University, Japan*; and Frank L. Janssens, *The Netherlands* (32, 5, p. 1598) Article
- G09-161 Design of Robust Drag-Free Controllers with Given Structure.** Lorenzo Pettazzi, *University of Bremen, Germany*; Alexander Lanzon, *University of Manchester, Great Britain*; Stephan Theil, *DLR, German Aerospace Center, Germany*; and Amalia Ercoli Finzi, *Politecnico di Milano, Italy* (32, 5, p. 1609) Article
- G09-162 Roll-Pitch-Yaw Integrated Robust Autopilot Design for a High Angle-of-Attack Missile.** Seonhyeok Kang and H. Jin Kim, *Seoul National University, ROK*; Jin-Ik Lee and Byung-Eul Jun, *Agency for Defense Development, ROK*; and Min-Jea Tahk, *Korea Advanced Institute of Science and Technology, ROK* (32, 5, p. 1622) Article
- G09-163 Optimization of Low-Thrust Reconfiguration Maneuvers for Spacecraft Flying in Formation.** Mauro Massari and Franco Bernelli-Zazzera, *Politecnico di Milano, Italy* (32, 5, p. 1629) Article
- G09-164 Gravity-Assist Maneuvers Augmented by the Lorentz Force.** Brett Streetman and Mason A. Peck, *Cornell University* (32, 5, p. 1639) Article based on AIAA Paper 2007-6846
- G09-165 Attitude Determination from Light Curves.** Charles J. Wetterer, *U.S. Air Force Academy*; and Moriba K. Jah, *U.S. Air Force Research Laboratory* (32, 5, p. 1648) Technical Note
- G09-166 Computational Bifurcation Analysis of Multiparameter Dynamical Systems.** N. Ananthkrishnan and Nitin K. Gupta, *IDeA Research & Development (P), Ltd., India*; and Nandan K. Sinha, *Indian Institute of Technology Madras, India* (32, 5, p. 1651) Technical Note
- G09-167 Compressibility Effects on Maximum Range Cruise at Constant Altitude.** Damián Rivas and Alfonso Valenzuela, *Universidad de Sevilla, Spain* (32, 5, p. 1654) Technical Note
- G09-168 New Measure Representing Degree of Controllability for Disturbance Rejection.** O. Kang, Y. Park, Y.S. Park, and M. Suh, *Agency for Defense Development, ROK* (32, 5, p. 1658) Technical Note
- G09-169 Robust Control Moment Gyroscope Steering Logic with Gimbal Angle Constraints.** V. Lappas, *University of Surrey, Great Britain*; and B. Wie, *Iowa State University* (32, 5, p. 1662) Technical Note based on AIAA Paper 2006-6651
- G09-170 Asymptotic Analysis of Displaced Lunar Orbits.** Jules Simo and Colin R. McInnes, *University of Strathclyde, Great Britain* (32, 5, p. 1666) Technical Note
- G09-171 Time-Optimal Detumbling Control of Spacecraft.** Farhad Aghili, *Canadian Space Agency, Canada* (32, 5, p. 1671) Technical Note based on AIAA Paper 2008-7274
- G09-172 Multibody Model of an Ornithopter.** Jared A. Grauer and James E. Hubbard, *University of Maryland* (32, 5, p. 1675) Technical Note based on AIAA Paper 2009-727
- G09-173 Robustness Analysis for Terminal Phases of Reentry Flight.** Urbano Tancredi, *University of Naples "Parthenope," Italy*; Michele Grassi, *University of Naples "Federico II," Italy*; Federico Corrado and Edoardo Filippone, *Italian Aerospace Research Centre, Italy* (32, 5, p. 1679) Technical Note
- G09-174 Solution of Two-Point Boundary-Value Problems Using Lagrange Implicit Function Theorem.** Manoranjan Majji, James D. Turner, and John L. Junkins, *Texas A&M University* (32, 5, p. 1684) Technical Note
- G09-175 Model for Linearized Satellite Relative Motion About a J2-Perturbed Mean Circular Orbit.** Srinivas R. Vadali, *Texas A&M University* (32, 5, p. 1687) Technical Note
- G09-179 In-Flight Trajectory Planning and Guidance for Autonomous Parafoils.** Branden J. Rademacher and Ping Lu, *Iowa State University*; Alan L. Strahan and Christopher J. Cerimele, *NASA Johnson Space Center* (32, 6, p. 1697) Article based on AIAA Paper 2008-7417
- G09-180 Model Development and Code Verification for Simulation of Electrodynamic Tether System.** Joshua R. Ellis and Christopher D. Hall, *Virginia Polytechnic Institute and State University* (32, 6, p. 1713) Article
- G09-181 Investigation of Reaction Control System Design on Spacecraft Handling Qualities for Docking.** Randall E. Bailey, E. Bruce Jackson, and Kenneth H. Goodrich, *NASA Langley Research Center*; W. A. Ragsdale and Jason Neuhaus, *Unisys Corporation*; and James R. Barnes, *ARINC, Inc.* (32, 6, p. 1723) Article based on AIAA Paper 2008-6553
- G09-182 Minimum-Time Path Planning for Unmanned Aerial Vehicles in Steady Uniform Winds.** Laszlo Techy and Craig A. Woolsey, *Virginia Polytechnic Institute and State University* (32, 6, p. 1736) Article
- G09-183 Piloted Simulator Evaluation Results of New Fault-Tolerant Flight Control Algorithm.** T. J. J. Lombaerts, *Delft University of Technology, The Netherlands*; M. H. Smaili, *National Aerospace Laboratory, The Netherlands*; O. Stroosma, Q. P. Chu, J.A. Mulder, and D. A. Joosten, *Delft University of Technology, The Netherlands* (32, 6, p. 1747) Article
- G09-184 Dynamics of Towed Payload System Using Multiple Fixed-Wing Aircraft.** Paul Williams and Wubbo Ockels, *Delft University of Technology, The Netherlands* (32, 6, p. 1766) Article based on AIAA Paper 2006-6375
- G09-185 State Transition Matrix Approximation Using a Generalized Averaging Method.** Yuichi Tsuda, *Japan Aerospace Exploration Agency, Japan*; and Daniel J. Scheeres, *University of Colorado at Boulder* (32, 6, p. 1781) Article
- G09-186 Active Optics of Large Segmented Mirrors: Dynamics and Control.** R. Bastais, G. Rodrigues, B. Mokrani, and A. Preumont, *Free University of Brussels, Belgium* (32, 6, p. 1795) Article
- G09-187 Time-Delayed Feedback Control in Astrodynamics.** James D. Biggs and Colin R. McInnes, *University of Strathclyde, Great Britain* (32, 6, p. 1804) Article
- G09-188 Multiple-Model Adaptive Fault-Tolerant Control of a Planetary Lander.** Jovan D. Boskovic, Joseph A. Jackson, and Raman K. Mehra, *Scientific Systems Company, Inc.*; and Nhan T. Nguyen, *NASA Ames Research Center* (32, 6, p. 1812) Article based on AIAA Paper 2008-7290
- G09-189 Two-Point Boundary Value Problem Solutions to Spacecraft Formation Flying.** Fanghua Jiang, Junfeng Li, Hexi Baoyin, and Yunfeng Gao, *Tsinghua University, PRC* (32, 6, p. 1827) Article
- G09-190 Guidance Laws with Finite Time Convergence.** Di Zhou and Sheng Sun, *Harbin Institute of Technology, PRC*; and Kok L. Teo, *Curtin University of Technology, Australia* (32, 6, p. 1838) Article
- G09-191 Structure Preserving Approximations of Conservative Forces for Application to Small-Body Dynamics.** Andrew Colombi and Anil N. Hirani, *University of Illinois at Urbana-Champaign*; and Benjamin F. Villac, *University of California, Irvine* (32, 6, p. 1847) Article based on AIAA Paper 2008-7205
- G09-192 Spaceborne Autonomous Relative Control System for Dual Satellite Formations.** Jean-Sébastien Ardaens and Simone D'Amico, *DLR, German Aerospace Research Center, Germany* (32, 6, p. 1859) Article
- G09-193 Energetics of Control Moment Gyroscopes as Joint Actuators.** Daniel Brown and Mason Peck, *Cornell University* (32, 6, p. 1871) Article based on AIAA Paper 2008-7271

G09-194 Design of Solar Sail Trajectories with Applications to Lunar South Pole Coverage. M. T. Ozimek, D. J. Grebow, and K. C. Howell, *Purdue University* (32, 6, p. 1884) Article based on AIAA Paper 2008-7080

G09-195 Practical Steering Law for Small Satellite Energy Storage and Attitude Control. David J. Richie and Vaios J. Lappas, *University of Surrey*, Great Britain; and Bong Wie, *Iowa State University* (32, 6, p. 1898) Article based on AIAA Paper 2008-7501

G09-196 Comparison of the Radar and Seeker Modes of Pursuer Guidance. A. K. SAarkar, *Defence Research and Development Laboratory*, India; M. R. Ananthasayanam, *Indian Institute of Science*, India; T. Srinivasan and P. K. Kar, *Defence Research and Development Laboratory*, India (32, 6, p. 1912) Article based on AIAA Paper 2008-7462

G09-197 Role of Invariant Manifolds in Low-Thrust Trajectory Design. Rodney L. Anderson, *University of Colorado at Boulder*; and Martin W. Lo, *Jet Propulsion Laboratory, California Institute of Technology* (32, 6, p. 1921) Article

G09-198 Vision-Based Obstacle Avoidance of Wheeled Robots Using Fast Estimation. Amanda Dippold, *Virginia Polytechnic Institute and State University*; Lili Ma, *Wentworth Institute of Technology*; and Naira Hovakimyan, *University of Illinois at Urbana-Champaign* (32, 6, p. 1931) Technical Note based on AIAA Paper 2008-7449

G09-199 Simplified Singularity Avoidance Using Variable-Speed Control Moment Gyroscope Null Motion. Jay McMahon and Hanspeter Schaub, *University of Colorado at Boulder* (32, 6, p. 1938) Technical Note

G09-200 Efficient Initial Costates Estimation for Optimal Spiral Orbit Transfer Trajectories Design. Donghun Lee and Hyochoong Bang, *Korea Advanced Institute of Science and Technology*, ROK (32, 6, p. 1943) Technical Note

G09-201 Analysis of Transition Stability for Morphing Aircraft. T. M. Seigler, *University of Kentucky*; and D. A. Neal, *Barron Associates, Inc.* (32, 6, p. 1947) Technical Note

G09-202 Nonlinear Hierarchical Flight Controller for Unmanned Rotorcraft: Design, Stability, and Experiments. Farid Kendoul, *Chiba University*, Japan (32, 6, p. 1954) Technical Note

G09-203 Decentralized Receding Horizon Control for Cooperative Multiple Vehicles Subject to Communication Delay. Hojjat A. Izadi, Brandon W. Gordon, and Youmin Zhang, *Concordia University*, Canada (32, 6, p. 1959) Technical Note