Chronological Index

G98-002 Erratum for "Strapdown Inertial Navigation Integration Algorithm Design Part 2: Velocity and Position Algorithms" by Paul G. Savage (27, 2, p. 318) Erratum

G03-076 Erratum for "Using Fractional Gaussian Noise Models in Orbit Determination" by Winston C. Chow and Paul W. Schumacher, Jr. (27, 2, p. 319) Erratum

G04-001 Evolution, Revolution, and Challenges of Handling Qualities. David G. Mitchell, *Hoh Aeronautics, Inc.*; David B. Doman, *U.S. Air Force*; David L. Key, *Key Qualities*; David H. Klyde, *Systems Technology, Inc.*; David B. Leggett and David J. Moorhouse, *U.S. Air Force*; David H. Mason, *The Boeing Company*; David L. Raney, *NASA Langley Research Center*; and David K. Schmidt, *University of Colorado* (27, 1, p. 12) History of Key Technologies based on AIAA Paper 2003-5465

G04-002 Synthesis of Optimal Control and Flight Testing of an Autonomous Circular Parachute. Oleg A. Yakimenko, Vladimir N. Dobrokhodov, and Isaac I. Kaminer, *Naval Postgraduate School*; and Scott H. Dellicker, *U.S. Army Yuma Proving Ground* (27, 1, p. 29) Article

G04-003 Flight-Test Evaluation of Stability Augmentation Steering System for Aircraft Ground Handling. David H. Klyde, Systems Technology, Inc.; James G. Reinsberg, The Boeing Company; Erica Sanders and Alexander Kokolios, Naval Air Systems Command (27, 1, p. 41) Article based on AIAA Paper 2003-5318

G04-004 Control of a Nonlinear Wing Section Using Leadingand Trailing-Edge Surfaces. George Platanitis and Thomas W. Strganac, *Texas A&M University* (27, 1, p. 52) Article

G04-005 Gain-Phase Margin Analysis of Pilot-Induced Oscillations for Limit-Cycle Prediction. Bing-Fei Wu and Jau-Woei Perng, *National Chiao Tung University, Taiwan (ROC)* (27, 1, p. 59) Article

G04-006 Optimization of Interplanetary Solar Sailcraft Trajectories Using Evolutionary Neurocontrol. Bernd Dachwald, *DLR*, *German Aerospace Center, Germany* (27, 1, p. 66) Article

G04-007 Decentralized Scheme for Spacecraft Formation Flying via the Virtual Structure Approach. Wei Ren and Randal Beard, *Brigham Young University* (27, 1, p. 73) Article

G04-008 Rule-Based Cooperative Control of Optically Linked Model Spacecraft: Experimental Study. P. K. C. Wang, J. Yee, and E. G. Sayegh, *University of California, Los Angeles*; and F. Y. Hadaegh, *Jet Propulsion Laboratory* (27, 1, p. 83) Article

G04-009 Toward a Stellar Gyroscope for Spacecraft Attitude Determination. Carl C. Liebe, Konstantin Gromov, and David M. Meller, *Jet Propulsion Laboratory* (27, 1, p. 91) Article

G04-010 Interspacecraft Optical Communication and Navigation Using Modulating Retroreflectors. N. G. Creamer, G. C. Gilbreath, Timothy J. Meehan, Michael J. Vilcheck, John A. Vasquez, William S. Rabinovich, and Peter G. Goetz, *U.S. Naval Research Laboratory*; and Rita Mahon, *Jaycor Inc.*, **(27**, 1, p. 100) Article

G04-011 Robust Vibration Suppression in Flexible Systems Using Infinite Impulse Response Digital Filters. D. Economou, National Technical University of Athens, Greece; C. Mavroidis, Rutgers University; and I. Antoniadis, National Technical University of Athens, Greece (27, 1, p. 107) Article

G04-012 Integrated Guidance and Control of Moving-Mass Actuated Kinetic Warheads. P. K. Menon and G. D. Sweriduk, *Optimal Synthesis Inc.*; E. J. Ohlmeyer and D. S. Malyevac, *Naval Surface Warfare Center* (27, 1, p. 118) Article

G04-013 Frenet-Based Algorithm for Trajectory Prediction. Giulio Avanzini, *Polytechnic of Turin, Italy* (27, 1, p. 127) Article

G04-014 Nonlinear Recursive Minimum Model Error Estimation. Zhiqiang Ge, Beijing Institute of Remote Sensing and Equipment, China (prc); and Peikang Huang, National Electromagnetic Scattering Laboratory, China (PRC) (27, 1, p. 136) Article

G04-015 Nonlinear Adaptive Control for Slewing Flexible Active Structures. D. G. Wilson, Sandia National Laboratories; G. P. Starr, University of New Mexico; G. G. Parker, Michigan Technological University; and R. D. Robinett, Sandia National Laboratories (27, 1, p. 142) Technical Note

G04-016 Partial Eigenstructure Assignment Approach for Robust Flight Control. Atsushi Satoh and Kenji Sugimoto, *Nara Institute of Science and Technology, Japan* (27, 1, p. 145) Technical Note

G04-017 Linear System Input-Order Reduction by Hankel Norm Maximization. Randal K. Douglas, *The Aerospace Corporation*; Robert H. Chen, *The University of California*; and Jason L. Speyer, *The University of California, Los Angeles* (27, 1, p. 150) Technical Note

G04-018 Nonlinear Modelling of Spacecraft Relative Motion in the Configuration Space. Pini Gurfil and N. Jeremy Kasdin, *Princeton University* (27, 1, p. 154) Technical Note

G04-019 Flight Control Century: Triumphs of the Systems Approach. Duane McRuer and Dunstan Graham, *Systems Technology, Inc.* (27, 2, p. 161) History of Key Technologies

G04-020 History of Analytical Orbit Modeling in the U.S. Space Surveillance System. Felix R. Hoots, AT&T; Paul W. Schumacher Jr., *Naval Network and Space Operations Command*; and Robert A. Glover, AT&T (27, 2, p. 174) Article

G04-021 Sensor and Actuator Fault Reconstruction. Robert H. Chen and Jason L. Speyer, *University of California, Los Angeles* (27, 2, p. 186) Article

G04-022 Boost-Phase Identification of Theater Ballistic Missiles Using Radar Measurements. Meirav Almogi-Nadler, Yaakov Oshman, and Joseph Z. Ben-Asher, *TechnionñIsrael Institute of Technology, Israel* (27, 2, p. 197) Article

G04-023 Adaptive Control Design for Nonaffine Models Arising in Flight Control. Jovan D. Boskovic, Lingji Chen, and Raman K. Mehra, *Scientific Systems Company, Inc.* (27, 2, p. 209) Article

- **G04-024 Development of Linear-Parameter-Varying Models for Aircraft.** Andrès Marcos and Gary J. Balas, *University of Minnesota* (27, 2, p. 218) Article
- G04-025 Nonlinear Control of Librational Motion of Tethered Satellites in Elliptic Orbits. Hirohisa Kojima, Masatake Iwasaki, and Hironori A. Fujii, *Tokyo Metropolitan Institute of Technology, Japan*; Chris Blanksby and Pavel Trivailo, *Royal Melbourne Institute of Technology, Australia* (27, 2, p. 229) Article
- **G04-026** Global Magnetometer-Based Spacecraft Attitude and Rate Estimation. Mark L. Psiaki, *Cornell University* (27, 2, p. 240) Article
- G04-027 Precise Cassini Navigation During Solar Conjunctions Through Multifrequency Plasma Calibrations. P. Tortora, University of Bologna, Italy; L. Iess, University of Rome, Italy; J. J. Bordi, J. E. Ekelund, and D. C. Roth, Jet Propulsion Laboratory, California Institute of Technology (27, 2, p. 251) Article based on AIAA Paper 03-200
- **G04-028 Dynamics** and **Stability of an Autorotating Rotor/Wing Unmanned Aircraft.** C. A. Lopez and V. L. Wells, *Arizona State University* (27, 2, p. 258) Article
- **G04-029** Singularity Analysis and Visualization for Single-Gimbal Control Moment Gyro Systems. Bong Wie, *Arizona State University* (27, 2, p. 271) Article
- **G04-030 Miss Distance Error Analysis of Exoatmospheric Interceptors.** Hari B. Hablani and David W. Pearson, *The Boeing Company* (27, 2, p. 283) Article
- **G04-031 First-Order Analytical Solution for Spacecraft Motion About (433) Eros.** Juan F. San-Juan, *Universidad de la Rioja, Spain*; Alberto Abad, *Universidad de Zaragoza, Spain*; Martin Lara, *Real Observatorio de la Armada, Spain*; and Daniel J. Scheeres, *The University of Michigan* (27, 2, p. 290) Article
- **G04-032 Jacobi Pseudospectral Method for Solving Optimal Control Problems.** Paul Williams, *Royal Melbourne Institute of Technology, Australia* (27, 2, p. 293) Technical Note
- **G04-033 Interferometric Observatories in Earth Orbit.** I. I. Hussein, D. J. Scheeres, and D. C. Hyland, *University of Michigan* (27, 2, p. 297) Technical Note
- **G04-034** New, Fast Numerical Method for Solving Two-Point Boundary-Value Problems. Raymond W. Holsapple and Ram Venkataraman, *Texas Tech University*; David Doman, *US AFRL* (27, 2, p. 301) Technical Note
- **G04-035 Approximate Analytical Criterion for Aircraft Wing Rock Onset.** N. Ananthkrishnan, Parikshit M. Shah, and Suraj Unnikrishnan, *Indian Institute of Technology Bombay, India* (**27**, 2, p. 304) Technical Note based on AIAA Paper 2003-5304
- **G04-036 Learning-Based Sensor Validation Scheme Within Flight Control Laws.** M. L. Fravolini, *Perugia University, Italy*; G. Campa, M. R. Napolitano, and M. Perhinschi, *West Virginia University* (27, 2, p. 307) Article
- **G04-037** Application of Pseudospectral Methods for Receding Horizon Control. Paul Williams, *Royal Melbourne Institute of Technology, Australia* (27, 2, p. 310) Technical Note

- **G04-038** Square Root Sigma Point Filtering for Real-Time, Nonlinear Estimation. Shelby Brunke, *University of Washington*; and Mark Campbell, *Cornell University* (27, 2, p. 314) Technical Note
- **G04-039 Covariance Control for Sensor Management in Cluttered Tracking Environments.** Michael Kalandros and Lucy Y. Pao, University of Colorado (27, 3, p. 493) Technical Note
- **G04-040 Systematic Method for Constructing Earth-Mars Cyclers Using Free-Return Trajectories.** Ryan P. Russell and Cesar A. Ocampo, *University of Texas at Austin* (27, 3, p. 321) Article based on AIAA Paper 03-145
- **G04-041 Dual Controller Approach to Three-Dimensional Autonomous Formation Control.** Erfu Yang, *Tokyo Institute of Technology, Japan*; Yoichiro Masuko, *Mitsubishi Heavy Industries, Ltd., Japan*; and Tsutomu Mita, *Tokyo Institute of Technology, Japan* (**27**, 3, p. 336) Article
- **G04-042** Nanosatellite Attitude Stabilization Using Passive Aerodynamics and Active Magnetic Torquing. Mark L. Psiaki, *Cornell University* (27, 3, p. 347) Article
- **G04-043 Resonant Motion of a Spin-Stabilized Thrusting Spacecraft.** Ja-Young Kang, *Hankuk Aviation University*; and John E. Cochran, *Auburn University* (27, 3, p. 356) Article
- G04-044 Spacecraft Angular Rate Estimation from Magnetometer Data Only Using an Analytic Predictor. Paolo Tortora, *University of Bologna*; Yaakov Oshman, *Technion—Israel Institute of Technology*; and Fabio Santono, *University of Rome* (27, 3, p. 365) Article
- **G04-045 Singularity Analysis of Variable Speed Control Moment Gyros.** Hyungjoo Yoon and Panagiotis Tsiotras, *Georgia Institute of Technology* (27, 3, p. 374) Article
- **G04-046** Augmenting Adaptive Approach to Control of Flexible Systems. Anthony J. Calise, Bong-Jun Yang, and James I. Craig, *Georgia Institute of Technology* (27, 3, p. 387) Article
- **G04-047 Pseudospectral Knotting Methods for Solving Nonsmooth Optimal Control Problems.** I. M. Ross and Fariba Fahroo, *Naval Postgraduate School* (27, 3, p. 397) Article
- **G04-048 Nonlinear Missile Autopilot Design with Theta-D Technique.** Ming Xin and S. N. Balakrishnan, *University of Missouri–Rolla*; Donald T. Stansbery, *Boeing Company*; and Ernest J. Ohlmeyer, *Naval Surface Weapon Center* (**27**, 3, p. 406) Article
- **G04-049 Optimal-REQUEST** Algorithm for Attitude **Determination.** D. Choukroun, I. Y. Bar-Itzhack, and Y. Oshman, *Technion—Israel Institute of Technology* (27, 3, p. 418) Article
- **G04-050 State-Space Approach to Computing Spacecraft Pointing Jitter.** David S. Bayard, *Jet Propulsion Laboratory* (27, 3, p. 426) Article based on AIAA Paper 2003-5782
- **G04-051 Adaptive Neural Network Inverse Controller for General Aviation Safety.** Urpo J. Pesonen, James E. Steck, and Kamran Rokhsaz, *Wichita State University*; Hugh S. Bruner and Noel Duerksen, *Raytheon Aircraft Company* (**27**, 3, p. 434) Article based on AIAA Paper 2003-578

- **G04-052 Optimal State Estimation With Failed Sensor Discrimination and Identification.** Michael E. Polites, Kevin E. Witzberger, Christopher M. Lane, and Mark N. Thornblom, *University of Alabama* (27, 3, p. 444) Article
- **G04-053** Aircraft Autopilot Analysis and Envelope Protection for Operation Under Icing Conditions. Vikrant Sharma, Petros G. Voulgaris, and Emilio Frazzoli, *Coordinated Science Lab, University of Illinois at Urbana–Champaign* (27, 3, p. 454) Article
- **G04-054 Scaling Effects and Dynamic Characteristics of Miniature Rotorcraft.** Bernard Mettler, Chris Dever, and Eric Feron, *Massachusetts Institute of Technology* (27, 3, p. 466) Article
- G04-055 mu Synthesis for a Small Commercial Aircraft: Design and Simulator Validation. Francesco Amato, *Universita degli Studi Magna Graecia di Catanzaro*; and Raffaele Iervolino, *University of Naples* (27, 3, p. 479) Article
- **G04-056 Simple Structure for a High Performance Three- Dimensional Tracking Filter.** H. Weiss, *Technion-Israel Institute of Technology*; and G. Hexner, *RAFAEL Armament Development Authority* (27, 3, p. 491) Article
- **G04-057 Mars and Mercury Missions Using Solar Sails and Solar Electric Propulsion.** Christian Circi, *University of Rome, Italy* (27, 3, p. 496) Technical Note
- G04-058 Second-Order Equations for Rendezvous in a Circular Orbit. Christopher D. Karlgaard, Analytical Mechanics Associates, Inc.; and Frederick H. Lutze, Virginia Polytechnic Institute and State University (27, 3, p. 499) Technical Note
- **G04-059 Sequential Computation of Total Least-Squares Parameter Estimates.** Marco W. Soijer, *Delft University of Technology, Germany* (27, 3, p. 501) Technical Note
- **G04-060 Optimal Interplanetary Trajectories Using Constant Radial Thrust and Gravitational Assists.** Aaron J. Trask, *Naval Research Laboratory*; William J. Mason and Victoria L. Coverstone, *University of Illinois at Urbana–Champaign* (27, 3, p. 503) Technical Note based on AIAA Paper 2002-4731
- **G04-061 Vehicle Motion Planning with Time-Varying Constraints.** W. T. Cerven, Francesco Bullo, and Victoria L. Coverstone, *University of Illinois at Urbana–Champaign* (27, 3, p. 506) Technical Note
- **G04-062** Extended Kalman Filtering for Satellite Orbital Attitude Estimation Based on Gibbs Vector. YuRong Lin and ZhengLong Deng, *Harbin Institute of Technology* (27, 3, p. 509) Technical Note
- **G04-063** Attitude Dynamics/Control of a Dual-BodySpacecraft with Variable-Speed Control Moment Gyros. Marcello Romano and Brij N. Agrawal, *Naval Postgraduate School* (27, 4, p. 513) Article
- **G04-064 Solar Sail Attitude Control and Dynamics, Part 1.** Bong Wie, *Arizona State University* (27, 4, p. 526) Article
- **G04-065 Solar Sail Attitude Control and Dynamics, Part Two.** Bong Wie, *Arizona State University* (27, 4, p. 536) Article

- **G04-066 Flight Dynamics of the Boomerang, Part 1: Fundamental Analysis.** Akira Azuma, *University of Tokyo, Japan*; Goro Beppu and Hiroaki Ishikawa, *Tokai University, Japan*; and Kunio Yasuda, *Nihon University, Japan* (27, 4, p. 545) Article
- G04-067 Flight Dynamics of the Boomerang, Part Two: Effects of Initial Condition and Geometrical Configuration. Goro Beppu and Hiroaki Ishikawa, *Tokai University, Japan*; Akira Azuma, *University of Tokyo, Japan*; and Kunio Yasuda, *Nihon University, Japan* (27, 4, p. 555) Article
- **G04-068** Multibody Dynamics of Parachute and Balloon Flight Systems for Planetary Exploration. Marco B. Quadrelli, Jonathan M. Cameron, and Viktor Kerzhanovich, *Jet Propulsion Laboratory, California Institute of Technology* (27, 4, p. 564) Article
- **G04-069 Minimum-Energy Output Transitions for Linear Discrete-Time Systems: Flexible Structure Applications.** Dhanakorn Iamratanakul, Hector Perez, and Santosh Devasia, *University of Washington* (27, 4, p. 572) Article
- G04-070 Dynamic Optimization Strategies for Three-Dimensional Conflict Resolution of Multiple Aircraft. Arvind U. Raghunathan, Carnegie Mellon University; Vipin Gopal, United Technologies Research Center; Dharmashankar Subramanian, Honeywell International; Lorenz T. Biegler, Carnegie Mellon University; and Tariq Samad, Honeywell International (27, 4, p. 586) Article
- **G04-071 Enhanced Air-to-Air Missile Tracking Using Target Orientation Observations.** Yaakov Oshman and David Arad, *Technionólsrael Institute of Technology* (**27**, 4, p. 595) Article
- **G04-072 Tuning of Observer-Based Controllers.** C. Cumer and F. Delmond, *ONERA-Centre d'Etudes et de Recherches de Toulouse, France*; D. Alazard and C. Chiappa, *SUPAERO, France* (27, 4, p. 607) Article based on AIAA Paper 2001-4102
- G04-073 Simulated Annealing for Missile Optimization: Developing Method and Formulation Techniques. Ozan Tekinalp, Middle East Technical University, Aerospace Engineering Department, Turkey; and Muge Bingol, Middle East Technical University, Turkey (27, 4, p. 616) Article
- **G04-074 Robust Tracking Control Design for Spacecraft Under Control Input Saturation.** Jovan D. Boskovic, Sai-Ming Li, and Raman K. Mehra, *Scientific Systems Company, Inc.* (27, 4, p. 627) Article
- **G04-075** Missile Autopilot Design Using Discrete-Time Variable Structure Controller with Sliding Sector. A. A. Powly and M. S. Bhat, *Indian Institute of Science, India* (27, 4, p. 634) Article
- **G04-076 Computation of Controllability Regions for Unstable Aircraft Dynamics.** M. G. Goman and M. N. Demenkov, *De Montfort University, Great Britain* (**27**, 4, p. 647) Article based on AIAA Paper 2002-4749
- **G04-077 Analytical Theory of Three-Degree-of-Freedom Aircraft Wing Rock.** Tiauw Hiong Go and Rudrapatna V.
 Ramnath, *Massachusetts Institute of Technology* (**27**, 4, p. 657)
 Article

G04-078 Modeling Pilot's Sequential Maneuvering Decisions by a Multistage Influence Diagram. Kai Virtanen, Tuomas Raivio, and Raimo P. Hamalainen, *Helsinki University of Technology, Finland* (27, 4, p. 665) Article

G04-079 Optimization of Variable-Specific-Impulse Interplanetary Trajectories. Lorenzo Casalino and Guido Colasurdo, *Politecnico di Torina, Italy* (27, 4, p. 678) Article

G04-080 Formation Control of Satellites Subject to Drag Variations and J2 Perturbations. David Mishne, *Technionólsrael Institute of Technology* (27, 4, p. 685) Article

G04-081 Solving Relative Two-Point Boundary Value Problems: Spacecraft Formulation Flight Transfers Application. V. M. Guibout and D. J. Scheeres, *University of Michigan* (27, 4, p. 693) Article

G04-082 Bank-to-Turn Missile Autopilot Design Via Observer-Based Command Governor Approach. Alessandro Casavola, *Universita della Calabria*; and Edoardo Mosca, *Universita di Firenze* (27, 4, p. 705) Technical Note

G04-083 Adaptive Output Feedback Control Methodology: Theory and Practical Implementation Aspects. Moshe Idan, Technionólsrael Institute of Technology, Israel; Anthony J. Calise, Georgia Institute of Technology; and Naira Hovakimyan, Virginia Polytechnic Institute and State University (27, 4, p. 710) Technical Note

G04-084 Guidance of Unmanned Air Vehicles Based on Fuzzy Sets and Fixed Waypoints. Mario Innocenti and Lorenzo Pollini, *University of Pisa, Italy*; and Demetrio Turra, *University of Pisa* (27, 4, p. 715) Technical Note based on AIAA Paper 2002-4993

G04-085 Gain-Scheduling Stability Issues Using Differential Inclusion and Fuzzy Systems. Mario Innocenti, Lorenzo Pollini, and Antonio Marullo, *University of Pisa, Italy* (**27**, 4, p. 720) Technical Note

G04-086 Unified Algebraic Approach to Approximation of Lateral-Directional Modes and Departure Criteria. Giovanni Mengali, *University of Pisa, Italy*; and Fabrizio Giulietti, *University of Bologna, Italy* (27, 4, p. 724) Technical Note

G04-087 Limit Cycles and Domain of Stability in Unsteady Aeroelastic System. Sushma Gujjula and Sahjendra N. Singh, *University of Nevada, Las Vegas*; and Wooson Yim, *University of Nevada, Las Vegas* (27, 4, p. 728) Article

G04-088 Review of Formulas for Dynamic Analysis. Kurt Anderson, *Rensselaer Polytechnic Institute* (27, 4, p. 733) Book Review

G04-089 Review of Newton's Tyranny: The Suppressed Scientific Discoveries of Stephen Gray and John Flamsteed. M. Peck, *Honeywell Space Systems* (27, 4, p. 734) Book Review

G04-090 New Approach for Modeling, Analysis, and Control of Air Traffic Flow. P. K. Menon and G. D. Sweriduk, *Optimal Synthesis Inc.*; and K. D. Bilimoria, *NASA Ames Research Center* (27, 5, p. 737) Article based on AIAA Paper 2001-5012

G04-091 Neural-Network-Based Design of Optimal Controllers for Nonlinear Systems. Nilesh V. Kulkarni and Minh Q. Phan, *Dartmouth College* (27, 5, p. 745) Article based on AIAA Paper 2002-4664

G04-092 Human-Inspired Control Logic for Automated Maneuvering of Miniature Helicopter. V. Gavrilets, Bernard Mettler, and E. Feron, *Massachusetts Institute of Technology* (27, 5, p. 752) Article

G04-093 Helicopter Vibration Reduction and Damping Enhancement Using Individual Blade Control. Thomas Mannchen and Klaus H. Weil, *University of Stuttgart* (**27**, 5, p. 760) Article

G04-094 Anytime Control Algorithm: Model Reduction Approach. Raktim Bhattacharya, *California Institute of Technology*; and Gary J. Balas, *University of Minnesota* (27, 5, p. 767) Article

G04-095 Online Adaptive Critic Flight Control. Silvia Ferrari, *Duke University*; and Robert F. Stengel, *Princeton University* (27, 5, p. 777) Article

G04-096 Adaptive Linear Parameter Varying Control Synthesis for Actuator Failure. Jong-Yeob Shin, National Institute of Aerospace; N. Eva Wu, Binghamton University; and Christine Belcastro, NASA Langley Research Center (27, 5, p. 787) Article

G04-097 Aeroelasticity of Time-Delayed Feedback Control of Two-Dimensional Supersonic Lifting Surfaces. Yuan Yuan, Memorial University of Newfoundland, Canada; Pei Yu, The University of Western Ontario, Canada; Liviu Librescu, Virginia Polytechnic Institute and State University; and Piergiovanni Marzocca, Clarkson University (27, 5, p. 795) Article

G04-098 Investigating The Role of Rate Limiting in Pilot-Induced Oscillations. David H. Klyde, *Systems Technology, Inc.*; and David G. Mitchell, *Hoh Aeronautics, Inc.* (27, 5, p. 804) Article based on AIAA Paper 2003-5463

G04-099 Time Simulations of the Response of Maneuvering Flexible Aircraft. Leonard Meirovitch and Ilhan Tuzcu, *Virginia Polytechnic Institute and State University* (27, 5, p. 814) Article based on AIAA Paper 2003-1403

G04-100 Adaptive Sliding Mode Control Design for a Hypersonic Flight Vehicle. Haojian Xu, *University of Southern California*; Maj. D. Mirmirani, *California State University*; and Petros A. Ioannou, *University of Southern California* (27, 5, p. 829) Article

G04-101 Relative Orbit Geometry Through Classical Orbit Element Differences. Hanspeter Schaub, Virginia Polytechnic Institute and State University (27, 5, p. 839) Article

G04-102 Control of a Rotating Variable-Length Tethered System. Mischa Kim and Christopher D. Hall, *Virginia Polytechnic Institute and State University* (27, 5, p. 849)
Article

- **G04-103 Integrated Power and Attitude Control with Spacecraft Flywheels and Control Moment Gyroscopes.** Carlos M. Roithmayr, *NASA Langley Research Center*; Christopher D. Karlgaard, Renjith R. Kumar, and David M. Bose, *Analytical Mechanics Associates, Inc.* **(27**, 5, p. 859) Article based on AIAA Paper 03-124
- **G04-104** Periodic H2 Synthesis for Spacecraft Attitude Control with Magnetorquers. Rafal Wisniewski and Jakob Stoustrup, *Aalborg University, Denmark* (27, 5, p. 874) Article
- G04-105 Libration Control of Flexible Tethers Using Electromagnetic Forces and Movable Attachment. Paul Williams, Royal Melbourne Institute of Technology, Australia; Takeo Watanabe, Tokyo Metropolitan Institute of Technology, Japan; Chris Blanksby and Pavel Trivailo, Royal Melbourne Institute of Technology, Australia; and Hironori A. Fujii, Tokyo Metropolitan Institute of Technology, Japan (27, 5, p. 882) Article based on AIAA Paper 2003-5781
- **G04-106** Linear Theory of a Rotating Internal Part Projectile Configuration in Atmospheric Flight. Geoffrey Frost and Mark Costello, *Oregon State University* (27, 5, p. 898) Article
- **G04-107** Method for Determination of Nonlinear Attainable Moment Sets. Michael A. Bolender and David B. Doman, *Air Force Research Laboratory* (27, 5, p. 907) Article
- **G04-108** Singular Perturbation Analysis of Optimal Glide. Ilana Shapira and Joseph Z. Ben-Asher, *Technion–Israel Institute of Technology, Israel* (27, 5, p. 915) Technical Note based on AIAA Paper 2002-4406
- **G04-109 Modern Explicit Guidance Law for High-Order Dynamics.** S. H. Jalali-Naini, *Aerospace Research Institute, Iran* (27, 5, p. 918) Technical Note
- **G04-110** Methods for Compensating for Control Allocator and Actuator Interactions. Michael W. Oppenheimer and David B. Doman, *U.S. Air Force Research Laboratory* (27, 5, p. 922) Technical Note
- **G04-111 Generation of Launch Vehicle Abort Trajectories Using a Hybrid Optimization Method.** Anthony J. Calise, *Georgia Institute of Technology*; and Nico Brandt, *Georgia Institute of Technology, Germany* **(27**, 6, p. 929) Article based on AIAA Paper 2002-4560
- **G04-112** New Nonlinear Control Technique for Ascent Phase of Reusable Launch Vehicles. David Drake, Ming Xin, and S. N. Balakrishnan, *University of Missouri–Rolla* (27, 6, p. 930) Article
- **G04-113 Dynamic Lateral Entry Guidance Logic.** Zuojun Shen and Ping Lu, *Iowa State University* (27, 6, p. 949) Article
- **G04-114** Test Results for Entry Guidance Methods for Space Vehicles. John M. Hanson, *NASA Marshall Space Flight Center*; and Robert E. Jones, *Sverdrup Technology, Inc.* (27, 6, p. 960) Article based on AIAA Paper 2004-0701
- **G04-115 Unpowered Approach and Landing Guidance Using Trajectory Planning.** Craig A. Kluever, *University of Missouri-Columbia* (27, 6, p. 967) Article

- **G04-116** Integrated Adaptive Guidance and Control for Re-Entry Vehicles with Flight Test Results. John D. Schierman, David G. Ward, Jason R. Hull, and Neha Gandhi, *Barron Associates, Inc.*; David B. Doman and Michael Oppenheimer, *Air Force Research Laboratory* (27, 6, p. 975) Article
- **G04-117 Lambert Guidance Routine Designed To Match Position And Velocity Of A Ballistic Target.** Steven P. Burns and
 Jeff J. Scherock, *Johns Hopkins University, Applied Physics Laboratory* (27, 6, p. 989) Article
- **G04-118 Trajectory Planning for Autonomous Aerospace Vehicles amid Known Obstacles and Conflicts.** Hong Yang and Yiyuan Zhao, *University of Minnesota* (27, 6, p. 997) Article
- **G04-119** Efficient Minimax Control Design for Prescribed Parameter Uncertainty. Dirk Tenne and Tarunraj Singh, *State University of New York at Buffalo* (27, 6, p. 1009) Article
- **G04-120 Nonlinear Control Allocation Using Piecewise Linear Functions.** Michael A. Bolender and David B. Doman, *U.S. Air Force Research Laboratory* (27, 6, p. 1017) Article
- **G04-121 Dynamic Control Allocation Using Constrained Quadratic Programming.** Ola Härkegärd, *Linkping University, Sweden* (27, 6, p. 1028) Article
- **G04-122 Transit-Orbit Search for Planar Restricted Three-Body Problems with Perturbations.** Hideaki Yamato, *The Pennsylvania State University, Japan*; and David Spencer, *The Pennsylvania State University* (27, 6, p. 1035) Article
- **G04-123 Low Thrust Minimum-Fuel Orbital Transfer: A Homotopic Approach.** Thomas Haberkorn, Pierre Martinon, and Joseph Gergaud, *Centre National de la Recherche Scientifique, France* (27, 6, p. 1046) Article
- **G04-124 Retargeting Dynamics of a Linear Tethered Interferometer.** Claudio Bombardelli, *University of Padova, Italy*; Enrico C. Lorenzini, *Harvard-Smithsonian Center for Astrophysics*; and Marco B. Quadrelli, *Jet Propulsion Laboratory, California Institute of Technology* (**27**, 6, p. 1061) Article based on AIAA Paper 222-03
- **G04-125 Design of Reduced-Order Robust Controllers for Smart Structural Systems.** Pengxiang Liu and Vittal S. Rao, *University of Missouri–Rolla* (27, 6, p. 1068) Article
- **G04-126 Genetic Algorithm Preprocessing for Numerical Solution of Differential Games Problems.** Kazuhiro Horie, *University of Illinois at Urbana–Champaign*; and Bruce A. Conway, *University of Illinois* (27, 6, p. 1075) Technical Note
- G04-127 Circular Navigation Missile Guidance with Incomplete Information and Uncertain Autopilot Model. Ian R. Manchester and Andrey V. Savkin, *University of New South Wales, Australia* (27, 6, p. 1078) Technical Note
- G04-128 Optimal Dual-Rate Digital Redesign with Application to Missile Control. C. A. Rabbath, Defence Research and Development Canada-Valcartier, Canada; Nicolas Lechevin, Université du Quebec à Trois-Riviéres, Canada; and Noriyuki Hori, University of Tsukuba, Japan (27, 6, p. 1083) Technical Note

G04-129 Nonminimal Kane's Impulse-Momentum Relations. Abdulrahman Bajodah, Dewey H. Hodges, and Ye-Hwa Chen, *Georgia Institute of Technology* (**27**, 6, p. 1088) Technical Note

G04-130 Differentiator-Free Nonlinear Proportional-Integral Controllers for Rigid-Body Attitude Stabilization. Kamesh Subbarao, *The University of Texas at Arlington*; and Maruthi R. Akella, *The University of Texas at Austin* (**27**, 6, p. 1092) Technical Note

G04-131 Lyapunov-Based Nonlinear Missile Guidance. N. Lechevin, *Université du Quebec à Trois-Riviéres, Canada*; and

C. A. Rabbath, *Defence Research and Development Canada-Valcartier, Canada* (27, 6, p. 1096) Technical Note

G04-132 Trajectory Shaping in Linear Quadratic Pursuit-Evasion Games. Joseph Z. Ben-Asher, Josef Shinar, Sergei Levinson, and Haim Weiss, *Technion—Israel Institute of Technology, Israel* (27, 6, p. 1102) Technical Note

G04-133 Earth Escape by Ideal Sail and Solar-Photon. Giovanni Mengali and Alessandro A. Quarta, *University of Pisa, Italy* (27, 6, p. 1105) Technical Note

Books Reviewed During 2004

Sliding Mode Control in Engineering, by Wilfrid Perruquetti and Jean Pierre Barbot, *Marcel Dekker Inc.* (Vol. 27, No. 1, p. 158); reviewed by Ronald A. Hess

Correction to the book review of Introduction to Avionic Systems Engineering by R. P. G. Collinson (Vol. 27, No. 1, p. 159); reviewed by I. Y. Bar-Hzhack

Formulas for Dynamic Analysis, by Ronald L. Huston and C. Q. Liu, *Marcel Dekker* (Vol. 27, No. 4, p. 733); reviewed by Kurt Anderson

Newton's Tyranny: The Suppressed Scientific Discoveries of Stephen Gray and John Flamsteed, by David H. Clark and Stephen P. H. Clark, *W. H. Freeman and Co.* (Vol. 27, No. 4, p. 734); reviewed by M. Peck