## **Chronological Index**

- **G92-158** Robustness of Solutions to a Benchmark Control Problem. Robert F. Stengel and Christopher I. Marrison, *Princeton University* (15, 5, p. 1060) Article
- Technical Comment by Jeremy J. Gribble, *University of Glasgow, Scotland, UK* (18, 6, p. 1467)
  - Reply (18, 6, p. 1468)
- G93-165 Optimal Cooperative Power-Limited Rendezvous Between Neighboring Circular Orbits. Victoria Coverstone-Carroll and John E. Prussing, *University of Illinois at Urbana-Champaign* (16, 6, p. 1045) Article
- Technical Comment by Yurij P. Ulybyshev, NPO "Energia", Russia (18, 5, p. 1223)
  - Reply (18, 5, p. 1224)
- G94-090 Analytic Solution of the Riccati Equation for the Homing Missile Linear-Quadratic Control Problem. Nedeljko Lovren and Milos Tomic, *University of Sarajevo, Yugoslavia* (17, 3, p. 619) Engineering Note
- Technical Comment by Ilan Rusnak, RAFAEL, Ministry of Defense, Israel (18, 4, p. 936)
- G94-187 Automatic Guidance and Control for Helicopter Obstacle Avoidance. Victor H. L. Cheng, NASA Ames Research Center, and T. Lam, Sterling Software (17, 6, p. 1252) Article Errata (18, 4, p. 935)
- G95-001 Fundamental Mechanisms of Aeroelastic Control with Control Surface and Strain Actuation. Kenneth B. Lazarus, Edward F. Crawley, and Charrissa Y. Lin, Massachusetts Institute of Technology (18, 1, p. 10) Article
- **G95-002 Robust Dynamic Inversion for Control of Highly Maneuverable Aircraft.** Jacob Reiner, Gary J. Balas, and William L. Garrard, *University of Minnesota* (18, 1, p. 18) Article
- G95-003 Direct Adaptive and Neural Control of Wing-Rock Motion of Slender Delta Wings. Sahjendra N. Singh, Woosoon Yim, and William R. Wells, *University of Nevada, Las Vegas* (18, 1, p. 25) Article
- G95-004 Identification and Simulation Evaluation of a Combat Helicopter in Hover. Jeffery A. Schroeder, NASA Ames Research Center; Mark B. Tischler, U.S. Army Aeroflightdynamics Directorate; Douglas C. Watson, NASA Ames Research Center, and Michelle M. Eshow, U.S. Army Aeroflightdynamics Directorate (18, 1, p. 31) Article
- **G95-005** Rotorcraft Handling Qualities in Turbulence. R. A. Hess, *University of California, Davis* (18, 1, p. 39) Article based on AIAA Paper 93-3666
- G95-006 High-Performance, Robust, Bank-To-Turn Missile Autopilot Design. Ching-Fang Lin, American GNC Corporation; and James R. Cloutier and Johnny H. Evers, Wright Laboratories (18, 1, p. 46) Article
- G95-007 Optimal Impulsive Time-Fixed Orbital Rendezvous and Interception with Path Constraints. Der-Ren Taur, Chung Shan Institute of Science and Technology, Taiwan, ROC; and Victoria Coverstone-Carroll and John E. Prussing, University of Illinois at Urbana—Champaign (18, 1, p. 54) Article based on AIAA Paper 90-2972
- G95-008 Star-Field Identification for Autonomous Attitude Determination. M. S. Scholl, *Alenka Associates* (18, 1, p. 61) Article

- G95-009 Dynamics and Control of a Tethered Flight Vehicle. T. S. No and J. E. Cochran Jr., Auburn University (18, 1, p. 66) Article
- **G95-010** Integrated Development of the Equations of Motion for Elastic Hypersonic Flight Vehicles. Karl D. Bilimoria, *Arizona State University*; and David K. Schmidt, *University of Maryland* (18, 1, p. 73) Article based on AIAA Paper 92-4605
- G95-011 New Formulation for General Spatial Motion of Flexible Beams. W. J. Haering, General Motors Corporation; R. R. Ryan, Mechanical Dynamics, Inc.; and R. A. Scott, University of Michigan (18, 1, p. 82) Article based on AIAA Paper 93-1435
- G95-012 Validation of Finite-Dimensional Approximate Solutions for Dynamics of Distributed-Parameter Systems. John L. Junkins and Sangchul Lee, *Texas A&M University* (18, 1, p. 87) Article
- **G95-013** Piezoelectric Transformer. C. Chung Won, *Lockheed Engineering and Sciences Company* (18, 1, p. 96) Article
- **G95-014** Impact of Near-Coincident Faults on Digital Flight Controls Systems. Cristian Constantinescu, *Duke University* (18, 1, p. 102) Article
- G95-015 Case Study on Haptic Devices: Human-Induced Instability in Powered Hand Controllers. H. Kazerooni and Tanya J. Snyder, *University of California, Berkeley* (18, 1, p. 108) Article
- G95-016 Runge-Kutta Algorithm for the Numerical Integration of Stochastic Differential Equations. N. Jeremy Kasdin, Stanford University (18, 1, p. 114) Article
- G95-017 Monte Carlo Analysis of Titan/Transfer Orbit Stage Planetary Mission Guidance System. Stephen C. Bell, Marc A. Ginsburg, and Prabhakara P. Rao, *Martin Marietta Astronautics* (18, 1, p. 121) Article based on AIAA Paper 93-3889
- **G95-018 Hybrid Near-Optimal Atmospheric Guidance for Aeroassisted Orbit Transfer.** Michael B. McFarland and Anthony J. Calise, *Georgia Institute of Technology* (18, 1, p. 128) Article based on AIAA Paper 93-3858
- G95-019 Reduced-Order Model Based Control of the Flexible, Articulated-Truss Space Crane. Brian T. Bansenauer and Mark J. Balas, *University of Colorado* (18, 1, p. 135) Article
- **G95-020** Guaranteed Performance Control of Nonlinear Systems with Application to Flexible Space Structure. Y. D. Song, *North Carolina A&T State University* (18, 1, p. 143) Article
- **G95-021** Application of Direct Transcription to Commercial Aircraft Trajectory Optimization. John T. Betts and Evin J. Cramer, *Boeing Computer Services* (18, 1, p. 151) Article based on AIAA Paper 92-4528
- **G95-022** Classical/ $H_2$  Solution for a Robust Control Design Benchmark Problem. Peter M. Thompson, Systems Technology, Inc. (18, 1, p. 160) Article
- **G95-023** On-Line Learning Nonlinear Direct Neurocontrollers for Restructurable Control Systems. Marcello R. Napolitano, Steve Naylor, Charles Neppach, and Van Casdorph, *West Virginia University* (18, 1, p. 170) Article
- G95-024 Genetic Algorithm Approach for Optimal Control Problems with Linearly Appearing Controls. H. Seywald and R.

- R. Kumar, Analytical Mechanics Associates, Inc.; and S. M. Deshpande, Booz, Allen and Hamilton, Inc. (18, 1, p. 177) Article
- G95-025 Determination of Piloting Feedback Structures for an Altitude Tracking Task. Norihiro Goto, Kyushu University, Japan (18, 1, p. 183) Engineering Note based on AIAA Paper 93-3669
- G95-026 Dynamics and Control of Slewing Active Beam. Moon K. Kwak, Keith K. Denoyer, and Dino Sciulli, *Phillips Laboratory* (18, 1, p. 185) Engineering Note
- G95-027 Low-Thrust Orbit Transfer Guidance Using an Inverse Dynamics Approach. Craig A. Kluever, *University of Missouri-Columbia/Kansas City* (18, 1, p. 187) Engineering Note
- G95-028 System Design by Linear Exponential Quadratic Gaussian and Loop Transfer Recovery Methodology. Jium-Ming Lin, Chung-Hua Polytechnic Institute, Taiwan, ROC (18, 1, p. 189) Engineering Note
- G95-029 Hubble Space Telescope Pointing Control System Design Improvement Study Results. Angelia P. Bukley, NASA Marshall Space Flight Center (18, 2, p. 194) Article
- G95-030 Dual-Mode Disturbance-Accommodating Pointing Controller for Hubble Space Telescope. Stewart I. Addington, Teledyne Brown Engineering; and C. D. Johnson, University of Alabama in Huntsville (18, 2, p. 200) Article
- G95-031 Linear-Quadratic-Gaussian-Based Controller Design for Hubble Space Telescope. Emmanuel G. Collins Jr., Florida A&M University and Florida State University, and Stephen Richter, Harris Corporation (18, 2, p. 208) Article
- G95-032 Analytically and Numerically Derived H<sub>∞</sub> Controller Designs for Hubble Space Telescope. R. Dennis Irwin, Russell D. Glenn, W. Garth Frazier, Douglas A. Lawrence, and Randolph F. Follett, Mississippi State University (18, 2, p. 214) Article
- G95-033 Preservicing Mission, On-Orbit Modifications to Hubble Space Telescope Pointing Control System. G. S. Nurre and J. P. Sharkey, NASA Marshall Space Flight Center, J. D. Nelson, Lockheed Missiles and Space Company, and A. J. Bradley, Allied-Signal Aerospace Company (18, 2, p. 222) Article
- G95-034 Covariance Control Design for Hubble Space Telescope. Guoming Zhu, Karolos M. Grigoriadis, and Robert E. Skelton, *Purdue University* (18, 2, p. 230) Article
- G95-035 Autonomous Rendezvous Using Artificial Potential Function Guidance. Ismael Lopez and Colin R. McInnes, *University of Glasgow, Scotland, UK* (18, 2, p. 237) Article
- G95-036 Onboard Star Identification Without A Priori Attitude Information. Eleanor A. Ketchum, NASA Goddard Space Flight Center; and Robert H. Tolson, George Washington University (18, 2, p. 242) Article
- G95-037 Attitude Control System Conceptual Design for Geostationary Operational Environmental Satellite Spacecraft Series. F. L. Markley, F. H. Bauer, J. J. Deily, and M. D. Femiano, NASA Goddard Space Flight Center (18, 2, p. 247) Article based on AIAA Paper 91-2832 CP915
- G95-038 Attitude Stabilization of a Rigid Spaceceaft Using Two Momentum Wheel Actuators. Hariharan Krishnan, National University of Singapore; N. Harris McClamroch, University of Michigan; and Mahmut Reyhanoglu, King Fahd University of Petroleum and Minerals, Saudi Arabia (18, 2, p. 256) Article
- G95-039 General Attitude Maneuvers of Spacecraft with Flex-

- ible Structures. Yiing-Yuh Lin and Gern-Liang Lin, National Cheng Kung University, Taiwan, ROC (18, 2, p. 264) Article
- G95-040 Passivity Analysis for Flexible Multilink Space Manipulators. Christopher J. Damaren, Royal Roads Military College, Canada (18, 2, p. 272) Article
- G95-041 Dynamics and Control of Limit Cycling Motions in Boosting Rockets. Brett Newman, Old Dominion University (18, 2, p. 280) Article
- G95-042 Study of Strapdown Navigation Attitude Algorithms. Howard Musoff and James H. Murphy, *Charles Stark Draper Laoratory, Inc.* (18, 2, p. 287) Article based on AIAA Paper 93-3891
- G95-043 Failure Detection and Isolation Structure for Global Positioning System Autonomous Integrity Monitoring. Ren Da and Ching-Fang Lin, *American GNC Corporation* (18, 2, p. 291) Article
- G95-044 Robust Roll Modulation Guidance for Aeroassisted Mars Mission. Nick A. Thorp and Bion L. Pierson, *Iowa State University* (18, 2, p. 298) Article
- G95-045 Reduced-Computation End-Game Steering Laws for Predictive Guidance. Roger L. Barron, *Barron Associates, Inc.* (18, 2, p. 306) Article
- G95-046 Optimal Guidance and Nonlinear Estimation for Interception of Decelerating Targets. Michael E. Hough, *Textron Defense Systems* (18, 2, p. 316) Article
- G95-047 Control Design for Variations in Structural Natural Frequencies. Gary J. Balas, *University of Minnesota*; and Peter M. Young, *Massachusetts Institute of Technology* (18, 2, p. 325) Article
- G95-048 Closet Bifurcation Analysis and Robust Stability Design of Flexible Satellites. Andre P. Mazzoleni, *Texas Christian University*; and Ian Dobson, *University of Wisconsin* (18, 2, p. 333) Article
- G95-049 Modeling and Control for Vibration Suppression of a Flexible Active Structure. Jeffrey Dosch, AVC Instrumentation; Donald Leo, State University of New York at Buffalo; and Daniel Inman, Virginia Polytechnic Institute and State University (18, 2, p. 340) Article
- G95-050 Design of an Effective Controller via Disturbance Accommodating Left Eigenstructure Assignment. Jae Weon Choi, Jang Gyu Lee, and Youdan Kim, Seoul National University, Korea; and Taesam Kang, Hoseo University, Korea (18, 2, p. 347) Article
- **G95-051** Air Data Prediction from Surface Pressure Measurements on Guided Munitions. M. B. Anderson, W. R. Lawrence, and J. L. Lopez, *Sverdrup Technology, Inc.* (18, 2, p. 355) Article
- **G95-052** Reduced-Order Nonlinear Analysis of Aircraft Dynamics. Gerard Leng, *National University of Singapore* (18, 2, p. 361) Article
- G95-053 Application of Restructurable Flight Control System to Large Transport Aircraft. Y. Ochi and K. Kanai, *National Defense Academy, Japan* (18, 2, p. 365) Article
- **G95-054** Strong Hohmann Transfer Theorem. Fuyin Yuan and Koichi Matsushima, *National Aerospace Laboratory, Japan* (18, 2, p. 371) Engineering Note
- G95-055 Uniform Modal Damping of Rings by an Extended

- **Node Control Theorem.** Dino J. Rossetti, *North Carolina State University*; and Jian Q. Sun, *Lord Corporation* (18, 2, p. 373) Engineering Note
- G95-056 Alternative Variable Transformation for Simulation of Multibody Dynamic Systems. Li-Farn Yang, *National Chung-Cheng University, Taiwan, ROC* (18, 2, p. 375) Engineering Note
- G95-057 Trajectory Optimization Using Parallel Shooting Method on Parallel Computer. D. J. Wirthman, S.-Y. Park, and S. R. Vadali, *Texas A&M University* (18, 2, p. 377) Engineering Note
- G95-058 Maximum Likelihood Estimation of Fractional Brownian Motion and Markov Noise Parameters. Michael E. Ash, Charles Stark Draper Laboratory, Inc.; and Matthew E. Skeen, Cape Canaveral Air Force Station (18, 2, p. 379) Engineering Note
- G95-059 Aircraft Controller Synthesis by Solving a Nonconvex Optimization Problem. R. Srichander, *Technical University of Berlin, Germany* (18, 2, p. 382) Engineering Note
- G95-060 Measurement of the Modal Parameters of a Space Structure in Zero Gravity. Edward F. Crawley, Mark S. Barlow, Marthinus C. van Schoor, and Brett Masters, Massachusetts Institute of Technology; and Andrew S. Bicos, McDonnell Douglas Space System Company (18, 3, p. 385) Article
- **G95-061** Efficient Computation of the Eigensystem Realization Algorithm. L. D. Peterson, *University of Colorado* (18, 3, p. 395) Article
- **G95-062** Assumed Modes Method and Articulated Flexible Multibody Dynamics. S. S. K. Tadikonda, T. G. Mordfin, and T. G. Hu, *Grumman Space Station Integration Division* (18, 3, p. 404) Article based on AIAA Paper 93-3710 CP934
- G95-063 Structural Damage Detection Using Constrained Eigenstructure Assignment. Tae W. Lim, *University of Kansas* (18, 3, p. 411) Article
- **G95-064** Hybrid Approach for Damage Detection in Flexible Structures. Cuiping Li and Suzanne Weaver Smith, *University of Kentucky* (18, 3, p. 419) Article
- G95-065 Instability Tests, Lyapunov's Direct Method, and Exact Stability Boundaries for Flexible Satellites. Andre P. Mazzoleni, Texas Christian University; and Ian Dobson, University of Wisconsin (18, 3, p. 426) Article
- G95-066 Nonlinear Modal Control Method. Joseph C. Slater, Wright State University; and Daniel J. Inman, Virginia Polytechnic Institute and State University (18, 3, p. 433) Article
- G95-067 Guidance of a Homing Missile via Nonlinear Geometric Control Methods. Scott Bezick, Johns Hopkins University; Ilan Rusnak, RAFAEL, Ministry of Defense, Israel; and W. Steven Gray, Drexel University (18, 3, p. 441) Article
- G95-068 Three-Dimensional Air-to-Air Missile Trajectory Shaping. Renjith R. Kumar and Hans Seywald, Analytical Mechanics Associates, Inc.; and Eugene M. Cliff and Henry J. Kelley, Virginia Polytechnic Institute and State University (18, 3, p. 449) Article based on AIAA Paper 89-3637 CP899
- G95-069 Near-Optimal Three-Dimensional Air-to-Air Missile Guidance Against Maneuvering Target. Renjith R. Kumar and Hans Seywald, Analytical Mechanics Associates, Inc.; and Eugene M. Cliff, Virginia Polytechnic Institute and State University (18, 3, p. 457) Article

- G95-070 Optimal Midcourse Guidance Law for Fixed-Interval Propulsive Maneuvers. Mohammad-Ali Massoumnia, *Integrated Systems, Inc.* (18, 3, p. 465) Article
- G95-071 Examination of a Practical Aerobraking Guidance Algorithm. Steven W. Evans and Greg A. Dukeman, NASA Marshall Space Flight Center (18, 3, p. 471) Article
- G95-072 Neighboring Optimal Trajectories for Aeroassisted Orbital Transfer Under Uncertainties. C. D. Charalambous and D. S. Naidu, *Idaho State University*; and J. L. Hibey, *Old Dominion University* (18, 3, p. 478) Article based on AIAA Paper 92-0735
- G95-073 Optimal Sliding-Mode Control of a Flexible Spacecraft Under Stochastic Disturbances. Alok Sinha, *Pennsylvania State University*; and David W. Miller, *Massachussets Institute of Technology* (18, 3, p. 486) Article
- **G95-074** Trajectory and Control Optimization for Flexible Space Robots. L. Meirovitch and Y. Chen, *Virginia Polytechnic Institute and State University* (18, 3, p. 493) Article based on AIAA Paper 93-4322 CP928
- G95-075 Trainable Neural Network for Mechanically Flexible Systems Based on Nonlinear Filtering. Hsin-Tan Chiu and Sabri Cetinkunt, *University of Illinois at Chicago* (18, 3, p. 503) Article
- **G95-076** Design with Multiple-Delay-Model and Multiple-Design-Point Approach. Yoshikazu Miyazawa, *National Aerospace Laboratory, Japan* (18, 3, p. 508) Article based on AIAA Paper 92-4630 CP928
- G95-077 System Identification for Adaptive and Reconfigurable Control. P. R. Chandler, U.S. Air Force Wright Laboratory; M. Pachter, U.S. Air Force Institute of Technology, and M. Mears, U.S. Air Force Wright Laboratory (18, 3, p. 516) Article
- G95-078 Mixed  $H_2/H_{\infty}$  Control of Multimodel Plants. Ewald Schömig, University of Washington; Mario Sznaier, Pennsylvania State University; and Uy-Loi Ly, University of Washington (18, 3, p. 525) Article
- G95-079 Self-Scheduled  $H_{\infty}$  Control of Missile via Linear Matrix Inequalities. Pierre Apkarian and Jean-Marc Biannic, ONERA, France; and Pascal Gahinet, INRIA Rocquencourt Domaine de Voluceau (18, 3, p. 532) Article
- G95-080 Robust Multirate Eigenstructure Assignment with Flight Control Application. J. E. Piou, *Binghamton University*; and K. M. Sobel, *City College of New York* (18, 3, p. 539) Article based on AIAA Paper 94-3542
- G95-081 Analytical Gain Scheduling Approach to Periodic Observer Design. Jeff Wesley Fisher, Lockheed Missiles and Space Company; and Arthur Earl Bryson Jr., Stanford University (18, 3, p. 547) Article
- G95-082 Optimal Aircraft Terrain-Following Analysis and Trajectory Generation. Ping Lu and Bion L. Pierson, *Iowa State University* (18, 3, p. 555) Article
- **G95-083** Approximate Altitude Transitions for High-Speed Aircraft. M. D. Ardema, Santa Clara University; J. V. Bowles and E. J. Terjesen, NASA Ames Research Center, and T. Whittaker, Sterling Software (18, 3, p. 561) Article
- **G95-084** Solution of Aircraft Inverse Problems by Local Optimization. Guido de Matteis, Luciano M. de Socio, and Alexander Leonessa, *University of Rome "La Sapienza"*, *Italy* (18, 3, p. 567) Article
- G95-085 Integrated Flight/Propulsion Control: Subsystem

- Specifications for Performance. W. Kenneth Neighbors III and Stephen M. Rock, *Stanford University* (18, 3, p. 572) Article
- G95-086 Aggregation Effects in Air Traffic Arrival Flows. James DeArmon, *The MITRE Corporation* (18, 3, p. 579) Article
- G95-087 Autonomous Orbit and Magnetic Field Determination Using Magnetometer and Star Sensor Data. Mark L. Psiaki, Cornell University (18, 3, p. 584) Article based on AIAA Paper 93-3825
- G95-088 Transfer Orbits in Restricted Problem. Antonio Fernando Bertachini de Almeida Prado, *Instituto Naçional de Pesquisas Espaciasis, Brazil*; and Roger Broucke, *University of Texas at Austin* (18, 3, p. 593) Article based on AIAA Paper 94-3745
- G95-089 Optimization of Low-Thrust Interplanetary Trajectories Using Collocation and Nonlinear Programming. Sean Tang and Bruce A. Conway, *University of Illinois at Urbana-Champaign* (18, 3, p. 599) Article
- G95-090 Autonomous Imaging of Phobos and Deimos for the PLANET-B Mission. Jun'ichiro Kawaguchi, Tatsuaki Hashimoto, Ichiro Nakatani, and Keiken Ninomiya, *Institute of Space and Astronautical Science, Japan* (18, 3, p. 605) Article
- G95-091 Robust Stabilization of the Space Station in the Presence of Inertia Matrix Uncertainty. Bong Wie and Qiang Liu, Arizona State University; and John Sunkel, NASA Johnson Space Flight Center (18, 3, p. 611) Article
- G95-092 Spectral Analysis of Tethered Satellite System-Mission 1 Vibrations. S. Bergamaschi, F. Bonon, and M. Legnami, University of Padova, Italy (18, 3, p. 618) Article
- G95-093 Eigenstructure Assignment Using Inverse Eigenvalue Methods. D. J. Inman and A. Kress, *Virginia Polytechnic Institute and State University* (18, 3, p. 625) Engineering Note
- **G95-094** Variance-Based Sensor Placement for Modal Identification of Structures. Frederick A. Tasker and Chinchao Liu, *University of Maryland Baltimore County* (18, 3, p. 627) Engineering Note
- G95-095 New Filtering Method for Linear Weakly Coupled Stochastic Systems. Z. Gajic and Z. Aganovic, Rutgers University (18, 3, p. 630) Engineering Note
- G95-096 Perturbation Analysis for Flexible System Control. Chun-Liang Lin, Feng Chia University, Taiwan, ROC (18, 3, p. 633) Engineering Note
- G95-097 Regulation of Single-Link Flexible Manipulator Involving Large Elastic Deflections. King Yuan, *National Taiwan University, Taiwan, ROC* (18, 3, p. 635) Engineering Note
- G95-098 Radome Slope Compensation Using Multiple-Model Kalman Filters. Jium-Ming Lin, Chung-Hua Polytechnic Institute, Taiwan, ROC; and Yuan-Fong Chau, Chung-Shan Institute of Science and Technology, Taiwan, ROC (18, 3, p. 637) Engineering Note
- G95-099 Sensor Fault Detection and Diagnosis for a T700 Turboshaft Engine. Jonathan Litt, NASA Lewis Research Center, Mehmet Kurtkaya, Oyak Renault Automobile Company, Turkey, and Ahmet Duyar, Florida Atlantic University (18, 3, p. 640) Engineering Note
- **G95-100** On-Line Robust Stabilizer. R. Balan and D. Aur, *University "Politehnica" of Bucharest, Romania* (18, 3, p. 642) Engineering Note

- G95-101 Matched Asymptotic Expansion Solutions for an Ablating Hypervelocity Projectile. Colin R. McInnes, *University of Glasgow, Scotland, UK* (18, 3, p. 644) Engineering Note
- **G95-102** Approximate Solution to Lawden's Problem. Jerome M. Baker, *The Analytical Sciences Corporation* (18, 3, p. 646) Engineering Note
- G95-103 Vibrations of the Low Power Atmospheric Compensation Experiment Satellite. Shalom Fisher, U.S. Naval Research Laboratory; Kenneth I. Schultz, Massachusetts Institute of Technology, Lincoln Laboratory; and Lawrence W. Taylor Jr., NASA Langley Research Center (18, 4, p. 650) Article
- G95-104 Optimal Modal-Space Controller for Structural Damping Enhancements. Min-Hung Hsiao, Taipei Institute of Technology, Taiwan, ROC; Jen-Kuang Huang, Old Dominion University; and Lawrence W. Taylor Jr., NASA Langley Research Center (18, 4, p. 657) Article
- G95-105 Vibration Reduction in Rotocraft Using Active Control: A Comparison of Various Approaches. Peretz P. Friedmann and Thomas A. Millott, *University of California, Los Angeles* (18, 4, p. 664) Article
- G95-106 Experimental Application of an Explicit Optimal Linear Quadratic Gaussian Controller. John H. Lilly, *University of Louisville* (18, 4, p. 674) Article
- G95-107 Hybrid Equations of Motion for Flexible Multibody Systems Using Quasicoordinates. L. Meirovitch and T. Stemple, Virginia Polytechnic Institute and State University (18, 4, p. 678) Article
- G95-108 Human-in-the-Loop Evaluation of Remote Manipulator System Active Damping Augmentation. Martha E. Demeo, ViGYAN, Inc.; Michael G. Gilbert and Michael A. Scott, NASA Langley Research Center; Janet A. Lepanto, Charles Stark Draper Laboratory, Inc.; Elizabeth M. Bains, NASA Johnson Space Center; and Mary C. Jensen, Lockheed Engineering and Sciences Company, Inc. (18, 4, p. 689) Article based on AIAA Paper 93-3875 CP934
- **G95-109** Failure Diagnosis System Using ARTMAP Neural Networks. Ren Da and Ching-Fang Lin, *American GNC Corporation* (18, 4, p. 696) Article
- G95-110 Flight Test of Radar Altimeter Enhancement for Terrain-Referenced Guidance. Richard E. Zelenka, NASA Ames Research Center, Zee Yee, U.S. Army Command/Control and Systems Integration Directorate; and Andre Zirkler, Vitronics, Inc. (18, 4, p. 702) Article
  - Errata (18, 6, p. 1470)
- **G95-111 Optimal Guidance of Aeroassisted Transfer Vehicles Based on Matched Asymptotic Expansions.** A. J. Calise and N. Melamed, *Georgia Institute of Technology* (18, 4, p. 709) Article based on AIAA Paper 91-2680 CP915
- **G95-112 Evaluation of Optimal-Guidance Algorithm for Aeroassisted Orbit Transfer.** N. Melamed and A. J. Calise, *Georgia Institute of Technology* (18, 4, p. 718) Article based on AIAA Paper 92-4454 CP928
- G95-113 Optimal Atmospheric Trajectory for Aerogravity Assist with Heat Constraint. Fayyaz A. Lohar, Arun K. Misra, and Dan Mateescu, McGill University, Canada (18, 4, p. 723) Article
- G95-114 Neural Networks Approach to AIAA Aircraft Control Design Challenge. C. M. Ha, Lockheed Fort Worth Company (18, 4, p. 731) Article

- G95-115 Design and Examination of  $H_{\infty}$  Robust Controller for Ground Effect Problem. Kyoko Nitta, Nagoya University, Japan (18, 4, p. 740) Article
- G95-116 Consistent Model Reduction of Experimental Modal Parameters for Reduced-Order Control. K. F. Alvin, L. D. Peterson, and K. C. Park, *University of Colorado* (18, 4, p. 748) Article
- G95-117 Control of a Flexible Space Robot Executing a Docking Maneuver. Y. Chen and L. Meirovitch, Virginia Polytechnic Institute and State University (18, 4, p. 756) Article
- G95-118 Identification of Linear Stochastic Systems Through Projection Filters. Chung-Wen Chen, Geophysical and Environmental Research Corporation; Jen-Kuang Huang, Old Dominion University; and Jer-Nan Juang, NASA Langley Research Center (18, 4, p. 767) Article based on AIAA Paper 92-2520 CP922
- G95-119 Decentralized Sliding Mode Control in Three-Axis Inertial Platforms. Yuri B. Shtessel, *University of Alabama in Huntsville* (18, 4, p. 773) Article
- G95-120 Minimum-Time Reorientation of a Two-Degree-of-Freedom Gyroscope. Shmuel Boyarski and Joseph Z. Ben-Asher, *Tel-Aviv University, Israel* (18, 4, p. 782) Article
- G95-121 Robust Game Theoretic Synthesis in the Presence of Uncertain Initial States. Sinpyo Hong and Jason L. Speyer, *University of California, Los Angeles* (18, 4, p. 792) Article
- G95-122 Flutter Margin Augmentation Synthesis Using Normalized Coprime Factors Approach. Dario H. Baldelli and Hirobumi Ohta, *Nagoya University, Japan*; and Hiroshi Matsushita, Masataka Hashidate, and Kenichi Saitoh, *National Aerospace Laboratory*, *Japan* (18, 4, p. 802) Article
- **G95-123** Nonlinear Decoupling Control of Aircraft Motion. Zhou Zhiqiang, *Northwestern Polytechnical University, PRC* (18, 4, p. 812) Article based on AIAA Paper 94-3517 CP949
- G95-124 Aircraft Terrain Following Based on a Nonlinear Continuous Predictive Control Approach. Ping Lu and Bion L. Pierson, *Iowa State University* (18, 4, p. 817) Article based on AIAA Paper 95-3342 CP957
- **G95-125** Close Conjunction Detection on Parallel Computer. Liam M. Healy, *U.S. Naval Research Laboratory* (18, 4, p. 824) Article
- G95-126 Optimal Low-Thrust Three-Dimensional Earth-Moon Trajectories. Craig A. Kluever, *University of Missouri-Columbia/Kansas City*; and Bion L. Pierson, *Iowa State University* (18, 4, p. 830) Article
- **G95-127** Terminal Spacecraft Coplanar Rendezvous Control. Shaohua Yu, Center for Space Science and Applied Research, PRC (18, 4, p. 838) Article
- G95-128 Satellite Autonomous Navigation Based on Magnetic Field Measurements. Gil Shorshi and Itzhack Y. Bar-Itzhack, Technion—Israel Institute of Technology (18, 4, p. 843) Article
- **G95-129** Estimation and Control of Tethered Satellite Systems. Ehud Netzer, *Technion—Israel Institute of Technology*, and Thomas R. Kane, *Stanford University* (18, 4, p. 851) Article
- G95-130 Spacecraft Orientation Based on Space Object Observations by Means of Quaternion Algebra. L. Aramanovitch, State University of Geodesy and Cartography, Russia (18, 4, p. 859) Article

- G95-131 Closed Loop Momentum Transfer Maneuvers Using Multiwheels. Jun'ichiro Kawoguchi, Institute of Space and Astronautical Science, Japan; Ken Maeda, NEC Aerospace System, Ltd., Japan; and Hiroki Matsuo and Keiken Ninomiya, Institute of Space and Astronautical Science, Japan (18, 4, p. 867) Article based on AIAA Paper 92-4332 CP928
- **G95-132 Dynamic Modeling of a Trailing Wire Towed by an Orbiting Aircraft.** James M. Clifton, *U.S. Naval Air Warfare Center*; Louis V. Schmidt, *U.S. Naval Postgraduate School*; and Thomas D. Stuart, *U.S. Navy* (**18**, 4, p. 875) Article based on AIAA Paper 93-3663 CP937
- **G95-133 Geometric Stiffening in Multibody Dynamics Formulations.** Inna Sharf, *University of Victoria, Canada* (18, 4, p. 882) Article
- G95-134 Application of Rigid Finite Element Method to Dynamic Analysis of Spatial Systems. Edmund Wittbrodt and Stanislaw Wojciech, *Technical University of Gdansk, Poland* (18, 4, p. 891) Article
- G95-135 Eigenvector Derivatives for Mechanical Second-Order Systems. Youdan Kim and Seungjae Lee, Seoul National University, Korea; and John L. Junkins, Texas A&M University (18, 4, p. 899) Article
- **G95-136 Maximum Power Absorption with Active Struts.** Rakel Kristin Kanestrøm, *Stord/Haugesund College, Norway*, and Olav Egeland, *Norwegian Institute of Technology* (**18**, 4, p. 907) Engineering Note
- G95-137 Two Misconceptions in the Theory of Inertial Navigation Systems. Itzhack Y. Bar-Itzhack, *Technion—Israel Institute of Technology* (18, 4, p. 908) Engineering Note based on AIAA Paper 93-3819 CP934
- G95-138 Controllability and Optimization in Aeroassited Orbital Transfer. R. Andiarti and C. H. Moog, Laboratoire d'Automatique de Nantes, France; and J. Szymanowski, Warsaw University of Technology, Poland (18, 4, p. 911) Engineering Note
- G95-139 Shaping Time Response by State Feedback in Minimum-Phase Systems. Pradeep Misra and Arnab K. Shaw, Wright State University (18, 4, p. 913) Engineering Note
- G95-140 Experimental Control of a Single-Link Flexible Arm Incorporating Electrorheological Fluids. Seung-Bok Choi, *Inha University, Korea*; and Brian S. Thompson and Mukesh V. Gandhi, *Michigan State University* (18, 4, p. 916) Engineering Note
- G95-141 Calculation of Second and Higher Order Eigenvector Derivatives. Michael I. Friswell, *University College of Swansea, Wales, UK* (18, 4, p. 919) Engineering Note
- G95-142 U-Parameter Robust Flight Control Design. Chih-Min Lin, Yuan-Ze Institute of Technology, Taiwan, ROC; and Ruey-Shih Tai, Chung-Shan Institute of Science and Technology, Taiwan, ROC (18, 4, p. 921) Engineering Note
- G95-143 Methodology for Integration of Digital Control Loaders in Aircraft Simulators. Amnon Katz and Marc F. Schamlé, *University of Alabama* (18, 4, p. 923) Engineering Note
- G95-144 Improved Literal Approximation for Lateral-Directional Dynamics of Rigid Aircraft. Rafael Livneh, *Arizona State University* (18, 4, p. 925) Engineering Note
- **G95-145** Pointing Geometry for Low Earth Orbit Auroral Observations. F. Shahidi and L. J. C. Woolliscroft, *University of Sheffield, England, UK* (18, 4, p. 928) Engineering Note

- G95-146 Low-Earth-Orbit Maintenance: Reboost vs Thrust-Drag Cancellation. I. Michael Ross and Kyle T. Alfriend, U.S. Naval Postgraduate School (18, 4, p. 930) Engineering Note
- G95-147 Near-Optimal Three-Dimensional Rotational Maneuvers of Spacecraft Using Manipulator Arms. S. Krishnan and S. R. Vadali, *Texas A&M University* (18, 4, p. 932) Engineering Note
- **G95-148** Multistage Integration Model for Human Egomotion Perception. Greg L. Zacharias and Adam X. Miao, *Charles River Analytics*; and Rik Warren, *Armstrong Laboratory* (18, 5, p. 937) Article based on AIAA Paper 93-3564 CP937
- G95-149 Feedback Linearization Autopilot Design for the Advanced Kinetic Energy Missile Boost Phase. H. J. Gratt, KBM Enterprises, Inc.; and W. L. McCowan, U.S. Army Missile Command (18, 5, p. 945) Article based on AIAA Paper 93-3736 CP934
- G95-150 Bank-to-Turn Optimal Guidance with Linear Exponential Quadratic Gaussian Performance Criterion. Jium-Ming Lin, Chung-Hua Polytechnic Institute, Taiwan, ROC, and Shih-Wen Lee, Chung Shan Institute of Science and Technology, Taiwan, ROC (18, 5, p. 951) Article
- G95-151 Optimal Guidance and Nonlinear Estimation for Interception of Accelerating Targets. Michael E. Hough, *Textron Defense Systems* (18, 5, p. 959) Article
- **G95-152** Proportional Navigation and Weaving Targets. Paul Zarchan, Charles Stark Draper Laboratory, Inc. (18, 5, p. 969) Article
- G95-153 Linearized Kappa Guidance. Demetrios Serakos, U.S. Naval Surface Warfare Center, and Ching-Fang Lin, American GNC Corporation (18, 5, p. 975) Article
- G95-154 Optimum Guidance with a Single Uncertain Time Lag. I. Yaesh and J. Z. Ben Asher, *TAAS Israel Industries* (18, 5, p. 981) Article
- G95-155 Numerical Approach to Computing Nonlinear  $H_{\infty}$  Control Laws. Jie Huang and Ching-Fang Lin, American GNC Corporation (18, 5, p. 989) Article
- **G95-156 Optimal Pole Placement in Time-Dependent Linear Systems.** William E. Wiesel, *U.S. Air Force Institute of Technology* (**18**, 5, p. 995) Article
- G95-157 Closed-Form Solutions to Constrained Control Allocation Problem. Kenneth A. Bordignon and Wayne C. Durham, Virginia Polytechnic Institute and State University (18, 5, p. 1000) Article
- G95-158 On-Line Learning Neural-Network Controllers for Autopilot Systems. Marcello R. Napolitano and Michael Kincheloe, West Virginia University (18, 5, p. 1008) Article
- G95-159 Reconfigurable Tracking Control with Saturation. M. Pachter, U.S. Air Force Institute of Technology, and P. R. Chandler and M. Mears, U.S. Air Force Wright Laboratory (18, 5, p. 1016) Article
- G95-160 Nonlinear Predictive Control of Feedback Linearizable Systems and Flight Control System Design. Sahjendra N. Singh, *University of Nevada, Las Vegas*; and Marc Steinberg and Robert D. DiGirolamo, *U.S. Naval Air Warfare Center* (18, 5, p. 1023) Article
- **G95-161** Feedback System Design for Stable Plants with Input Saturation. R. A. Hess, *University of California, Davis* (18, 5, p. 1029) Article

- G95-162 Finite Element Method for the Solution of State-Constrained Optimal Control Problems. Robert R. Bless, Lockheed Engineering and Sciences Company, Inc.; Dewey H. Hodges, Georgia Institute of Technology; and Hans Seywald, Analytical Mechanics Associates, Inc. (18, 5, p. 1036) Article
- G95-163 Dissipative Controllers for Nonlinear Multibody Flexible Space Systems. A. G. Kelkar and S. M. Joshi, NASA Langley Research Center, and T. E. Alberts, Old Dominion University (18, 5, p. 1044) Article
- G95-164 Substructure-Based Controller Design Method for Flexible Structures. Tzu-Jeng Su, NASA Langley Research Center; and Vit Babuška and Roy R. Craig Jr., University of Texas at Austin (18, 5, p. 1053) Article
- G95-165 Flexible Vehicle Control Using Quantitative Feedback Theory. R. A. Hess and D. K. Henderson, *University of California, Davis* (18, 5, p. 1062) Article
- G95-166 Precision Position Control of Piezoelectric Actuators Using Charge Feedback. John A. Main, *University of Maine*; Ephrahim Garcia, *Vanderbilt University*; and David V. Newton, *Garman Systems, Inc.* (18, 5, p. 1068) Article
- **G95-167** Unified Literal Approximations for Longitudinal Dynamics of Flexible Flight Vehicles. Rafael Livneh, *Arizona State University*; and David K. Schmidt, *University of Maryland* (18, 5, p. 1074) Article
- **G95-168** Aircraft Flight Control in Wind Shear Using Sequential Dynamic Inversion. Sandeep S. Mulgund and Robert F. Stengel, *Princeton University* (18, 5, p. 1084) Article
- G95-169 Control Stick Logic in High-Angle-of-Attack Maneuvering. Wayne C. Durham, Virginia Polytechnic Institute and State University (18, 5, p. 1092) Article
- G95-170 Hybrid Fuzzy Logic Flight Controller Synthesis via Pilot Modeling. K. KrishnaKumar, *University of Alabama*; P. Gonsalves, *Charles River Analytics*; A. Satyadas, *Flexible Intelligence Group, LLC*; and G. Zacharias, *Charles River Analytics* (18, 5, p. 1098) Article
- G95-171 Time-Optimal Lateral Maneuvers of an Aircraft. Yigang Fan, Frederick H. Lutze, and Eugene M. Cliff, Virginia Polytechnic Institute and State University (18, 5, p. 1106) Article
- G95-172 Aircraft Antilock Brake System with Neural Networks and Fuzzy Logic. H. Chris Tseng, *Duke University*; and Charlie W. Chi, *Santa Clara University* (18, 5, p. 1113) Article
- G95-173 Stability of Motion on Three-Dimensional Halo Orbits. Mihai Popescu, *Institute of Applied Mathematics, Romania* (18, 5, p. 1119) Article
- G95-174 Experimental Satellite Trajectory Analysis Using Decision-Based Robust Design. Uwe Lautenschlager, Stein Ove Erikstad, Janet K. Allen, and Farrokh Mistree, *University of Houston* (18, 5, p. 1126) Article
- **G95-175** Earth-to-Moon Transfer with a Limited Power Engine. Moshe Guelman, *Technion—Israel Institute of Technology* (18, 5, p. 1133) Article based on AIAA Paper 94-3761 CP9411
- **G95-176** Expert System for Processing Uncorrelated Satellite Tracks. Michael Hecker, U.S. Naval Postgraduate School (18, 5, p. 1139) Article
- G95-177 Optimal Power-Limited Rendezvous with Thrust Saturation. Cyrus J. Pardis, Worcester Polytechnic Institute; and

- Thomas E. Carter, Eastern Connecticut State University (18, 5, p. 1145) Article
- G95-178 Optimal Station-Change Maneuver for Geostationary Satellites Using Constant Low Thrust. Nathan A. Titus, *Phillips Laboratory* (18, 5, p. 1151) Article
- **G95-179** Fuel-Optimal Stationkeeping via Differential Inclusions. Renjith R. Kumar and Hans Seywald, *Analytical Mechanics Associates, Inc.* (18, 5, p. 1156) Article
- G95-180 Integrating Robustness into Multiobjective Space Vehicle Design Process. Stein Ove Erikstad, Uwe Lautenschlager, Bert Bras, Janet K. Allen, and Farrokh Mistree, Georgia Institute of Technology (18, 5, p. 1163) Article
- G95-181 Modeling Issues Related to Retrieval of Flexible Tethered Satellite Systems. Euisok Kim and Srinivas R. Vadali, *Texas A&M University* (18, 5, p. 1169) Article
- **G95-182** Spinup Dynamics of Gyrostats. Christopher D. Hall, U.S. Air Force Institute of Technology (18, 5, p. 1177) Article
- G95-183 Near-Minimum-Time Eigenaxis Rotation Maneuvers Using Reaction Wheels. Willem H. Steyn, *University of Stellenbosch, South Africa* (18, 5, p. 1184) Article
- G95-184 Fluid Force Activated Spacecraft Dynamics Driven by Gravity Gradient and Jitter Accelerations. R. J. Hung and H. L. Pan, *University of Alabama in Huntsville* (18, 5, p. 1190) Article
- **G95-185** Nutational Stability and Passive Control of Spinning Rockets with Internal Mass Motion. D. M. Halsmer, Oral Roberts University; and D. L. Mingori, University of California, Los Angeles (18, 5, p. 1197) Article based on AIAA Paper 92-4544 CP928
- G95-186 Distributed Control of Maneuvering Vehicles for On-Orbit Assembly. Colin R. McInnes, *University of Glasgow, Scotland, UK* (18, 5, p. 1204) Engineering Note
- G. Sachs and R. Bayer, *Technical University of Munich, Germany* (18, 5, p. 1206) Engineering Note
- G95-188 Control Variables for Finite Element Solution of Missile Trajectory Optimization. Dewey H. Hodges, Georgia Institute of Technology; and Malvin G. Johnson Jr., LORAL Vought Systems (18, 5, p. 1208) Engineering Note
- G95-189 Minimal Time Change Detection Algorithm for Reconfigurable Flight Control Systems. Sungwan Kim, University of California, Los Angeles (18, 5, p. 1211) Engineering Note
- **G95-190** Elliptical Orbit with Variable Angular Momentum. Rachad M. Shoucri, *Royal Military College of Canada* (18, 5, p. 1213) Engineering Note
- G95-191 Autonomous Ring Formation for a Planar Constellation of Satellites. Colin R. McInnes, *University of Glasgow, Scotland, UK* (18, 5, p. 1215) Engineering Note
- G95-192 Orbital Strategies Around a Comet by Means of a Genetic Algorithm. Maxwell Noton, *England, UK* (18, 5, p. 1217) Engineering Note
- G95-193 Clarification of the Garber Instability for Gravity-Gradient Stabilized Spacecraft. John T. Harduvel, McDonnell Douglas Aerospace (18, 5, p. 1220) Engineering Note
- G95-194 Fuel/Time Optimal Control of the Benchmark Prob-

- lem. Tarunraj Singh, State University of New York at Buffalo (18, 6, p. 1225) Article
- G95-195 Nonlinear Control Law for Aerial Towed Target. Alexander S. Bourmistrov, Robin D. Hill, and Paul Riseborough, Royal Melbourne Institute of Technology, Australia (18, 6, p. 1232) Article
- G95-196 Optimal Tradeoff Between  $H_2$  Performance and Tracking Accuracy in Servocompensator Synthesis. Andrew G. Sparks and Dennis S. Bernstein, *University of Michigan* (18, 6, p. 1239) Article
- **G95-197** Real Structured Singular Value Synthesis Using the Scaled Popov Criterion. Andrew G. Sparks and Dennis S. Bernstein, *University of Michigan* (18, 6, p. 1244) Article
- **G95-198** Pole Placement in Optimal Regulator by Continuous Pole-Shifting. Y. Ochi and K. Kanai, *National Defense Academy, Japan* (18, 6, p. 1253) Article based on AIAA Paper 93-3845 CP934
- G95-199 Maximum-Payload Trajectories for a Laser-Propelled Launch Vehicle. W. Edward Humble and Bion L. Pierson, *Iowa State University* (18, 6, p. 1259) Article
- G95-200 Adjoint Variable Solutions via an Auxiliary Optimization Problem. Craig A. Martell and John A. Lawton, *U.S. Naval Surface Warfare Center* (18, 6, p. 1267) Article
- G95-201 Optimal Planar Interception with Terminal Constraints. Moshe Idan, *Technion—Israel Institute of Technology*; Oded M. Golan, *RAFAEL*, *Ministry of Defense*, *Israel*; and Moshe Guelman, *Technion—Israel Institute of Technology* (18, 6, p. 1273) Article
- G95-202 Neural-Network-Based Scheme for Sensor Failure Detection, Identification, and Accommodation. Marcello R. Napolitano, Charles Neppach, Van Casdorph, and Steve Naylor, West Virginia University; and Mario Innocenti and Giovanni Silvestri, University of Pisa, Italy (18, 6, p. 1280) Article
- **G95-203** Analytical Models of Doppler Data Signatures. Connie J. Weeks and Melissa J. Bowers, *Loyola Marymount University* (18, 6, p. 1287) Article
- G95-204 Identification of a Nonlinear Aerodynamic Model of the F-14 Aircraft. Thomas L. Trankle, Systems Control Technology, Inc.; and Stephen D. Bachner, U.S. Naval Air Warfare Center (18, 6, p. 1292) Article based on AIAA Paper 93-3634 CP937
- G95-205 Resonance Control of Aircraft Instabilities by Smooth and Continuous Feedback. Mark A. Pinsky and Bill Essary, *University of Nevada, Reno* (18, 6, p. 1298) Article
- **G95-206** Aerocapture with a Flexible Tether. Jordi Puig-Suari, James M. Longuski, and Steven G. Tragesser, *Purdue University* (18, 6, p. 1305) Article
- G95-207 Comparative Stability Analysis and Performance of Magnetic Controllers for Bias Momentum Satellites. Hari B. Hablani, Rockwell International Corporation (18, 6, p. 1313) Article
- G95-208 Magnetic Precession and Product-of-Inertia Nutation Damping of Bias Momentum Satellites. Hari B. Hablani, *Rockwell International Corporation* (18, 6, p. 1321) Article
- **G95-209** Resonance Capture in Unbalanced Dual-Spin Spacecraft. Raymond Tsui and Christopher D. Hall, *U.S. Air Force Institute of Technology* (18, 6, p. 1329) Article based on AIAA Paper 94-3714 CP9411

- **G95-210 Robust Closed-Loop Control Design for Spacecraft Slew Maneuver Using Thrusters.** Brij N. Agrawal and Hyochoong Bang, *U.S. Naval Postgraduate School* (18, 6, p. 1336) Article
- G95-211 Smooth Sliding-Mode Control for Spacecraft Attitude Tracking Maneuvers. Shih-Che Lo and Yon-Ping Chen, *National Chiao Tung University, Taiwan, ROC* (18, 6, p. 1345) Article
- G95-212 Suboptimal Command Generation for Control Moment Gyroscopes and Feedback Control of Spacecraft. S. R. Vadali and S. Krishnan, *Texas A&M University* (18, 6, p. 1350) Article
- G95-213 Roll/Pitch Determination with Scanning Horizon Sensors: Oblateness and Altitude Corrections. Hari B. Hablani, Rockwell International Corporation (18, 6, p. 1355) Article
- G95-214 Spacecraft Attitude Determination by Kalman Filtering of Global Positioning System Signals. Stephen J. Fujikawa, Welch Engineering, Ltd.; and Darrell F. Zimbelman, ITHACO Technical Services (18, 6, p. 1365) Article
- G95-215 Feedback Control Logic for Spacecraft Eigenaxis Rotations Under Slew Rate and Control Constraints. Bong Wie and Jianbo Lu, *Arizona State University* (18, 6, p. 1372) Article based on AIAA Paper 94-3563 CP948
- G95-216 Near-Minimum-Time Maneuvers of Large Structures: Theory and Experiments. S. R. Vadali, M. T. Carter, and T. Singh, *Texas A&M University*; and N. S. Abhyankar, *Dynacs Engineering Company* (18, 6, p. 1380) Article based on AIAA Paper 94-3624 CP948
- G95-217 Experiments with Model-Simplified Computed-Torque Manipulator Controllers for Free-Flying Robots. R. Koningstein, *CriSys, Ltd., Canada*; and R. H. Cannon Jr., *Stanford University* (18, 6, p. 1386) Article
- G95-218 Modeling of Translational Motion Between Two Flexible Bodies Connected via Three Points. Sivakumar S. K. Tadikonda, *Grumman Corporation* (18, 6, p. 1392) Article
- **G95-219** Influence of Pinned Joints on Damping and Dynamic Behavior of a Truss. Steven L. Folkman, Edwin A. Rowsell, and Greg D. Ferney, *Utah State University* (18, 6, p. 1398) Article
- G95-220 Motion of a Rigid Body with an Attached Spring-Mass Damper. Anne E. Chinnery and Christopher D. Hall, U.S.

- Air Force Institute of Technology (18, 6, p. 1404) Article based on AIAA Paper 94-3715 CP9411
- G95-221 Generalization of the Wittrick-Williams Formula for Counting Modes of Flexible Structures. A. V. Balakrishnan, University of California, Los Angeles (18, 6, p. 1410) Article
- G95-222 Observability of Gravimeter-Aided Inertial Navigation Systems. Y. G. Prokhorov, State Academy of Management, Russia (18, 6, p. 1416) Article
- **G95-223** Simple Guidance Method for Single Stage to Low Earth Orbit. Bandu N. Pamadi, *ViGYAN*, *Inc.* (18, 6, p. 1420) Article
- G95-224 Terminal Homing Performance of Semiactive Missiles Against Multitarget Raids. Craig Phillips, U.S. Naval Surface Warfare Center (18, 6, p. 1427) Article
- **G95-225 Bayesian State Estimation for Tracking and Guidance Using the Bootstrap Filter.** Neil Gordon and David Salmond, *Defence Research Agency, England, UK*; and Craig Ewing, *Eglin Air Force Base* (18, 6, p. 1434) Article based on AIAA Paper 93-3701 CP934
- **G95-226** Terrain-Aided Navigation Using the Viterbi Algorithm. Russell Enns, *McDonnell Douglas Helicopter Company*; and Darryl Morrell, *Arizona State University* (18, 6, p. 1444) Article
- G95-227 Passive Airborne Navigation and Terrain Avoidance Using Gravity Gradiometry. David M. Gleason, *Phillips Laboratory* (18, 6, p. 1450) Article
- G95-228 Optimal Maneuver of a Flexible Arm by Space–Time Finite Element Method. Alona Ben-Tal and Pinhas Bar-Yoseph, Technion—Israel Institute of Technology, and Henryk Flashner, University of Southern California (18, 6, p. 1459) Engineering Note
- G95-229 Determination of Weighting Matrices of a Linear Quadratic Regulator. Jia Luo, Lutz, Daily and Brain; and C. Edward Lan, University of Kansas (18, 6, p. 1462) Engineering Note
- G95-230 Recurrent Artificial Neural Network Simulation of a Chaotic System Without Training. Andrew J. Meade Jr. and Rafael Moreno, William Marsh Rice University (18, 6, p. 1463) Engineering Note