

## Chronological Index

**G84-091 A General Formulation for Librational Dynamics of Spacecraft with Deploying Appendages.** V. J. Modi and A. M. Ibrahim, *University of British Columbia* (7, 5, p. 564) Article based on AIAA Paper 83-0432

Technical Comment by Kenneth W. Lips, *Communications Research Center, Canada* (9, 1, p. 125)

Reply (9, 1, p. 126)

**G85-028 To Pursue or to Evade—That is the Question.** A. W. Merz, *Lockheed Palo Alto Research Laboratory* (8, 2, p. 161) Article

Technical Comment by John V. Breakwell, *Stanford University* (9, 1, p. 127)

Reply (9, 1, p. 128)

**G85-083 Minimum Energy-Loss Guidance for Aeroassisted Orbital Plane Change.** D. G. Hull, J. M. Giltner, J. L. Speyer and J. Mapar, *University of Texas at Austin* (8, 4, p. 487) Article based on AIAA Paper 84-1825 CP848

Technical Comment by Ernst D. Dickmanns, *Universität der Bundeswehr, FRG* (9, 6, p. 725)

**G85-113 Absolute Stability of Symmetric Highly Maneuverable Missiles.** M. Guelman, *Rafael, Ministry of Defense (Israel)* (8, 5, p. 660) Engineering Note

Errata (9, 4, p. 512)

**G85-133 A New Algorithm for the Computation of the Geodetic Coordinates as a Function of Earth-Centered Earth-Fixed Coordinates.** Lawrence O. Lupash, *Intermetrics Inc.* (8, 6, p. 787) Engineering Note

Technical Comment by James Nohl Churchyard, *The FORTRAN Doctor* (9, 4, p. 511)

Reply (9, 4, p. 511)

**G86-001 Flight Dynamics of a Spinning, Sequential Munition-Dispenser.** B. L. Nagabhushan, *Goodyear Aerospace Corporation* (9, 1, p. 6) Article

**G86-002 Dynamics of a Subsatellite System Supported by Two Tethers.** A. K. Misra and G. S. Diamond, *McGill University, Canada* (9, 1, p. 12) Article based on AIAA Paper 84-0062

**G86-003 Optimal Multiple-Impulse Time-Fixed Rendezvous Between Circular Orbits.** John E. Prussing, *University of Illinois at Urbana-Champaign*; and Jeng-Hua Chiu, *Chung Shan Institute of Science and Technology, China* (9, 1, p. 17) Article based on AIAA Paper 84-2036

Errata (9, 2, p. 255)

**G86-004 An Energy Approach for Orbital Transfers.** D. H. May, *6555 Aerospace Test Group, Cape Canaveral Air Force Station* (9, 1, p. 23) Article based on AIAA Paper 84-2054

**G86-005 A Simple Targeting Technique for Two-Body Spacecraft Trajectories.** Dale Gordon Stuart, *Massachusetts Institute of Technology* (9, 1, p. 27) Article

**G86-006 Perturbation Guidance Laws for Perfect Information Interceptors with Symmetrical Nonlinearities.** M. Shefer and J. V. Breakwell, *Stanford University* (9, 1, p. 32) Article

**G86-007 Extension of the Midvalue Selection Technique for Redundancy Management of Inertial Sensors.** James E. Potter, *The Charles Stark Draper Laboratory, Inc.*; and M. C. Suman, *Litton Guidance and Control Systems* (9, 1, p. 37) Article based on AIAA Paper 78-1320 CP785

**G86-008 Linear-Quadratic Gaussian with Loop-Transfer Recovery Methodology for the F-100 Engine.** Michael Athans, Petros Kapasouris, Efthimios Kappos and H. A. Spang III, *Massachusetts Institute of Technology* (9, 1, p. 45) Article based on AIAA Paper 84-1910 CP848

**G86-009 Necessary Conditions for Optimal Pulse Control.** Anthony J. Calise, *Drexel University*; and Joseph Nagy, *McDonnell Douglas Astronautics Company* (9, 1, p. 53) Article based on AIAA Paper 85-1955 CP856

**G86-010 Endurance Increase by Cyclic Control.** Gottfried Sachs and Theodoros Christodoulou, *Technical University of Munich* (9, 1, p. 58) Article

**G86-011 Design of an Active Flutter Suppression System.** Bradley S. Liebst and William L. Garrard, *University of Minnesota*; and William M. Adams, *NASA Langley Research Center* (9, 1, p. 64) Article based on AIAA Paper 84-1867 CP848

**G86-012 Control of a Forward-Swept-Wing Configuration Dominated by Flight Dynamic/Aeroelastic Interactions.** M. Rimer, R. Chipman and B. Muniz, *Grumman Aerospace Corporation* (9, 1, p. 72) Article based on AIAA Paper 84-1866 CP848

**G86-013 Simulator Evaluation of a Remotely Piloted Vehicle Visual Landing Task.** Shahan K. Sarrafian, *NASA Dryden Flight Research Facility* (9, 1, p. 80) Article based on AIAA Paper 84-2095 CP849

**G86-014 Robustness Properties of Collocated Controllers for Flexible Spacecraft.** S. M. Joshi, *NASA Langley Research Center* (9, 1, p. 85) Article

**G86-015 In-Flight Identification of the Galileo Spacecraft Flexible Mode Characteristics.** Edward C. Wong, *Jet Propulsion Laboratory, California Institute of Technology* (9, 1, p. 92) Article based on AIAA Paper 84-1965 CP848

**G86-016 Optimal Nonlinear Feedback Control for Spacecraft Attitude Maneuvers.** C. K. Carrington and J. L. Junkins, *Virginia Polytechnic Institute and State University* (9, 1, p. 99) Article based on AIAA Paper 83-2230 CP836

**G86-017 Evolution of an Attitude Control System for Body-Stabilized Communication Spacecraft.** L. Muhlfelder, *RCA Astro-Electronics* (9, 1, p. 108) Article based on AIAA Paper 84-1839 CP848

**G86-018 Motor Characteristics in the Control of a Compliant Load.** E. G. Harokopos and R. W. Mayne, *State University of New York, Buffalo* (9, 1, p. 113) Article

- G86-019 A Parallel Quasi-Linearization Algorithm for Air Vehicle Trajectory Optimization.** P. K. A. Menon and L.L. Lehman, *Integrated Systems, Inc.* (9, 1, p. 119) Engineering Note
- G86-020 The Principal Minor Test for Semidefinite Matrices.** John E. Prussing, *University of Illinois at Urbana-Champaign* (9, 1, p. 121) Engineering Note
- G86-021 Gravity Gradient Torque for an Arbitrary Potential Function.** David R. Glandorf, *Lockheed Engineering and Management Services Company* (9, 1, p. 122) Engineering Note
- G86-026 Spacecraft Attitude Dynamics and Control—A Personal Perspective on Early Developments (History of Key Technologies).** Peter Likins, *Lehigh University* (9, 2, p. 129) Survey Paper
- G86-027 Advanced Midcourse Guide for Air-to-Air Missiles.** V. H. L. Cheng and N. K. Gupta, *Integrated Systems, Inc.* (9, 2, p. 135) Article
- G86-028 Differential Interferometry for Precise Tracking of a Geosynchronous Satellite.** T. Shiomi and S. Nagai, *Radio Research Laboratory, Japan*; S. Kozono, Y. Arimoto and M. Isogai, *Telecommunications Satellite Corporation of Japan* (9, 2, p. 143) Article
- G86-029 Optimal Continuous Control for Remote Orbital Capture.** B. A. Conway, *University of Illinois at Urbana-Champaign*; and J. W. Widhalm, *Air Force Institute of Technology, Wright-Patterson Air Force Base* (9, 2, p. 149) Article
- G86-030 Attitude Determination Covariance Analysis for Geostationary Transfer Orbits.** Jozef C. Van der Ha, *Eurobean Space Operations Center ESA, Federal Republic of Germany* (9, 2, p. 164) Article
- G86-031 Wind Shear Estimation by Frequency-Shaped Optimal Estimator.** B.K. Kim and J.A. Bossi, *University of Washington* (9, 2, p. 164) Article
- G86-032 Periodic Control for Minimum-Fuel Aircraft Trajectories.** W. Grimm and K. H. Well, *DFVLR Institute for Flight Systems Dynamics, Federal Republic of Germany*; and H. J. Oberle, *University of Hamburg, Federal Republic of Germany* (9, 2, p. 169) Article
- G86-033 A Performance Evaluation of the Software-Implemented Fault-Tolerance Computer.** Daniel L. Palumbo and Ricky W. Butler, *NASA Langley Research Center* (9, 2, p. 175) Article
- G86-034 Actuator Failure Detection in the Control of Distributed Systems.** H. Baruh, *Rutgers University* (9, 2, p. 181) Article
- G86-035 Influence of High-Order Dynamics on Helicopter Flight-Control System Bandwidth.** Robert T. N. Chen, *NASA Ames Research Center*; and William S. Hindson, *Stanford University* (9, 2, p. 190) Article
- G86-036 An Interpretation of Airplane General Motion and Control as Inverse Problem.** Osamu Kato and Ichiro Sugiura, *Nagoya University, Japan* (9, 2, p. 198) Article
- G86-037 Transient Motion of a Hypersonic Wedge, Including Time History Effects.** W. H. Hui and H. J. Van Roessel, *University of Waterloo, Canada* (9, 2, p. 205) Article based on AIAA Paper 85-0201
- G86-038 Flight Trajectory Simulation of Fluid Payload Projectiles.** Harold R. Vaughn, Walter P. Wolfe and William L. Oberkampf, *Sandia National Laboratories* (9, 2, p. 213) Article based on AIAA Paper 85-1824 CP857
- G86-039 Uniform Damping Control of Spacecraft.** Larry Silverberg, *North Carolina State University* (9, 2, p. 221) Article
- G86-040 Robust Beam-Pointing and Attitude Control of a Flexible Spacecraft.** Joseph S.-C. Yuan, *Spar Aerospace Limited, Canada*; and Michael E. Stieber, *Department of Communications, Canada* (9, 2, p. 228) Article based on AIAA Paper 85-1967 CP856
- G86-041 Variable-Structure Control of Spacecraft Large-Angle Maneuvers.** S. R. Vadali, *Iowa State University* (9, 2, p. 235) Article
- G86-042 Exact Nonlinear Control of Spacecraft Slewing Maneuvers with Internal Momentum Transfer.** Thomas A. W. Dwyer III, *University of Illinois* (9, 2, p. 240) Article based on AIAA Paper 84-1026 CP845
- G86-043 Compensating Structure and Parameter Optimization for Attitude Control of a Flexible Spacecraft.** D. C. Ceballos, *Instituto de Pesquisas Espaciais, Brazil* (9, 2, p. 248) Engineering Note
- G86-044 Reduced-Order Observers Applied to State and Parameter Estimation of Hydromechanical Servoactuators.** Hagop V. Panossian, *HR Textron* (9, 2, p. 249) Engineering Note
- G86-045 A Computational Method to Solve Nonautonomous Matrix Riccati Equations.** M. B. Subrahmanyam, *University of Missouri-Columbia* (9, 2, p. 251) Engineering Note
- G86-046 Roll Motion of a Wraparound Fin Configuration at Subsonic and Transonic Mach Numbers.** Young Hoon Kim, *Agency of Defense Development, Republic of Korea*; and G. L. Winchenbach, *Air Force Armament Laboratory, Eglin Air Force Base* (9, 2, p. 253) Engineering Note
- G86-048 Historical Perspective on Estimation Techniques for Position and Gravity Survey with Inertial Systems.** James R. Huddle, *Litton Guidance and Control Systems Division* (9, 3, p. 257) Survey Paper
- G86-049 Clutter Effect on the Guidance of a Semi-Active Radar Homing Missile.** Susumu Miwa and Fumiaki Imado, *Mitsubishi Electric Corporation, Japan* (9, 3, p. 268) Article
- G86-050 Explicit Guidance of Drag-Modulated Aeroassisted Transfer Between Elliptical Orbits.** Nguyen X. Vinh and Jennie R. Johannesen, *University of Michigan*; Kenneth D. Mease, *Jet Propulsion Laboratory, California Institute of Technology*; and John M. Hanson, *Analytic Services Inc.* (9, 3, p. 274) Article based on AIAA Paper 84-1848 CP848
- G86-051 Multi-Input Multi-Output Automatic Design Synthesis for Performance and Robustness.** Vernon C. Gordon and D. J. Collins, *Naval Postgraduate School* (9, 3, p. 281) Article based on AIAA Paper 85-1929 CP856
- G86-052 The Optimal Projection Equations for Reduced-Order, Discrete-Time Modeling, Estimation, and Control.** Dennis S. Bernstein, Lawrence D. Davis and David C. Hyland, *Harris Corporation* (9, 3, p. 288) Article

- G86-053 Effects of Noise on Modal Parameters Identified by the Eigensystem Realization Algorithm.** Jer-Nan Juang and Richard S. Pappa, *NASA Langley Research Center* (9, 3, p. 294) Article
- G86-054 Spline-Based Distributed System Identification with Application to Large Space Antennas.** H. T. Banks, *Brown University*; P. K. Lamm, *Southern Methodist University*; and E. S. Armstrong, *NASA Langley Research Center* (9, 3, p. 304) Article
- G86-055 Gravity-Model Errors in Mobile Inertial-Navigation Systems.** B. A. Kriegsmann and K. B. Mahar, *The Charles Stark Draper Laboratory, Inc.* (9, 3, p. 312) Article
- G86-056 The Hybrid Automated Reliability Predictor.** Joanne Bechta Dugan and Kishor S. Trivedi, *Duke University*; Mark K. Smotherman and Robert M. Geist, *Clemson University* (9, 3, p. 319) Article
- G86-057 Design and Simulation of Closed-Loop Ground Alignment of Inertial Platforms with Sway Motion.** S. Vathsar, *NASA Goddard Space Flight Center* (9, 3, p. 332) Article
- G86-058 Design of a Flutter Mode Controller Using Positive Real Feedback.** Marc Takahashi and G. L. Slater, *University of Cincinnati* (9, 3, p. 339) Article based on AIAA Paper 84-1869 CP848
- G86-059 Frequency Domain Synthesis of a Robust Flutter Suppression Control Law.** D. K. Schmidt, *Purdue University*; and T. K. Chen, *Lear Siegler Inc.* (9, 3, p. 346) Article based on AIAA Paper 85-0754 CP851
- G86-060 Classical Flight Dynamics of a Variable Forward-Sweep-Wing Aircraft.** Brett A. Newman and Robert L. Swaim, *Oklahoma State University* (9, 3, p. 352) Article
- G86-061 Spacecraft Nutational Instability Prediction by Energy-Dissipation Measurements.** S. C. Garg, *Ford Aerospace and Communications Corporation*; N. Furumoto, *University of California, Santa Barbara*; and J. P. Vanyo, *Ford Aerospace and Communications Corporation* (9, 3, p. 357) Article
- G86-062 Long-Term Evolution of Near-Geostationary Orbits.** Jozef C. Van der Ha, *European Space Operations Center, Federal Republic of Germany* (9, 3, p. 363) Article
- G86-063 Computation of Optimal Controls by Newton's Method Using a Discretized Jacobian.** M. B. Subrahmanyam, *University of Missouri-Columbia* (9, 3, p. 371) Engineering Note
- G86-064 Near-Optimum Design of Large-Scale Systems.** M. Elwakkad Zaghoul and N. Matta, *George Washington University* (9, 3, p. 374) Engineering Note
- G86-065 Fuel Conservative Guidance for Shipboard Landing of Powered-Lift STOL Aircraft.** David N. Warner Jr. and Leonard A. McGee, *NASA Ames Research Center*; John D. McLean and Gregory K. Schmidt, *Analytical Mechanics Associates, Inc.* (9, 3, p. 377) Engineering Note
- G86-066 Error Analysis Strapdown Inertial Navigation Using Quaternions.** Minoru Shibata, *Technical Research and Development Institute, Japan* (9, 3, p. 379) Engineering Note
- G86-067 Optimal Control of Quaternion Propagation Errors in Spacecraft Navigation.** S. Vathsar, *NASA Goddard Space Flight Center* (9, 3, p. 382) Engineering Note
- G86-068 Identifying Approximate Linear Models for Simple Nonlinear Systems.** Lucas G. Horta and Jer-Nan Juang, *NASA Langley Research Center* (9, 4, p. 385) Article based on AIAA Paper 85-0686 CP851
- G86-069 An Asymptotic Perturbation Method for Nonlinear Optimal Control Problems.** J. L. Junkins, *Texas A&M University*; and R. C. Thompson, *Virginia Polytechnic Institute and State University* (9, 4, p. 391) Article
- G86-070 Disturbance Attenuation by a Frequency-Shaped Linear-Quadratic-Regulator Method.** Hiroyuki Imai, *Setsunan University, Japan*; Naohiko Abe, *Mitsubishi Heavy Industry Co., Ltd., Japan*; and Makoto Kobayakawa, *Kyoto University, Japan* (9, 4, p. 397) Article
- G86-071 A Discrete-Time Multivariable Model-Following Method Applied to Decoupled Flight Control.** Kimio Kanai, *National Defense Academy, Japan*; Noriyuki Hori and Peter N. Nikiforuk, *University of Saskatchewan, Canada* (9, 4, p. 403) Article based on AIAA Paper 85-1978 CP856
- G86-072 Estimation of Distributed Parameter Systems: Some Closed-Form Solutions.** David B. Schaechter, *Lockheed Missiles & Space Company, Inc.* (9, 4, p. 408) Article
- G86-073 Unfolding of Degenerate Hopf Bifurcation for Supersonic Flow Past a Pitching Wedge.** N. Sri Namachchivaya, *University of Illinois*; and H. J. Van Roessel, *University of Western Ontario* (9, 4, p. 413) Article
- G86-074 Gravity-Induced Errors in Airborne Inertial Navigation.** David W. Harriman and J. Chris Harrison, *Geodynamics Corporation* (9, 4, p. 419) Article based on AIAA Paper 84-1873
- G86-075 Practical Considerations in Optimal Flight Management Computations.** Sam Liden, *Sperry Corporation, Aerospace & Marine Group* (9, 4, p. 427) Article
- G86-076 Identification of Pilot-Vehicle Dynamics from In-Flight Tracking Data.** R. A. Hess and M. A. Mnich, *University of California, Davis* (9, 4, p. 433) Article based on AIAA Paper 85-1945 CP856
- G86-077 Development of Control Laws for a Flight Test Maneuver Autopilot.** Gurbux S. Alag and Eugene L. Duke, *NASA Ames Research Center* (9, 4, p. 441) Article based on AIAA Paper 85-1859 CP856
- G86-078 Identification and Verification of Frequency-Domain Models for XV-15 Tilt-Rotor Aircraft Dynamics in Cruising Flight.** Mark B. Tischler, *AD/USAARTA, NASA Ames Research Center*; Joseph G. M. Leung and Daniel C. Dugan, *NASA Ames Research Center* (9, 4, p. 446) Article
- G86-079 Predictive Momentum Management for the Space Station.** Philip D. Hattis, *The Charles Stark Draper Laboratory, Inc.* (9, 4, p. 454) Article
- G86-080 Traveling Wave Control for Large Spacecraft Structures.** A. H. von Flowtow, *Massachusetts Institute of Technology* (9, 4, p. 462) Article based on AIAA Paper 85-0630 CP851
- G86-081 Future Payload Isolation and Pointing System Technology.** R. A. Laskin and S. W. Sirlin, *Jet Propulsion Laboratory, California Institute of Technology* (9, 4, p. 469) Article based on AIAA Paper 84-1879, 84-2021 CP848

**G86-082 Integrated Design of Space Structures Using Lattice Plate Finite Elements.** S. E. Lamberson, *U.S. Air Force Academy*; and T. Y. Yang, *Purdue University* (9, 4, p. 478) Article based on AIAA Paper 85-0592 CP851

**G86-083 Orbit Determination Singularities in the Doppler Tracking of a Planetary Orbiter.** Lincoln J. Wood, *Jet Propulsion Laboratory, California Institute of Technology* (9, 4, p. 485) Article based on AIAA Paper 85-0218

**G86-084 Linear Guidance Laws for Space Missions.** Wayne Tempelman, *The Charles Stark Draper Laboratory, Inc.* (9, 4, p. 495) Article based on AIAA Paper 85-1915 CP856

**G86-085 A Simple Algorithm for the Selection of Terminal Penalty Weighting Matrices.** H. M. Chun, *The Charles Stark Draper Laboratory, Inc.*; and J. D. Turner, *Cambridge Research* (9, 4, p. 503) Engineering Note

**G86-086 Comparison of Angular and Metric Guidance Laws for Tactical Missiles.** J.-L. Durieux, *Cabinet d'Etudes Techniques d'Automatisation, France* (9, 4, p. 505) Engineering Note

**G86-087 On-Off Attitude Control of Flexible Satellites.** S. B. Skaar, L. Tang and I. Yalda-Mooshabad, *Iowa State University* (9, 4, p. 507) Engineering Note

**G86-091 Handling Qualities and Pilot Evaluation (Wright Brothers Lectureship in Aeronautics).** Robert P. Harper Jr., *Arvin/Calspan*; and George E. Cooper, *G. E. Cooper Associates* (9, 5, p. 515) Lecture based on AIAA Paper 84-2442

**G86-092 A Perspective on Superaugmented Flight Control: Advantages and Problems.** Duane McRuer, Donald Johnston and Thomas Myers, *Systems Technology, Inc.* (9, 5, p. 530) Article

**G86-093 Flying Qualities of Pitch Rate Command/Attitude Hold Control Systems for Landing.** C. R. Chalk, *Calspan Corporation* (9, 5, p. 541) Article

**G86-094 Control Law Synthesis for an Airplane with Relaxed Static Stability.** J. D. Blight, D. Gangsaas and T. M. Richardson, *Boeing Military Airplane Company* (9, 5, p. 546) Article

**G86-095 Flight Evaluation of Augmented Controls for Approach and Landing of Powered-Lift Aircraft.** James A. Franklin, Charles S. Hynes, Gordon H. Hardy, Robert C. Innis and James L. Martin, *NASA Ames Research Center* (9, 5, p. 555) Article based on AIAA Paper 85-1944 CP856

**G86-096 Space Shuttle Longitudinal Landing Flying Qualities.** Bruce G. Powers, *NASA Ames Research Center, Dryden Flight Research Facility* (9, 5, p. 566) Article

**G86-097 In-Flight Evaluation of Incremental Time Delays in Pitch and Roll.** Donald T. Berry, *NASA Ames Research Center, Dryden Flight Research Facility* (9, 5, p. 573) Article based on AIAA Paper 85-1852 CP856

**G86-098 Effect of Time Delay on Flying Qualities: An Update.** Rogers E. Smith and Shahan K. Sarrafian, *NASA Ames Research Center, Dryden Flight Research Facility* (9, 5, p. 578) Article based on AIAA Paper 86-2202 CP869

**G86-099 Fault Detection, Isolation, and Reconfiguration in the Fault Tolerant Multiprocessor.** Jaynarayan H. Lala, *The Charles Stark Draper Laboratory Inc.* (9, 5, p. 585) Article

**G86-100 Modeling and Simulation of Spacecraft Solar Array Deployment.** B. Wie, N. Furumoto, A. K. Banerjee and P. M. Barba, *Ford Aerospace and Communications Corporation* (9, 5, p. 593) Article

**G86-101 A Slewing Control Experiment for Flexible Structures.** Jer-Nan Juang and Lucas G. Horta, *NASA Langley Research Center*; and Harry H. Robertshaw, *Virginia Polytechnic Institute and State University* (9, 5, p. 599) Article

**G86-102 A Flight-Path-Overshoot Flying Qualities Metric for the Landing Task.** Donald T. Berry, *NASA Ames Research Center* (9, 6, p. 609) Article

**G86-103 Cross Coupling in Pilot-Vehicle Systems.** R. A. Hess and D. C. Watson, *University of California, Davis* (9, 6, p. 614) Article

**G86-104 Sensitivity Analysis of Automatic Flight Control Systems Using Singular-Value Concepts.** Alfredo Herrera-Vaillard, *Institute for Electrical Research, Mexico*; James Paduano and David Downing, *University of Kansas* (9, 6, p. 621) Article

**G86-105 Subsonic and Transonic Aerodynamics of a Wrap-around Fin Configuration.** G. L. Winchenbach and Randy S. Buff, *Air Force Armament Laboratory, Eglin Air Force Base*; Robert H. Whyte and Wayne H. Hathaway, *General Electric Company* (9, 6, p. 627) Article based on AIAA Paper 85-0106

**G86-106 Roll Divergence of a Canard-Controlled Missile with a Freely Spinning Tail.** Y. Neumeier and M. Hanin, *Technion-Israel Institute of Technology* (9, 6, p. 633) Article based on AIAA Paper 83-2080

**G86-107 Control of Missile Dispersion via Roll Rate Modulation.** Jennifer Shandling and Daniel H. Platus, *The Aerospace Corporation* (9, 6, p. 638) Article based on AIAA Paper 85-1778 CP857

**G86-108 Wing Size vs Radome Compensation in Aerodynamically Controlled Radar Homing Missiles.** F. William Nesline Jr. and Mark L. Nesline, *Raytheon Company* (9, 6, p. 645) Article based on AIAA Paper 85-1869 CP857

**G86-109 A Unified Three-Dimensional Trajectory Simulation Methodology.** Hideo Ikawa, *Rockwell International* (9, 6, p. 650) Article based on AIAA Paper 85-1821 CP857

**G86-110 Nonlinear Feedback Control for Remote Orbital Capture.** Joseph W. Widhalm, *U.S. Air Force Institute of Technology, Wright-Patterson Air Force Base*; and Bruce A. Conway, *University of Illinois* (9, 6, p. 657) Article

**G86-111 Thruster-Augmented Active Control of a Tethered Subsatellite System During Its Retrieval.** D. M. Xu and A. K. Misra, *McGill University, Canada*; and V. J. Modi, *University of British Columbia, Canada* (9, 6, p. 663) Article based on AIAA Paper 84-1993

**G86-112 Wave-Absorbing Controllers for a Flexible Beam.** A. H. von Flotow and B. Schafer, *Deutsche Forschungs- und Versuchsanstalt für Luft- und Raumfahrt, Federal Republic of Germany* (9, 6, p. 673) Article based on AIAA Paper 85-1922 CP857

**G86-113 Nonlinear Attitude Motion of a Dual-Spin Spacecraft Containing Spherical Dampers.** P. K. Winfree and J. E. Cochran Jr., *Auburn University* (9, 6, p. 681) Article based on AIAA Paper 84-2019

**G86-114 A Highly Accurate Feedback Approximation for Horizontal Variable-Speed Interceptions.** Hendrikus G. Visser, *Fokker B. V., the Netherlands*; and Josef Shinar, *Technion-Israel Institute of Technology* (9, 6, p. 691) Article based on AIAA Paper 85-1783 CP857

**G86-115 A Sequential Linear Optimization Approach for Controller Design.** Lucas G. Horta and Jer-Nan Juang, *NASA Langley Research Center*; and John L. Junkins, *Texas A&M University* (9, 6, p. 699) Article based on AIAA Paper 85-1971 CP857

**G86-116 Coordinate-Transformation-Based Filter for Improved Target Tracking.** S. N. Balakrishnan, *University of Missouri-Rolla*; and Jason L. Speyer, *University of Texas at Austin* (9, 6, p. 704) Article

**G86-117 Aircraft Control Design Using Improved Time-Domain Stability Robustness Bounds.** R. K. Yedavalli, *University of Toledo*; and Z. Liang, *Stevens Institute of Technology* (9, 6, p. 710) Article based on AIAA Paper 85-1926 CP857

**G86-118 Trilateration and Extension to Global Positioning System Navigation.** Bertrand T. Fang, *The Analytic Services Corporation* (9, 6, p. 715) Engineering Note

**G86-119 Auxiliary Problem Concerning Optimal Pursuit on Lagrangian Orbits.** Mihai Popescu, *National Institute for Scientific and Technical Creation, Romania* (9, 6, p. 717) Engineering Note

**G86-120 Comparison of Local Pole Assignment Methods.** P. T. Kabamba and K. C. Shin, *University of Michigan* (9, 6, p. 719) Engineering Note

**G86-121 Efficient Modal Analysis of Damped Space Structures.** Trevor Williams, *Kingston Polytechnic, England* (9, 6, p. 722) Engineering Note

U.S. Postal Service STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION <small>Required by 39 U.S.C. 3685</small>			
1A. TITLE OF PUBLICATION		1B. PUBLICATION NO.	2. DATE OF FILING
Journal of Guidance, Control and Dynamics		414 D 1 10	Oct. 27, 1987
3. FREQUENCY OF ISSUE		3A. NO. OF ISSUES PUBLISHED ANNUALLY	3B. ANNUAL SUBSCRIPTION PRICE
Bimonthly		6	\$19.00
4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (Street, City, County, State and ZIP+4 Code) (Not printer)			
1633 Broadway, New York, N.Y. 10019			
5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER (Not printer)			
Same As Above			
6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR (The item MUST NOT be blank)			
PUBLISHER (Name and Complete Mailing Address)			
American Institute of Aeronautics and Astronautics, Inc., Same As Above			
EDITOR (Name and Complete Mailing Address)			
Donald C. Fraser Same As Above			
MANAGING EDITOR (Name and Complete Mailing Address)			
Robert Tuman Same As Above			
7. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated. (Item must be completed.)			
FULL NAME		COMPLETE MAILING ADDRESS	
American Institute of Aeronautics and Astronautics, Inc.		Same As Above	
8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES (If none are none, so state)			
FULL NAME		COMPLETE MAILING ADDRESS	
None			
9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES (Section 475.12 DSM only) The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes. Check one:			
<input checked="" type="checkbox"/> HAS NOT CHANGED DURING PRECEDING 12 MONTHS <input type="checkbox"/> HAS CHANGED DURING PRECEDING 12 MONTHS <small>(If changed, publisher must submit explanation of change with this statement.)</small>			
10. EXTENT AND NATURE OF CIRCULATION <small>(See instructions on reverse side)</small>		AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A. TOTAL NO. COPIES (Net Press Run)		3417	3500
B. PAID AND/OR REQUESTED CIRCULATION			
1. Sales through dealers and carriers, street vendors and counter sales		---	---
2. Mail Subscriptions (Paid and/or requested)		3064	3162
C. TOTAL PAID AND/OR REQUESTED CIRCULATION (Sum of 10B1 and 10B2)		3064	3162
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS (Samples, complimentary, and other free copies)		56	56
E. TOTAL DISTRIBUTION (Sum of C and D)		3120	3218
F. COPIES NOT DISTRIBUTED			
1. Office use, left over, unaccounted, spoiled after printing		297	282
2. Return from News Agents		---	---
G. TOTAL (Sum of E, F1 and 2 - should equal net press run shown in 10A)		3417	3500
11. I certify that the statements made by me above are correct and complete		SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER	
		Chris Troll, Controller	