Chronological Index

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. Kriegsman 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. Vathsal, *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 Zaghloul 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. Vathsal, *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 Lattic 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 Wraparound 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 fur 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

Required by 39 U.S.C. 3685)

1A. TITLE OF PUBLICATION	1B. PUBLICATION NO.	2. DATE OF FILING
Journal of Guidance, Control and Dynamics	4 4 0 1 0	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 printers)*

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 *(This 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 Inman 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 there are none, so state)*

FULL NAME	COMPLETE MAILING ADDRESS
None	

9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES *(Section 423.12 DMM only)*

The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes: *(Check one)*

☒ (1) HAS NOT CHANGED DURING PRECEDING 12 MONTHS ☐ (2) HAS CHANGED DURING PRECEDING 12 MONTHS *(If changed, publisher must submit explanation of change with this statement.)*

10. EXTENT AND NATURE OF CIRCULATION *(See instructions on reverse side)*	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 Subscription *(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 A)*	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

PS Form 3526, July 1984 *(See instruction on reverse)*