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Annual Business and News: Beginning the 34th Year

THIS past year has been another successful one for the *Journal of Guidance, Control, and Dynamics* (*JGCD*). Four-hundred and eighty papers (65% from outside the United States) were submitted for review from October 2009 through September 2010. Last year's numbers were 472 and 57%, respectively. From inception of the *JGCD* through September, 10,077 submissions have been received. The milestone 10,000th paper, titled "Three-Dimensional Sector Design with Optimal Number of Sectors," was submitted on 12 August at 2:24 a.m. Eastern Daylight Time by Min Xue of the University of California, Santa Cruz. In recognition, he was awarded an AIAA penholder set.

About the same number of total pages were published as last year. For the near future, about 30 papers per issue will be featured. The average time from paper submission to publication was reduced to 292 days from 321 days last year. The 292 days consisted of 167 days from submission to acceptance and 125 days from acceptance to publication. This is a good balance between review time and publication preparation time. The *JGCD* will continue to better the timeline goal of less than one year from submission to publication.

Our Associate Editors (AEs) are doing an outstanding job of conducting reviews that are consistently both high-quality and that meet the publication timeline goal. Here is some information on the papers for which the AEs made final decisions during the 12-month period from October 2009 through September 2010. The corresponding numbers for the previous year are in parentheses.

1) Number of papers decided: 509 (446)
2) Number of papers accepted: 196 (182)
3) Number of papers declined: 164 (145)
4) Number of papers withdrawn, transferred, or other: 149 (119)
5) Average days from submission until:
   a) An author of a declined paper is notified: 75 (91) days
   b) The Associate Editor asks for a revision to a paper that is expected to be accepted: 80 (111) days
   c) A paper is accepted after revision: 152 (169) days

On average, the Associate Editor assigned the first reviewer in 10 (9) days. I am very proud of the performance of our Associate Editors, who control the quality of the *JGCD*, and the responsiveness of most authors, who complete their revisions on time. Revisions of 248 (223) papers took, on average, 38 (42) days.

The *JGCD* acceptance rate of approximately 40% shows selectivity in publishing only the most significant technical information. I continue to send back many submitted papers for English revisions. Some papers require significant improvement; therefore, I tell the authors that they *must* use an English technical editing service. As a result, I usually have about 20 papers waiting for English revision. This is about twice as many as in prior years. Papers originating from U.S. authors remain at very high quality, with the most common error being (answer at the end of the Editorial). The Science Citation Index Impact Factor of the *JGCD* is still the best of all the AIAA journals. The Impact Factor is one measure of quality that institutional librarians consider when ordering subscriptions.

With this issue, I am announcing reappointments to our Editorial Staff, with thanks for their continuing service as Associate Editors: Maruthi Akella, *University of Texas at Austin*; John Crassidis, *University at Buffalo, State University of New York*; Hari Hablani, *Indian Institute of Technology*; Ping Lu, *Iowa State University*; Hanspeter Schaub, *University of Colorado*; and M. Bala Subrahmanyam, *Lockheed Martin Aeronautics Company.*

Deepest appreciation and good luck for the future go to retiring Associate Editors Richard Colgren, *University of Kansas*; Fidelis Eke, *University of California, Davis*; and James Mitchell, *The Boeing Company.*

Recent and new appointments as Associate Editors are David Klyde, *Systems Technology, Inc.*; Marco Quadrelli, *Jet Propulsion Laboratory*; and John Valasek, *Texas A&M University.* I am also pleased to announce that Kevin Bollino, *U.S. Air Force*, *Pentagon*, has accepted the position of Book Review Editor to help keep us technically appraised of the latest books. The complete Associate Editor list, including biographical sketches, is presented in the following pages.

I express my gratitude to all the reviewers who perform the peer reviews necessary to maintain the quality of the *Journal of Guidance, Control, and Dynamics*. The list of reviewers contributing between 1 October 2009 and 30 September 2010 follows the list of Associate Editors. Although the system is electronic, a few names are always missed. I apologize to any reviewers whose names may have been inadvertently omitted.

Special acknowledgements go to the individuals who served as liaisons between the *JGCD* and an AIAA Technical Committee (TC): Dr. David Doman, *U.S. Air Force Research Laboratory* with the Guidance, Navigation, and Control TC; Dr. Ronald Proulx, *Draper Laboratory*, with the Astrodynamics TC; Prof. Dan DeLaurentis, *Purdue University*, with the Air Transportation Systems TC; and Dr. Sanjay Garg, *NASA John H. Glenn Research Center at Lewis Field*, with the Intelligent Systems TC.

Thanks goes to all the publications staff at AIAA Headquarters, particularly Amanda Maguire, Becky Rivard, and Michael McGinnes. These dedicated individuals work at the highest standards in producing all the AIAA journals.

Finally, I continue to encourage communications between our readers and any member of the Editorial Staff. I believe we did a good job last year of covering the interests of our readers and responding quickly to communications. We can always do better and we are willing to listen; please contact us. (Answer: the most common error is in referencing books. Authors should cite specific page numbers or chapters. I love Dick Battin's books, but I do not want reviewers having to figure out where the reference is located in the book.)

George T. Schmidt
Editor-in-Chief

Editor-in-Chief

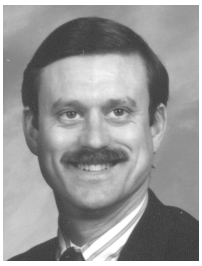
GEORGE T. SCHMIDT has been Editor-in-Chief of the *Journal of Guidance, Control, and Dynamics* since 1996. He is an industry consultant in guidance, navigation, and control and is currently Director of the NATO Systems and Electronics Technology Panel's Lecture Series on Low-Cost Navigation Sensors and Integration Technology. He is an AIAA Fellow, a Life Fellow of the Institute of Electrical and Electronics Engineers (IEEE), a Member of the Institute of Navigation, and an Elected Member of the Russian Federation, Academy of Navigation and Motion Control. He is a Distinguished Lecturer for the IEEE Aerospace and Electronic Systems Society. He has also been a Lecturer in aeronautics and astronautics at Massachusetts Institute of Technology (MIT). Until 2007 he was the Director of Education at the Charles Stark Draper Laboratory. Before that position he was the Leader of the Guidance and Navigation Division and Director of the Draper Guidance Technology Center. His major technical activities have been in guidance and navigation system design for missiles, aircraft, and manned spacecraft; Kalman filtering applications; integration and relative target techniques for high-resolution synthetic aperture radars; satellite navigation systems; and inertial sensors. He has served the NATO Research and Technology Organization (formerly AGARD) in many positions, including as a U.S. Member of the Guidance and Control Panel. He has received several awards, including the AIAA International Cooperation Award in 2001 and the NATO Research and Technology Organization's highest technical award, the von Kármán Medal in 2005. He is author or contributing author of more than 80 technical papers, reports, encyclopedia articles, and books. He received his S.B. and S.M. degrees in aeronautics and astronautics from MIT and his Sc.D. in Instrumentation from MIT.

Associate Editors

MARUTHI R. AKELLA has interests in the fields of dynamic systems theory and nonlinear control for aeromechanical systems. The overall emphasis of his research specifically involves fundamental investigations into high-performance adaptive identification algorithms and control theory for clusters of uncertain dynamic systems, including mobile heterogeneous sensor networks. His theoretical contributions have found applications in the study of spacecraft attitude dynamics, control of vision-guided robotics, and generation of dynamic models for flapping-wing micro air vehicles derived from the hummingbird-flight exemplar. Dr. Akella's current research is supported by the National Science Foundation, U.S. Office of Naval Research, and the U.S. Air Force Office of Scientific Research, encompassing control theoretic studies of cooperating teams of nonlinear systems accounting for the presence of measurement time delays and actuator saturation constraints. He is an Associate Fellow of the AIAA.

DR. S. N. BALAKRISHNAN is a Curators' Professor of Aerospace Engineering at the Missouri University of Science and Technology. His primary focus in research has been in developing missile-guidance algorithms and intelligent control. His research interests also include stability and control of aerospace and mechanical systems, cognition and bio-inspired techniques for decision and control, and large-scale optimization. His research in intelligent control has been continuously sponsored by the National Science Foundation for more than 17 years, including an accomplishment-based renewal. His aircraft and space research work has been sponsored by NASA Langley Research Center, NASA Johnson Space Center, NASA Ames Research Center, NASA Marshall Space Flight Center, and NASA Goddard Space Flight Center. Dr. Balakrishnan's research in missile guidance and control has been supported by grants from the U.S. Army Space and Missile Defense command, U.S. Naval Surface Warfare Center, the U.S. Air Force, and the Missile Defense Agency (MDA). He has served on the missile system evaluation committee for the MDA and has given keynote addresses and invited lectures in several countries. Dr. Balakrishnan has published numerous journal articles with his students; many of his students have won top awards at national and international conferences. He has served the AIAA in several capacities through the conferences and technical committees and served as a Director of the American Automatic Control Council for four years. He earned his Ph.D. in aerospace engineering from the University of Texas at Austin in 1983.

MARK E. CAMPBELL is an Associate Professor in the Sibley School of Mechanical and Aerospace Engineering at Cornell University. He received his B.S. in mechanical engineering from Carnegie Mellon in 1990 and his M.S. and Ph.D. in aeronautics and astronautics from the Massachusetts Institute of Technology (MIT) in 1993 and 1996, respectively. Before joining Cornell in 2001, he was a Research Associate and Lecturer at MIT and an Assistant Professor in aeronautics and astronautics at the University of Washington. In 2005, he served as a Visiting Research Scientist at the Insitu Group, a company specializing in small autonomous aircraft, and as an Australian Research Council (ARC) International Fellow at the ARC Centre of Excellence for Autonomous Systems. His research interests are in the areas of autonomous systems (space, air, and ground), nonlinear estimation theory and sensor fusion, and human–autonomy interaction. He has been recognized from NASA for his modeling and control work on the Middeck Active Control Experiment, flown on STS-67 in 1995. He received the 2004 AIAA Best Paper Award, best paper at the 1998 Frontiers in Education conference, and Bennet Prize and Andrew Carnegie Scholar award at Carnegie Mellon. He has received teaching awards from Cornell, University of Washington, and the American Society for Engineering Education. He is an Associate Fellow of the AIAA and an Associate Director on the American Automatic Control Council Board of Directors (Member of International Federation of Automatic Control). He is a Member of the AIAA Guidance, Navigation, and Control Technical Committee, and he serves as an Associate Editor for the *IEEE Transactions on Aerospace and Electronics*.



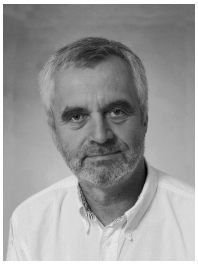
RICHARD D. COLGREN, Senior Staff Engineer at the Lockheed Martin Aeronautics Company, is Lead Engineer for C4ISR and unmanned air vehicle (UAV) programs for Air Vehicle Sciences and Systems. He earned his B.S. in aeronautics and astronautics at the University of Washington and his M.S. and Ph.D. in electrical engineering systems at the University of Southern California. Previously, he was Flight Control Systems Lead for RECEE and Advanced Programs, and before that, he was the Integrated Product Team (IPT) Lead for Specialist Support on the DarkStar UAV (Tier III-). He was also IPT Lead for the Vehicle Management System on the Uninhabited Combat Air Vehicle and was Lead Flight Controls Engineer on the U-2S and on the Air Force Multivariable Control Theory project. He has served as Project Engineer/Principal Investigator on independent research and development projects, including technologies for reliable autonomous control, development of the Lockheed flight controls workstation, and the state reduction of structural dynamic models for control systems design. Previous work includes feasibility studies and preliminary/advanced design for flight control system concepts. Work on UAV projects includes Tier IIC, Tier III-, Tier III, X-33, unmanned combat air vehicle, micro UAVs, the Wraith remotely piloted vehicle, and other projects. Dr. Colgren is a past Chair of the Integrated Controls Subcommittee of the Lockheed Corporate Task Force. Dr. Colgren is an Aeronautical Engineering Evaluator for the Accreditation Board for Engineering and Technology, Inc./Aeronautical. He is an Associate Fellow of the AIAA and a Member and past Secretary for the National Technical Committee on Guidance, Navigation, and Control.

JOHN L. CRASSIDIS is a Professor of mechanical and aerospace engineering at the University at Buffalo (UB), State University of New York. He is also Associate Director of UB's Center for Multisource Information Fusion. He received his B.S., M.S. and Ph.D. in mechanical engineering from the State University of New York at Buffalo. Before joining UB in 2001, he held previous academic appointments at Catholic University of America from 1996 to 1998 and Texas A&M University from 1998 to 2001. From 1996 to 1998, he was a NASA Postdoctoral Research Fellow at Goddard Space Flight Center, where he worked on a number of spacecraft projects and research ventures involving attitude control systems. He is the principal author of the textbook *Optimal Estimation of Dynamic Systems* (CRC Press, 2004) and has authored or coauthored more than 120 journal and refereed conference papers. He served as the Technical Program Co-Chair of the AIAA Guidance, Navigation, and Control (GN&C) conference in 2001 and as the General Chair in 2003. He has received many awards for his achievements, including the Best Paper award for both the 2001 and 2003 AIAA GN&C conferences, the 2006 AIAA Sustained Service Award, and the Society of Automotive Engineers 2006 Ralph R. Teetor Educational Award. His current research interests include nonlinear estimation and control theory, spacecraft attitude determination and control, attitude dynamics and kinematics, and robust vibration suppression. From 2006–2008 he was Chair of the AIAA Technical Committee on GN&C and currently serves on the Advisory Board. He is an Associate Fellow of the AIAA.

DAVID B. DOMAN is a Senior Aerospace Engineer with the Air Vehicles Directorate of the U.S. Air Force Research Laboratory (AFRL) at Wright–Patterson Air Force Base. He received his B.S. degree in aerospace engineering from West Virginia University in 1991, his M.S. in aeronautics and astronautics from Purdue University in 1993, and his Ph.D. in aerospace engineering from Virginia Polytechnic Institute and State University in 1998. He completed the Aerospace Vehicles Test Course at the U.S. Air Force Test Pilot School in 2005. He is currently the Technical Area Lead for the Micro Air Vehicle Dynamics and Control Group in the Control Science Center of Excellence at AFRL. He has published over 110 refereed conference papers, journal articles, and technical reports and currently holds two U.S. patents. He was the corecipient of the 2003 Gen. Benjamin D. Foulois Award and the 2000 Dr. Courtland D. Perkins award for his technical contributions at the Air Vehicles Directorate of AFRL. He is an Associate Fellow of the AIAA; a Senior Member of the Institute of Electrical and Electronics Engineers; and a Member of the AIAA Technical Committee on Guidance, Navigation, and Control.

RUSSELL J. ENNS is an Associate Technical Fellow at The Boeing Company. He received his B.A.Sc. from Simon Fraser University and his M.S. and Ph.D. in electrical engineering from Arizona State University. He has been developing fire and flight controls systems for McDonnell Douglas Helicopter Company/Boeing since 1993. He currently serves as a Technical Lead on the modernized flight control system for the Apache Longbow. He has either led, been a key designer, or acted as a consultant on a number of other flight control programs, especially those focusing on fly-by-wire technology. This includes unconventional systems such as the canard rotor wing and A-160 Hummingbird programs. His other research interests include neural-control systems and flight-control reconfiguration, with several refereed publications in these areas. He has been an invitee to the National Science Foundation Workshop on Reinforcement Learning and has had invited papers to the American Helicopter Society (AHS) Technical Specialists Meeting and International Joint Conference on Neural Networks. He has served for several years as a reviewer for the *Journal of Guidance, Control, and Dynamics* and *IEEE Transactions on Neural Networks*. He is a long-standing Member of the AIAA, Institute of Electrical and Electronics Engineers, and AHS.

EMILIO FRAZZOLI is an Associate Professor of aeronautics and astronautics with the Laboratory for Information and Decision Systems at the Massachusetts Institute of Technology. He received a Laurea degree in aeronautical engineering from the University of Rome, "La Sapienza," in 1994, and a Ph.D. degree in navigation and control systems from the Department of Aeronautics and Astronautics from the Massachusetts Institute of Technology in 2001. Between 1994 and 1997 he worked as an officer in the Italian Navy and as a spacecraft dynamics specialist for the European Space Agency Operations Centre and Telespazio. From 2001 to 2004 he was an Assistant Professor of aerospace engineering at the University of Illinois at Urbana–Champaign. From 2004 to 2006 he was an Assistant Professor of mechanical and aerospace engineering at the University of California, Los Angeles. He is a Senior Member of the AIAA and of the Institute for Electrical and Electronics Engineers. He was the recipient of a National Science Foundation CAREER award in 2002. Dr. Frazzoli's main research interests lie in the general areas of planning and control for autonomous air/space/ground vehicles, cooperative control of mobile robotic networks, air traffic control, and large-scale transportation systems.



WODEK GAWRONSKI is a Principal Engineer at the Jet Propulsion Laboratory, California Institute of Technology. He received his M.S. (1968), Ph.D. (1970), and D.Sc. (1975) from the Gdansk University of Technology. He was a Professor at the Gdansk University of Technology (1970–1983), a Visiting Professor at the University of Hanover (1983–1986), and Senior National Research Council Fellow at the NASA Langley Research Center (1987–1989). His research interest is in the areas of structural dynamics, structural control, system identification, and antenna and radio telescope pointing and control. At the Jet Propulsion Laboratory, he is responsible for the advanced development of the control systems of NASA Deep Space Network antennas. He was also a consultant on control system design to several radio telescope projects, including the National Radio Astronomy Observatory 100 m Green Bank Telescope and the 50 m Large Millimeter Wavelength Telescope. He is an author of two books: *Balanced Control of Flexible Structures* (Springer, 1996) and *Dynamics and Control of Structures* (Springer, 1998). He is a Senior Member of the AIAA.

PINI GURFIL received his Ph.D. in aerospace engineering from the Technion–Israel Institute of Technology in 2000. From 2000 to 2003, he was with Princeton University's Department of Mechanical and Aerospace Engineering, where he served as Research Staff Member and Lecturer. In September 2003, Dr. Gurfil joined the Faculty of Aerospace Engineering at the Technion. Dr. Gurfil is founder and director of the Distributed Space Systems Laboratory at the Technion. Dr. Gurfil has been conducting research in astrodynamics, distributed space systems, vision-based navigation, optimization, and multi-agent systems. He has published over 140 journal and conference articles in these areas. Dr. Gurfil is the Editor of the Elsevier Astrodynamics Book Series; Editorial Board Member in three aerospace engineering journals; Member of the AIAA Guidance, Navigation, and Control (GN&C) and American Astronautical Society (AAS) Spaceflight Mechanics Technical Committees; Associate Fellow of the AIAA; Member of the Institute of Electrical and Electronics Engineers, AAS, and Sigma Xi; and an Affiliate Member of the Division on Dynamical Astronomy. He has served on the Program Committee of the American Control Conference and as Technical Area Chair for the AIAA GN&C Conference. Dr. Gurfil has received a number of awards, including the Gutwirth Award for Excellence in Scientific Research, and has served as Principal Investigator in funded research projects both at the Technion—Israel Institute of Technology and at Princeton University. He is currently Principal Investigator on a number of projects in the fields of astrodynamics, distributed space systems, global navigation satellite systems, and multi-agent systems.

HARI B. HABLANI is currently a Professor in the Department of Aerospace Engineering, Indian Institute of Technology—Bombay (IITB), where he teaches, conducts, and leads research related with dynamics, guidance, navigation, and control of flight vehicles. Before joining IITB, Dr. Hablani was a Visiting Faculty for a year at the Department of Aerospace Engineering, IIT Kanpur (IITK), where he taught satellite orbits, spacecraft dynamics and control, and integrated air navigation. His research interests are varied and include space-based aircraft navigation, radar imaging surveillance satellites, attitude determination, control, and space-based navigation of satellites. Before coming to IITK, Dr. Hablani was with The Boeing Company (Rockwell International heritage) from 1982 to July 2008, where, for over 25 years, he has had the principal responsibility of detailed design and simulation of guidance, navigation, and control of spacecraft, strategic interceptors, and parachutes. In his last position in the company, he was a Technical Fellow. Dr. Hablani was a recipient of the prestigious Leonardo da Vinci (the Spirit of the Renaissance) Engineer of the Year 1991 Award. He has three patents and has received several innovation, invention, and patent-issuance awards. His extensive contributions over the years are documented in 35 papers, mostly in the *Journal of Guidance, Control, and Dynamics* (*JGCD*). During the years 2000–2005, he developed a course on guidance, navigation and control of spacecraft and strategic interceptors and presented it throughout Boeing. The course material comprised some 1300 charts in 13 chapters. Dr. Hablani has been an Associate Editor of the *JGCD* since 1999; International Advisor of the *JGCD*, and an Associate Fellow of the AIAA since 1994. He is also an Associate Editor of the *IEEE Transactions on Aerospace and Electronics Systems*. In 2003, Dr. Hablani was honored as a Distinguished Alumnus of the Department of Aerospace Engineering, Indian Institute of Science, Bangalore.

DAVID H. KLYDE's experience in his 23 years at Systems Technology, Inc., includes dynamic analysis and system identification; flight control system design and analysis; human-operator modeling; and handling-quality research for transport, fighter, unmanned aerial vehicle and drone, flying-wing, rotorcraft, vertical short takeoff and landing, and hypersonic aircraft. His piloted simulation experience includes rotorcraft-added dynamics studies, control inceptor force-feedback cueing, online loss of control detection using wavelet-based techniques, handling-quality demonstration-maneuver development, moderate-amplitude maneuvering-criteria development, aircraft ground-handling evaluations, and a hypersonic-flying-quality study. Mr. Klyde's flight-test experience includes loss of control alleviation and handling-quality evaluations using the Calspan Learjet in-flight simulator, ground-handling evaluation of the U.S. Navy T-45 jet trainer, a probe-and-drogue demonstration-maneuver evaluation program conducted by the U.S. Air Force Test Pilot School using the variable-stability NT-33A, a poststall maneuvering program with the NASA F/A-18 High Alpha Research Vehicle, and a high-speed flying-quality research program with a NASA SR-71. Mr. Klyde cocreated a two-day short course on the study of pilot-induced oscillations that has been presented to the Air Force Flight Test Center, the U.S. Naval Air Systems Command, NASA Dryden Flight Research Center, Boeing Long Beach, Boeing Philadelphia, Bell, and Sikorsky. He is an Associate Fellow of the AIAA.

PING LU, Professor of aerospace engineering at Iowa State University, received his B.S. from the Beijing Institute of Aeronautics and Astronautics in 1982 and his M.S.E. and Ph.D. in aerospace engineering from the University of Michigan in 1984 and 1988, respectively. He worked as a Postdoctoral Fellow from 1988 to 1989 at the University of Michigan. Since 1990, he has been with Iowa State University. His research interests include aerospace guidance, nonlinear control theory and applications, and trajectory optimization. He is an Associate Fellow of the AIAA and was a Member of the AIAA Technical Committee on Guidance, Navigation, and Control (1994–2000).

MALCOLM MACDONALD obtained a B.Eng. in aeronautical engineering from the University of Glasgow in 2000. He then studied for his Ph.D. at the University of Glasgow from 2000–2002, before gaining a research assistant post until December 2004. From 2005–2008 he worked at SciSys UK, Ltd., on a range of ESA missions throughout the project life cycle, progressing to become a Senior Member of Technical Staff, leading a team working across nonlinear dynamic systems and control, modeling and simulation, and advanced mission and concept studies. Since 2008, he has been an Associate Director of the Advanced Space Concepts Laboratory at the University of Strathclyde, where his research interests cover celestial mechanics, swarming systems, mission analysis and design, spacecraft systems, including solar sailing and nanospacecraft, and unmanned autonomous systems.

ROBERT G. MELTON is a Professor of aerospace engineering at the Pennsylvania State University. He received his B.S. in physics from Wake Forest University in 1976 and his M.S. in physics (1979) and Ph.D. in engineering physics (1982) from the University of Virginia. His research includes work in celestial mechanics, non-Keplerian astrodynamics, trajectory optimization, optimum station-keeping for space-based interferometry, and satellite attitude dynamics and control. An Associate Fellow of the AIAA, he has served on its Astrodynamics Technical Committee and on the Applications Advisory Board of the Journal of Guidance, Control, and Dynamic. He is a Member of Sigma Pi Sigma and a Fellow of the American Astronautical Society, in which he has served as Chair of the Space Flight Mechanics Technical Committee and as Vice President–Technical and, in which he has served as Chair of the Space Flight Mechanics Technical Committee, Vice President-Technical, and Vice President-Publications.

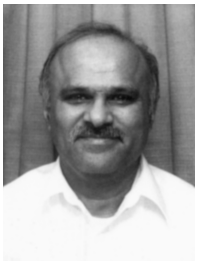
VIVEKANAND MUKHOPADHYAY received his S.M. and Sc.D. in aeronautics and astronautics from the Massachusetts Institute of Technology in 1970 and 1972. He was awarded the President of India Gold Medal and B.Tech.. at the Indian Institute of Technology in 1968. He is presently a Senior Research Engineer at NASA Langley Research Center. His prior positions include Assistant Professor, Indian Institute of Technology; Research Specialist, Planning Research Corporation; and Adjunct Associate Professor, George Washington University, Joint Institute for Advancement of Flight Sciences. He is an Associate Fellow of the AIAA and a recipient of the prestigious NASA Floyd Thompson Fellowship. He has 35 years of research and teaching experience in the areas of applied optimal control, aeroservoelasticity, and structural dynamics and control. He was a contributing author to the Academic Press series, "Advances in Controls and Dynamics"; the AIAA "History of Key Technologies" series; and "Benchmark Active Control Technology" special publications. His research interests are in the areas of robust control, active flutter suppression, multidisciplinary analysis, and optimization of advanced aerospace concepts. He has made key contributions to many NASA Langley projects, including drones for aeroelastic and structural testing, aeroelastic research wing, active flexible wing flutter suppression, advanced vehicle systems technology revolutionary concepts, blended wing—body vehicle design and optimization, efficient aerodynamic shape and integration, high-altitude long-endurance vehicle, crew exploration vehicle, and lunar surface access module design studies.

MARCO B. QUADRELLI is a Senior Research Technologist in the Guidance and Control Section at the Jet Propulsion Laboratory, California Institute of Technology. He received a Laurea/M.S. in mechanical engineering from the University of Padova in 1987, a M.S. in aeronautics and astronautics from Massachusetts Institute of Technology in 1992, and a Ph.D. in aerospace engineering from Georgia Institute of Technology in 1996. He has worked in the aerospace industry and has been a visiting scientist at the Harvard-Smithsonian Center for Astrophysics (Fellow of Accademia Nazionale dei Lincei 1988–1989) and at the Institute of Paper Science and Technology (1996–1997), and a Lecturer at the California Institute of Technology, Graduate Aeronautical Laboratories. His flight project experience includes the Cassini-Huygens probe decelerator design, Deep Space One, the Mars aerobot test program, the Mars exploration rover entry, descent, and landing, the Space Interferometry Mission, the Laser Interferometer Space Antenna gravitational wave antenna, the Autonomous Rendezvous Experiment, and the Mars Science Laboratory, among others. He has led or participated in several independent research and development projects in the areas of computational micromechanics; dynamics and control of tethered space systems; formation flying; inflatable apertures; hypersonic/supersonic entry; precision landing; flexible multibody dynamics; and guidance, navigation and control of spacecraft swarms. His current research interests are in the areas of adaptive structural dynamics and control and planetary sample capture. He is a Senior Member of the AIAA and also serves as Associate Editor of the international journal *Computer Modeling in Engineering Sciences*. He is a Member of the AIAA Technical Committee on Space Tethers.

JUREK Z. SASIADEK is a Professor of aerospace engineering at Carleton University. He received his M.S. (1972), Ph.D. (1975), and D.Sc. from the Technical University of Wroclaw. His research interests focus in two main areas. The first is robotics, especially space robotics and unmanned autonomous vehicles. The second area involves guidance, navigation, and control, especially spacecraft and aircraft control and nonlinear control. From 1989–1991, Dr. Sasiadek was with the Canadian Space Agency, and from 1985–1987, he was a Technical Director for Alberta Research Council. He has authored or coauthored more than 180 journal and refereed conference papers. Professor Sasiadek is a Member of the AIAA Guidance, Navigation, and Control Technical Committee. He is an Associate Fellow of the AIAA, and he was a Program Chair of the 1994 AIAA Guidance, Navigation, and Control Conference. In August 2001, he was General Chair of the 2001 AIAA Guidance, Navigation, and Control Conference. Currently, he is the Chair of an International Federation of Automatic Control Robotics Technical Committee and the Chair of a Joint Robotics and Control Systems Societies chapter.

HANSPETER SCHAUB joined the Aerospace Engineering Science department at the University of Colorado at Boulder in the fall of 2007 as the Joseph Smead Professor after having spent four years at the Virginia Polytechnic Institute and State University aerospace and Ocean Engineering Department. His more than 15 years of professional interests are in nonlinear dynamics and control applications, with a special emphasis on astrodynamics. He has performed research in spacecraft attitude and control, exploiting nonlinear dynamics of control moment gyros to avoid classical control-moment-gyroscope singularities, adaptive control with prescribed closed-loop dynamics, and well as extensive research in near-Earth spacecraft formation-flying problems. At the Sandia Intelligent Systems and Robotics Center he worked on the dynamics, simulation (both hardware-in-the-loop and workstation-based), and control of a U.S. Navy ship-mounted crane control project, control of swarms of autonomous robotics systems, and the development and integration of a robotic visual servoing system based on statistical pressure snakes. He has authored 60 peer-reviewed papers and 90 conference papers, published a textbook on analytical mechanics of space systems (recent second edition revision), holds a patent on a noncontact position and orientation measurement system, has graduated 15 graduate students and is currently mentoring 14 students. His current research focuses on charged relative motion dynamics of spacecraft, orbit debris removal, and relative motion sensing. He is an Associate Fellow of the AIAA.

DANIEL J. SCHEERES is the A. Richard Seebass Professor in the Department of Aerospace Engineering Sciences at the University of Colorado at Boulder. Before this, he was a Member of the Technical Staff in the Navigation Systems Section at the California Institute of Technology's Jet Propulsion Laboratory (1992–1997), and he held positions at the University of Michigan (1997–2007) and Iowa State University (1997–1999). He holds a B.S. in letters and engineering from Calvin College (1985) and a B.S.E. (1987), M.S.E. (1988), and Ph.D. (1992) in aerospace engineering from the University of Michigan. He has authored or coauthored over 100 papers and chapters in peer-reviewed journals and over 130 conference papers. His research interests include the dynamics, control, and navigation of spacecraft trajectories; the design of space missions; optimal control; planetary science; celestial mechanics; and dynamic astronomy. He is an Associate Fellow of the AIAA and serves on the AIAA Astrodynamics Technical Committee. Prof. Scheeres is a member of the American Astronautical Society, the American Astronomical Society's Division on Dynamical Astronomy and Division for Planetary Sciences, and the International Astronomical Union. He is also an Associate Editor for *Celestial Mechanics and Dynamical Astronomy* and *The Journal of the Astronautical Sciences*. He is the recipient of two NASA group awards for his work on the Near-Earth Asteroid Rendezvous (NEAR) mission, and Asteroid 8887 is named "Scheeres" in recognition of his contributions to the scientific understanding of the dynamic environment about asteroids.



M. BALA SUBRAHMANYAM received a Ph.D. in electrical engineering from the University of Iowa in 1975. He is currently a Principal Systems Engineer with the Lockheed Martin Skunk Works. His area of interest is guidance and control, and he worked on projects involving both fixed- and rotary-wing aircraft, missiles, and unmanned aerial vehicles. Previously, he worked at the Naval Air Warfare Center as a Research Engineer. He also taught Control Systems at the University of Missouri from 1982 to 1987. Dr. Subrahmanyam is the author of over 30 journal papers, two books, and numerous conference papers. He is an Associate Fellow of the AIAA.

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