



AEROSPACE

Aerospace Division Newsletter

John W. Robinson, Editor

Spring 2001

Message from Division Chair



John Tracy

While in the process of preparing a talk for the recently completed National Engineering Week celebration, I had the opportunity to reflect on the current state of

aerospace engineering and the health of the ASME Aerospace Division. As part of Engineering Week, ASME participated in an advertising campaign based on the theme "Engineering a Better Quality of Life." For members of the Aerospace Division, our contributions towards engineering a better quality of life come in many forms. The readers of *Mechanical Engineering* magazine recently voted on the top engineering achievements of the 20th Century. Two of the top five achievements were aerospace projects (the Apollo program and the airplane). The Apollo program opened the frontier of space, was the catalyst for the development of hundreds of new consumer products, expanded our knowledge of the moon, and inspired an entire generation of future scientists and engineers. The airplane, as part of an improved transportation system, dramatically impacted the economy and the quality of life of a large fraction of the world's population.

We probably all agree on these great historical accomplishments from the golden age of aerospace. However, we don't often stop to think about the exciting programs and opportunities that we are contributing to today. The International Space Station, for instance, will at completion be over 1 million pounds orbiting 220 miles above the earth with a permanent crew of seven astronauts. The Near Earth Asteroid Rendezvous (NEAR) project was the first ever to land on an asteroid and collect data. NASA has sponsored several X-vehicle projects that are attempting to radically alter our access to space through new reusable launch vehicle technology. The Air Force has also invested heavily in improving access to space with the Evolved Expendable Launch Vehicle (EELV). For atmospheric flight, there are several exciting new airplanes being developed. The A380 and the 747x will set new records as the largest commercial transports of all time. In the area of tactical aircraft, we have the F-22, F/A-18E/F, and the Joint Strike Fighter all being developed to increase the security in the world. New concepts such as the Uninhabited Combat Air Vehicle (UCAV) will provide defensive capabilities from the air without risking the life of a pilot. There are many significant opportunities today for us to use our aerospace engineering talents.

The role of the ASME Aerospace Division is to help our members with the resources they need to participate in these

(continued on page 2)

Outgoing Chair's Message

The executive committee of Aerospace Division is a team of enthusiastic, dedicated and outspoken colleagues investing their expertise and resources in our "tomorrow." In progressive settings, the success of any organization is measured by its ability to articulate its collective vision and investing its resources to make a difference. It was a privilege to work together to strengthen the interactions between the technical committees and the executive committee; initiating a strong voice in the aerospace community through participation in Federal Research and Development Budget Reviews and the ASME Aviation Task Force, where our views were adopted by sixteen other professional societies in a position statement. At present, the division has almost seven thousand primary members and our Technical Committees are immensely active and visible throughout international technical conferences. Yet, there is still more work ahead. We must diligently nominate our division members for the ASME awards as well as to ASME councils for effective leadership, and continue to be vocal about interdisciplinary research needs at academia and industry.

My tenure as the chair was not a simple one, but an immensely rewarding one. The challenge of making a difference in our future remains my personal pledge. My appreciation and gratitude is extended to each one of you and our support staff. Thank you!

Ozden Ochoa

Message from Division Chair

(continued from page 1)

exciting programs. The Aerospace Division is concerned principally with the Mechanical and Systems Engineering aspects of aircraft, spacecraft, and missile design and operation. The Division is organized into technical and administrative committees, and functions primarily through the organization and sponsorship of technical conferences and publications, and recognition of outstanding individual technical contributions by means of awards and honors. Our Division is an integral and active part of ASME. Of the 37 Technical Divisions in ASME, our Aerospace Division is the third largest with over 6,000 members selecting Aerospace as their primary affiliation and another 7,000 who have identified Aerospace as their secondary or other affiliation.

For the Aerospace Division in 2001 our goals are to strengthen our technical committees, establish an operating infrastructure to support our growth, continue our strong government relations activities, recognize those among us who have made technical contributions, and extend our reach into the community. We will continue to provide our members with opportunities to expand their skills through conference participation, make them aware of the latest trends in engineering, give them a voice at the national level for government relations, and extend their networks through opportunities for professional service.

I look forward to working with you to improve our Division in 2001.

John Tracy

Aerospace Division Web Site Operational!

The Aerospace Division web site is now operational. It can be accessed through the ASME International web site at <http://www.asme.org/> under the Technical Divisions tab or directly at <http://www.asme.org/divisions/aerospace/>. Both the ASME International web site and the Aerospace Division web site offer a wealth of information for the mechanical engineering professional, whether an ASME member or not.

The ASME International home page offers links to information on membership and benefits, codes and standards, education, professional development, public affairs, publications and conferences, careers and technical divisions and their committees. There are monthly features like *Survey of the Month*, *Upcoming Conferences*, and *News & Announcements*. The on-line editions of *ME Magazine* and *ASME News* are also available.

The Aerospace Division home page can lead you to information on the Executive Committee and the division's Technical Committees. The site gives descriptions of the division's focus and what it does for the membership. Other links allow access to information on division-sponsored conferences, honors and awards, and the latest in industry trends. The division newsletter is also available on-line as well as links to other sites of interest.

Government Relations Activities

The Aerospace Division, working with ASME's Government Relations office in Washington, led a coalition of ten engineering, professional and industry organizations in developing a joint position statement on the Crisis in Aviation Research and Technology (available on ASME's web site at www.asme.org/gric/). The statement, released in September at a media briefing in Washington, D.C., calls attention to the decade long decline in federal support for advanced aeronautics research and long-term investment in aviation related research and technology programs. It calls for the development and implementation of a national strategy for aviation R&D. This coalition effort followed an earlier Division activity of an ASME Aviation R&D Task Force chaired by past Division Chair Ozden Ochoa. The task force presented testimony in April on the aviation R&D crisis to the U.S. House of Representatives' Subcommittee on VA, HUD and Independent Agencies appropriations, the congressional body that appropriates NASA funding. This testimony and the accompanying Aerospace Division position statement can also be found on ASME's web site under Government Relations.

ASME's Government Relations office, with Aerospace Division participation, sponsored a joint coalition luncheon briefing to congressional staff on October 19. Staff from both House and Senate committees of jurisdiction, as well as staff from key congressional members offices, heard Aerospace Division Executive Committee member Inderjit Chopra discuss the impact of declining federal programs at our universities on aerospace engineering departments and their student enrollments. Representative Vern Ehlers (R-MI) who serves as Vice Chair of the House Committee on Science, also attended this briefing. This same message was presented forcefully to officials of the president's Office of Management and Budget on November 1 by Professor Ochoa. She served as the Division representative at the OMB meeting, joining former NASA administrator James M. Beggs, Dr. Donald

W. Richardson, Member of the Board of Directors of AIAA, and Cary Spitzer, Chair of the IEEE-USA Aerospace Policy Committee. As a result of her cogent presentation, the NASA budget examiners acknowledged that university programs in aeronautics and aerospace engineering will need greater attention.

The Division's efforts have borne some legislative fruit. For the first time in eight years, the congress and the president endorsed an authorization bill that calls for specific funding in FY 2001 and FY 2002 for aeronautics research (HR 1654 signed into law by the president on October 30). Appropriators have also provided funds in FY 2001 for specific aviation R&D programs. All in all, the year's government relations activities of the Aerospace Division have been highly productive and are expected to continue into next year.

Nelson Milder

Aviation Research

Responding to a sharp downward trend in aviation research, ASME formed a coalition of scientific and engineering societies and trade associations to inform Congress and the administration about the need to bolster research in this area of critical importance to economic competition and national security. The coalition held a press conference on Capitol Hill in September to raise awareness of the problem. Partly in response to the coalition's persistence and to Congressional testimony by ASME's Aerospace Division, both the House and the Senate this year passed authorization legislation for NASA's aeronautics research program, the first time such an authorization has passed in eight years. The legislation authorizes funding for research programs to increase significantly over the next three years, putting the program on course to achieve the funding levels of the early 1990s, when aeronautics research funding was at its peak. To drive home the point, ASME and its coalition partners held a luncheon briefing in October on Capitol Hill to continue the process of educating staff on the importance of the issue.

On March 22, 2001, Adnan Akay, Vice President of the ASME Environment and Transportation Goup, testified on behalf of the Aerospace Division before the House Appropriations VA-HUD Subcommittee concerning the NASA Fiscal Year 2002 budget request. Dr. Akay, who is affiliated with Carnegie Mellon University, expressed concern that a national commitment to sustain U.S. leadership in aviation research and technology has been lacking. A copy of the written statement is available on the ASME website at <http://www.asme.org/gric/01-12.html>.

Activities of the Structures and Materials Technical Committee

The Structures and Materials Technical Committee of the Aerospace Division sponsors symposia that focus on state-of-the-art developments in structural and material systems. Members of the committee take the lead in identifying key areas for discussion and in soliciting technical contributions from leading authorities in the field. On occasion, our members collaborate with colleagues from the Applied Mechanics and the Materials Divisions in the organization of these symposia. There has also been a recent emphasis on sponsoring sessions of direct interest to the industry, and to increase contributions from colleagues in the industry. The committee may sponsor between 16 and 20 technical sessions at the annual International Mechanical Engineering Conference and Exhibition (IMECE). There were 16 sessions at the IMECE 2000 in Orlando, Florida. Instability Studies in Solids and Structures, Damage Prediction in Composites, Analysis and Design of Textile Composites, and Multidisciplinary Structural Optimization are some of the topics that will receive attention at this meeting.

The Technical Committee also selects the recipient of the ASME/Boeing Best Paper award, selected from among the papers presented at the annual AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials (SDM) Conference. The recipient of this award in Spring 2000 was Professor Mark Drela of the Department of Aeronautics and Astronautics at MIT.

The committee is planning to soon unveil its new web page, with a link from the home page for the Aerospace Division.

Prabhat Hajela

Activities of the Propulsion Technical Committee

The main objective of the Aerospace Division Propulsion Technical Committee is to promote the development of propulsion disciplines and the dissemination of related technical information. The committee consists of mem-

bers from industry, universities and government who are engaged mainly in propulsion research and development activities. The committee deals with all aspects of vehicle propulsion including solid, liquid, ramjet, combined cycle, nuclear and hybrid rocket engines.

The Committee is mainly involved in developing and presenting technical papers at the Joint AIAA/ASME/SAE/ASEE Propulsion Conference & Exhibit and it sponsors the ASME Propulsion Best Paper Award. The purpose of the Joint Propulsion Conference is to promote the objectives of the propulsion-oriented technical committees of each of the sponsoring societies. The conference provides a forum for timely presentation and discussion of technical advance and issues within the disciplines of these committees.

The ASME Propulsion Best Paper Award offers national recognition to the author of one of the papers presented in one of the ASME sponsored sessions. This award is presented at the JPC Awards luncheon annually and selected from the previous conference presentation. The winning paper this year was "A PIV (particle image velocimetry) Investigation of Rotor-IGV (inlet guide vane) Interaction in a Transonic Axial Flow Compressor" (AIAA-99-2674), authored by Albert J. Sanders, John Papalia and Sanford Fleeter from the School of Mechanical Engineering at Purdue University.

The committee also sponsors the ASME von Karman Institute for Fluid Dynamics Award.

The PTC met in Huntsville at the 36th Joint Propulsion Conference and the officers for the coming year were elected. The new officers are:

- Kuk Frey - Rolls-Royce Corporation is the incoming chairperson
- Carl Gnerney - Jet Propulsion Laboratory is the incoming vice-chair
- Scott Sawyer - University of Akron is the incoming secretary

At the 2000 JPC there were thirteen sessions that were organized by the ASME. The attendance was good but some of the sessions, which have been on-going for several years, were absent. In 1999 there were 21 sessions with a solid following as with previous years. The drop-off may be a result of limited call for papers and we hope to correct this situation for next year.

The theme for the 37th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit is "In the Spirit of the Olympics - International Competition and Cooperation in Space."

Without both competition and cooperation, space exploration and space utilization will not be fully realized. The techno-

logical leaps will be too great and the costs too high. Perhaps success is as dependent on competition as it is cooperation. Today, competition and cooperation play key roles in the health of the propulsion industry. The Conference is to be held 8-11 July 2001 in Salt Lake City, Utah, host of the 2002 Winter Olympic Games. What better place to ponder International Competition and Cooperation in Space?

The best minds representing a wide range of disciplines will be in attendance. Papers and presentations are welcome.

John W. Robinson

Activities of the Crew Systems Technical Committee

The 31st International Conference on Environmental Systems (ICES) will be held at the Hilton Hotel in the Disney World Resort July 9-12, 2001. The ASME Aerospace Division, through the Crew Systems Technical Committee, is a co-sponsor of the conference. We organize 10 to 12 sessions in which research is presented. Our sessions deal with spacecraft environmental control and life support systems; regenerative and non-regenerative life support systems for human space flight and terrestrial or inner space environments; spacecraft or vehicle outfitting for habitability; spacecraft water and gas quality maintenance and monitoring; and extravehicular activity systems.

The committee also sends a representative to the conference steering committee where the conference is evaluated and improvements implemented.

The conference is open to participants from any nation, including academic, government and industry organizations. Individuals who wish to present a paper need not be affiliated with any of the sponsoring societies. Papers proposed will be evaluated solely on the basis of their suitability for inclusion in the program. Only written papers will be accepted.

If you would like to learn more about the conference or if you would like to submit an abstract, please contact the ASME committee chairman, Phil Spampinato, at the address below.

Phil Spampinato

Activities of the Adaptive Structures Technical Committee

Best Paper Awards

The annual best paper awards have been established to recognize outstanding papers in the area of adaptive structures and material systems appearing as an authored journal publication or conference proceedings. Over 15 papers were nominated in the two categories and a review panel of 8 individuals were involved in the reviews.

The winners of 1999 ASME Adaptive Structures Best Paper Award in Structural Dynamics and Control are the authors of "Shape Control of Deployable Membrane Mirrors," J. W. Martin, J. A. Main and G. C. Nelson, from the University of Kentucky. The prize consists of a \$500 cash award and a certificate. It was presented by Inderjit Chopra at the 2000 SPIE Conference on Smart Structures and Materials in March.

The winners of the 1999 ASME Adaptive Structures Best Paper Award in Materials and Material Systems are the authors of "Shape Memory Effect and Magnetostriction in Rapidly Solidified Fe-29.6% Pd Alloy," Yasubumi Faruya, Nesbitt W. Hagood, Hisamichi Kimura and Tadao Wantanabe. The prize, which consists of a \$500 cash award and certificates, is sponsored by SPIE and was presented by Inderjit Chopra at the SPIE Smart Structures and Materials Conference in March 2000.

Adaptive Structures and Material Systems Prize

The Aerospace Division Adaptive Structures and Material Systems Technical Committee established this award to honor a member of the technical community who has made significant contributions to the advancement of the sciences and technologies associated with adaptive structures and/or material systems. The award recognizes scientific contributions as measured by significant innovations, as well as service to the scientific community, and leadership that the individual has demonstrated to advance the science.

The recipient of the prize this year is Dr. Daniel J. Inman, the George R. Goodson Endowed Professor of Mechanical Engineering at Virginia Polytechnic Institute and State University in Blacksburg, Virginia. Dr. Inman earned his Ph.D. in Mechanical Engineering from Michigan State University in 1980. He is the current director of the Center for Intelligent Material Systems and Structures. He held the Herrick Chair in Engineering Science and Mechanics from 1992 until 1998, when he became the Goodson Chair of Mechanical Engineering. A former Department Chair at the State University of New York at Buffalo (1989-1992), he served as a member of

their faculty from 1980-1989. He is a Fellow of ASME, a Fellow of the American Academy of Mechanics, a Fellow of the International Institute of Acoustics and Vibration, an Associate Fellow American Institute of Aeronautics and Astronautics (AIAA), and was a National Science Foundation (NSF) Presidential Young Investigator in 1984. His editorial commitment includes: Technical Editor of ASME's Journal of Vibration and Acoustics (1990-2000), Associate Editor (1986-1989); Technical Editor of the Shock and Vibration Digest (1998-2001); Technical Editor of the Journal Shock and Vibration; Associate Editor of ASME's Journal of Applied Mechanics (1988-94), the Journal of Mechanics of Machines and Structures (1986-94), International Journal of Analytical and Experimental Modal Analysis (1986-1990), the Smart Materials and Structures Journal (since 1991), the Journal of Intelligent Material Systems and Structures (1992-2002), for which he now serves as Technical Editor, and on the editorial board of the Institute of Mechanical Engineer's Journal of Control (1999-2002). He is a founding member of the ASME Technical Committee on Adaptive Structures and of the related committee for AIAA. He is also a member of Institute for Electronic and Electrical Engineers, the Society of Engineering Science and the Society of Experimental Mechanics. He has published four books (on vibration, vibration and control, statics, and dynamics), eight software manuals (in MATLAB, MathCAD, Maple and Mathematica), seven book chapters, over 95 journal papers, 200 proceedings papers, graduated 30 Ph.D. students and supervised over 50 MS degrees. He has given numerous keynote addresses and short courses in the smart structures and control area for both the American Society of Mechanical Engineers (ASME) and the Society for Physical and Industrial Electronics (SPIE) including an ASME Satellite Broadcast short course on fundamentals of smart structures. He currently serves as an ASME Distinguished Lecturer (1996-2001) on smart structures. His research interest are in vibration of machines and structures, vibration testing including modal testing and parameter estimation, model updating of finite elements, damping models for finite element models, computational vibration problems, vibration suppression of structures (both active and passive), continuum models of damping, and smart structures. He holds a patent in smart structures on self-sensing actuation and is interested in applying advanced technologies to vibration based health monitoring.

Adaptive Structures and Material Systems Symposium

The Adaptive Structures and Materials Systems Technical Committee sponsored the Adaptive Structures and Material Systems Symposium at the 2000 ASME Congress in Orlando, FL from November 5-10. The overall theme of 2000 ASME Congress was "Beyond Traditional Boundaries." The Symposium was organized by Dr. James Redmond of Sandia National Laboratories and Dr. John A. Main of the University of Kentucky.

This symposium brought together the world's experts to discuss the latest breakthroughs in smart materials, the cutting edge in adaptive structure applications and the recent advances in both new device technologies and basic engineering research exploration.

ICAST '00: The 11th International Conference on Adaptive Structures and Technologies

ICAST is eleven and entering into the second decade. During the past ten years, ICAST has been established as a major international conference in the fields of active materials, structures and systems. The conference was held in Nagoya, Japan during 23-26 October 2000. The objective of the 11th ICAST was to extend a further promotion of scientific research, innovative exchanges and beneficial interactions among the global community engaged in leading research in the field of adaptive materials, structures and technologies. Traditionally, ICAST is a one-session, three-day meeting focussed on a variety of multi-disciplinary subjects that are essential components of adaptive structures and systems. In addition to ordinary oral presentations, seminars chaired by moderators on a few selected topics were also planned for intensive interaction, together with a round talk session in which the past, present and future courses of R&D on adaptive structures and smart materials were addressed. The Conference Chair was Professor Yuji Matsuzaki of Nagoya University.

SPIE's 7th International Symposium on Smart Structures and Materials

The International Society for Optical Engineering (SPIE) held its 7th Annual International Symposium on Smart Structures and Materials, consisting of nine different conferences, at the Newport Beach Marriott Hotel and Tennis Club in Newport Beach on March 5-9, 2000. This Sym-

posium is jointly sponsored by ASME and SPIE. Over 500 papers were presented. Chair and Co-Chair of the Symposium were Dr. Janet M. Sater of IDA and Marc E. Regelbrugge of Rhombus Consultants. The Symposium was co-located with SPIE's 5th International Symposium on Nondestructive Evaluation and Health Monitoring of Aging Infrastructure. Both Symposiums were attended by over 900 attendees.

SPIE Smart Structures & Materials Achievement Award

This award is presented yearly to an individual whose vision and leadership in the research, development, and application of smart structures and materials concepts has led to significant advances in the state-of-the-art of these interdisciplinary technologies. Selection of this award is made by the SPIE Smart Structures and Materials Symposium Planning Committee members.

At the 2000 SPIE Symposium, this award was given to Dr. Alok Das of the Air Force Research Laboratory. Dr. Das received his Ph. D. degree in 1982 from Virginia Polytechnic Institute and State University. A member of the scientific and professional cadre of senior executives, he is currently the senior scientist for space structures and control in the Space Vehicles Directorate at the Air Force Research Laboratory at Kirkland Air Force Base, NM. He serves as the science and technology advisor to the director of space vehicles in the formulation, planning and implementation of advanced concepts. Dr. Das is a Fellow of AIAA and an author of over 50 technical papers and reports. At this Symposium, Dr. Das gave a plenary presentation, "Gazing into the Crystal Ball: A Technologist's View of Future Defense Space Systems."

SPIE Smart Structures Product Implementation Award

This award is intended to recognize those individuals or companies who have taken the critical step of transforming smart structures technologies into viable industrial and commercial products. The best product is selected on the basis of its importance, uniqueness and usefulness to the defense or commercial industry by a panel of independent technical experts. The objective is to identify the most innovative but realistic products using smart structures and materials technologies. System integration aspects are an important criteria as well. At the 2000 SPIE Symposium, this award was given to James E. Hubbard for his outstanding work in active vibration control.

2000-2001 ASME Aerospace Division

Executive Committee

Chair
John J. Tracy
The Boeing Company
MS H013-C318
5301 Bolsa Ave
Huntington Beach, CA 92647-2099
562-593-2662 Fax 714-896-1425
john.j.tracy@boeing.com

Vice-Chair
Prabhat Hajela
Rensselaer Polytechnic Institute
Aeronautical Engrg Mech
5020 Jonsson Engrg Center
Troy, NY 12180
518-276-6624 Fax 518-276-2623
hajela@rpi.edu

Past Chair
Dr. Ozden Ochoa
Texas A&M University
Mech Engineering Dept ENPB 225
College Station, TX 77843-3123
409-845-2022 Fax 409-862-3989
ochoa@ochoa.tamu.edu

Member
David R. Martinez
Sandia National Laboratory
Structural Dyn & Vib Cont
Dept 9234, MS 0439
Albuquerque, NM 87185
505-844-1457 Fax 505-844-9297
drmarti@sandia.gov

Treasurer
Andrew S. Bicos
The Boeing Company
5301 Bolsa Ave
Huntington Beach, CA 92647-2099
714-896-6294 Fax 714-372-0870
andrew.s.bicos@boeing.com

Secretary
Dr. Inderjit Chopra
Dept of Aerospace Engineering
University of Maryland
College Park, MD 20742
301-405-1122 Fax 301-314-9001
chopra@eng.umd.edu

Member
John W. Robinson
The Boeing Company
P.O. Box 3829
Seal Beach, CA 90740
562-797-2051
john.w.robinson2@boeing.com

Technical Committees

Chair - Adaptive Structures & Material Systems
Dr Inderjit Chopra
Dept of Aerospace Engineering
University of Maryland
College Park, MD 20742
301-405-1122 Fax 301-314-9001
chopra@eng.umd.edu

Chair - Structures & Materials
Prabhat Hajela
Rensselaer Polytechnic Inst
Aeronautical Engrg Mech
5020 Jonsson Engrg Center
Troy, NY 12180
518-276-6624 Fax 518-276-2623
hajela@rpi.edu

Chair - Propulsion
Dr. Kuk K. Frey
3629 Katelyn Lane
Indianapolis, IN 46228-7021
317-230-6524 Fax 317-230-3691
kuk.k.frey@rolls-royce.com

Chair - Crew System
Philip Spampinato
ILC Dover, Inc
P.O. Box 266
Frederica, DE 19946
302-335-3911 x350 Fax 302-335-0762
spampp@ilcdover.com

ASME Staff Contacts

Elio A. Manes
Senior Program Manager
ASME International
Mail Stop 22W3
Three Park Ave
New York, NY 10016-5990
212-591-7797 Fax 212-591-7671
manese@asme.org

Angela M. Buonvicino
Engineering Programs Assistant
ASME International
Mail Stop 22W3
Three Park Ave
New York, NY 10016-5990
212-591-7103 Fax 212-591-7671
buonvicino@asme.org

2000 AIAA/ASME/AHS Adaptive Structures Forum

This Forum was jointly held with the 41st AIAA Structures, Structural Dynamics and Materials Conference at the Westin Peachtree Plaza Atlanta, Atlanta, GA on April 3-6, 2000. The General Chair of this

Forum was Dr. George A. Lesieutre and the Technical Program Chair was Friedrich K. Straub. The objective of this Forum is to bring together people who are concerned with the advancement of adaptive structures technology and its application to aerospace systems. As such, the range of topics addressed is broad, includ-

ing aerospace vehicle applications (fixed-wing, rotary-wing, and spacecraft); control methodologies; health monitoring; noise, vibration, and shape control; active damping; sensor and actuator devices; microsystems, and developments of active transducer materials. Forty-two papers were presented at this Forum.

ASME Congress Sessions

The 2000 ASME International Mechanical Engineering Congress and Exposition (IMECE) was held November 5-10, 2000 at Walt Disney World Dolphin in Orlando, Florida. The Aerospace Division had 33 sessions sponsored by two technical committees, including 5 sessions in symposia held jointly with committees from other divisions. We thank all the organizers and committee representatives for their time and dedication in organizing these sessions. The participation of the Aerospace Division at the annual IMECE is an important facet of our technical and professional activities throughout the year. These sessions are clear evidence of high quality research, and demonstrate many technical accomplishments in our field that are coordinated through the technical committees of the division. We look forward to seeing you at these sessions during this year's conference.

The Adaptive Structures and Material Systems technical committee sponsored 82 papers in 17 sessions. Session titles were as follows:

- Electroactive Material Development and Evaluation
- Innovative Smart Material Devices
- Materials and Mechanics Issues in Shape Memory Alloys I & II
- Dynamic Behavior of Shape Memory Alloys
- Active Composites
- Adaptive Structures Modeling
- Magnetorheological Fluids
- Issues in Smart Structure Actuation
- Power and Energy Considerations for Adaptive Structures
- Functionally Graded Smart Materials and Structures
- Applications in Aerodynamics
- Active Structures Health Monitoring
- Experimental Techniques and Applications
- Adaptive Structures Control Methodologies
- Active Control of Vibration and Noise - I & II

The Structures and Materials technical committee had 16 sessions with 77 papers. Session titles were as follows:

- FRP Composites for Civil Infrastructure: Durability Issues and Challenges
- FRP Composites for Civil Infrastructure: Durability Issues and Challenges
- Material Properties of Polymers and Composites
- Design, Analysis, and Processing of Textile Composites - I & II
- Emergent Issues in Multidisciplinary Structural Design - I & II
- Sandwich Construction
- Design of Composite Structures
- Mechanics of Sandwich Structures - IV, V, VI, VII
- Analysis of Composite Structures
- Damage Initiation and Prediction in Composites - II & III
- Sandwich Structures - VI

Aerospace Division 2001 Conferences

2001 International Mechanical Engineering Congress and Exposition (IMECE)
November 11-16, 2001
New York Hilton Hotel & Towers and
Sheraton New York Hotel & Towers
New York, New York
www.asme.org/conf/congress01/

SPIE's 8th Annual International Symposium on
Smart Structures & Materials
March 4-8, 2001
www.spie.org/info

42nd AIAA ASME ASCE AHS ASC
Structures, Structural Dynamics and
Materials (SDM)
Conference and Exhibit and AIAA
ASME AHS Adaptive Structures Forum
April 16-19, 2001
Seattle, Washington
www.aiaa.org

37th AIAA ASME SAE ASEE Joint
Propulsion Conference and Exhibit
July 8-11, 2001
Salt Lake City, Utah
www.aiaa.org/

31st International Conference on Environmental Systems (ICES)
July 9-12, 2001
Hilton Walt Disney World Resort
Orlando, FL
www.sae.org/calendar/

12th International Conference on Adaptive Structures and Technologies (ICAST)
October 15-17, 2001
Inn and Conference Center
College Park, MD
www.aiaa.org