Design Engineering Division

Annual Newsletter

Seth Orsborn, Editor • Summer 2010

Message from the Chair • *Hamid R. Hamidzadeh, Design Engineering Division Chair*

Indeed, it is my distinct pleasure to serve as the new Chair of the Design Engineering Division (DED). Over the last 65 years, under the visionary leadership of the chairs who preceded me, the DED has been recognized as one of the most active and vibrant divisions of the American Society of Mechanical Engineers. During the last year, the division reported 33,181 members. The DED is striving to lead in fostering the art, science and application of Design Engineering as well as promoting the professional careers of design engineers in education, research, and engineering practices.

The DED serves a variety of entities; the Division is also to maintain leadership technically, promote design engineering scientific research and dissemination of knowledge, as well as, respond to emerging technological changes. To ensure achievement of these responsibilities, the DED relies on its highly successful annual event known as the International Design Engineering Technical Conferences (IDETC) and its six sponsored prestigious journals.

The IDETC events have become the premier international meetings in the fields of Design Engineering and it is organized to showcase cutting edge research and accomplishments, and to enrich the educational experience in related fields. The upcoming IDETC event will be held this year in Montreal, Canada. It should be noted, too, that the DED has been actively represented in the International Mechanical Engineering Congress and Exposition.

Moreover, the DED's highly rated journals offer important insights into original scientific developments in all aspects of Design Engineering. These journals are: Journal of Computing and Information Science in Engineering (co-sponsored with CIE Division), Journal of Computational and Nonlinear Dynamics, Journal of Mechanical Design, Journal of Mechanisms and Robotics, Journal of Medical Devices (co-sponsored with Bioengineering Division), and Journal of Vibration & Acoustics.

Success of the DED has been made possible through the activities and accomplishments of its 13 dynamic Technical Committees, which act as pillars of the Division. These Technical Committees are:

- Design Automation
- Design Education
- Design for Manufacturing and the Life Cycle
- Design Theory and Methodology
- Fastening and Joining
- Mechanisms and Robotics
- Mechatronic and Embedded Systems and Applications (MESA)
- Micro & Nano Systems (MNS)
- Multibody Systems and Nonlinear Dynamics
- Power Transmission and Gearing
- Reliability, Stress Analysis & Failure Prevention
- Vehicle Design
- Vibration and Sound

Every year, the DED recognizes the significant achievement of our members by awarding several prestigious Society, Division, and Technical Committee awards for distinguished scientific contributions and dedicated services.

I am honored to be working with a great group of people in the DED Executive Committee. Special thanks to our Past Chair, Dr. Ahmed Shabana, who effectively led our Division and enhanced it financially, administratively, and technically. Also, I would like to thank our outgoing Past Chair, Dr. Kazem Kazeronian, for his dedicated services to the DED for many years. I trust that he will continue promoting the DED objectives for years to come. These gentlemen have provided me with a wealth of information and advice, for which I am very grateful.

I am pleased to work with a cluster of experts with excellent proven records:

- Dr. Ahmed Shabana, Past Chair
- Dr. (Buddy) W. Clark, new Vice-Chair and Treasurer
- Dr. Vijay Kumar, IDETC Executive
- Dr. Kurt Anderson, the Publications Executive
- Dr. Georges Fadel, Chair of the Honors and Awards Committee
- Dr. Wei Chen, Technical Committee/ IMECE Executive
- Dr. Sunil Agrawal, whom I welcome as the new Secretary of Executive Committee

Our immediate goals for this year are to augment the current activities of the Division; bring more members among practicing engineers, students, and academicians into active participation in our Division; and to focus and move towards developing fundraising strategies to support activities of the DED and all of its Technical Committees. Moreover, as the Division grows, we should plan to involve a wider array of people to engage in our activities to facilitate innovative dissemination of design engineering technology through programs and publications. Also, as we are broadening the scope for our Technical Committees and as the research and practice advance, we need to revise the International Design Engineering Technical conferences to be more efficient and cost effective.

I want to thank each and every one of you for your long-standing support and participation in your Division activities. Thanks especially to our current and past devoted Executive Committee members, and the ASME supporting staff, who have kept the Division highly active for over 65 years. Finally, I am very grateful for the devoted service of Ms. Erin Dolan, Ms. LaShion Pettiford, and Mr. Richard Ulvila, who assisted the DED during the past year. I urge you to visit our website at: divisions.asme.org/DED/ and welcome your input for improvements of the DED activities and initiatives. I wish everyone a productive and successful year ahead and I look forward to meeting you this August in Montréal! ●

EXECUTIVE COMMITTEE REPORTS

Greetings from the Past Chair • *Ahmed Shabana - Immediate Past DED Chair*

I had the honor to serve as the Chair of the ASME design Engineering Division (DED) last year (July 1, 2009 – June 30, 2010). DED remains the largest ASME division, and it continues to have a large number of active technical committees that sponsor several conferences and journals. DED operations are managed by its Executive Committee. I was very fortunate to have the opportunity to work with excellent group of dedicated colleagues who have been very helpful and supportive. Two new voting member positions (chairs of the DED Publication Committee and the DED Honors and Awards Committee) were added to the DED Executive Committee starting July 1, 2009. The DED finances are still in good shape despite the bad economic situation. Award matching funds approved by DED have been allocated to the DED technical committee accounts. Three new awards were established by the technical committees this year.

The International Design Engineering Technical Conference (IDETC), held in August/September 2009, was very successful. The conference had 13 sub-conferences and attracted approximately 1200 papers from academia, industry, and government. The conference was co-chaired by Kurt Anderson (RPI) and George Flowers (Auburn). The Program Co-Chairs were Harry Dankowicz (UIUC) and Dan Quinn (Akron). The conference had 1315 attendees including 476 students. At the 2009 IDETC, DED and the National Science Foundation supported a workshop for women and minorities. This workshop was organized by Judy Vance (Iowa State) and Janis Terpenny (VPI). The event was very successful. DED continued active participation in the 2009 ASME International Mechanical Engineering Congress and Exposition (IMECE) held in Lake Buena Vista, Florida during the period November 13 – 19, 2009. DED volunteers who served as track chairs and co-chairs, and session and symposium organizers contributed to the success of the 2009 IMECE. DED sponsored IMECE tracks, symposia and sessions related to design engineering. The 2010 IDETC to be held in Montreal, Canada has received a record number of abstract submissions for the even year IDETC conferences. The 2011 IDETC will be held in Washington, D.C., the 2012 IDETC will be held in Chicago, Illinois. The DED Executive Committee approved the proposal submitted by Harry Dankowicz and Dan Quinn to organize the 2013 IDETC. DED approved a proposal to reorganize IDETC, allowing the conference organizers to have a 5- day conference instead of 3-day conference. Some DED groups will have their conferences during the first two and Half days while other groups will have their conferences during the last two and half days. Wednesday will be used for the Honors and Awards Lunch, receptions, and other major activities that can be of interest to all DED groups. Vijay Kumar (UPenn) drafted a proposal for the IDETC reorganization which was discussed by the members of the DED Executive Committee.

DED currently has 13 active Technical Committees (TC). Most of these committees have established their bylaws and operating guidelines. Requests for change in the leadership of these committees were approved by the DED Executive Committee. I would like to welcome the new TC chairs and thank the past chairs for their efforts which are very much appreciated by the DED community. Because of the DED rapid growth and the number of conferences and journals sponsored by the division, I prepared a draft of a proposal to establish the DED Technical Groups (clusters) in order to facilitate communications between the DED Executive Committee and the DED technical committees. This proposal was discussed, and I hope to see it implemented in the future in order to be able to more efficiently manage the division. I appreciate the constructive comments and feedback received from the DED community on this proposal.

DED continued to fully sponsor four ASME journals; Mechanical Design, Vibration and Acoustics (JVA), Mechanisms and Robotics, and Computational and Nonlinear Dynamics (CND). The division also co-sponsors two ASME journals; Computing and Information Science in Engineering (JCISE), and Medical Devices, which are co-sponsored, respectively, with the Division of Computer and Information in Engineering and the Bio-Engineering Division. Kon-Well Wang (UM) ended his term as the Editor-in-Chief (EIC) of JVA on December 31, 2009. Kon-Well did an excellent job and provided the leadership required for increasing the visibility and standing of JVA. Noel Perkins (UM) was appointed as the new EIC. Jami Shah (ASU) and Subhash Sinha (Auburn) end their term this year as the EIC of JCISE and CND, respectively. They are the founding editors of these two journals and provided the leadership required to establish them as successful ASME journals. Their efforts and dedicated service are very much appreciated. Several new Associate Editors of DED journals were appointed and several others were reappointed during the past year. Kurt Anderson prepared guidelines for turnover of DED journal Editor-in-Chief (EIC). These guidelines were approved by the DED Executive Committee.

After receiving feedback from the Honors and Awards Committee members and the Executive Committee, Georges Fadel (Clemson) prepared guidelines and recommendations for award honorarium. These guidelines and recommendations were sent to the TC chairs for their comments. New members were elected to fill the vacant positions in several DED award committees. Several nominations were made for DED Awards this year, and the recipients of these awards were selected. The DED Technical Committee on Vibration and Sound (TCVS) voted to elevate the Den Hartog Award to be a Society Award. DED submitted the request to ASME for approval of the Den Hartog Award as a Society Award.

Sunil Agrawal (UDel) was elected as the incoming DED Secretary. Sunil has an outstanding record of service to the DED community. He served as the M & R chair and also as chair of the M & R conference. I would like to thank the DED Nominating Committee members Kazem Kazerounian (UConn, Chair), Kazuhiro Saitou (UM), Subhash Sinha (Auburn), and Judy Vance (Iowa State) for their efforts in identifying qualified candidates for the DED Secretary.

I would like to thank Kazem Kazerounian (Uconn), past DED chair, and Hamid Hamidzadeh (TnState), DED Vice Chair/Treasurer, for their help, advice and support during this past year. I was fortunate to work with dedicated members of the DED Executive Committee who have been very supportive; I would like to thank William W. (Buddy) Clark (Pitt), Vijay Kumar (UPenn),

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Executive Committee Reports

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Wei Chen (Northwestern), Georges Fadel (Clemson), and Kurt Anderson (RPI). I very much appreciate their support and cooperation. I would also like to thank the ASME staff LaShion Pettiford, Erin Dolan, and Richard Ulvila, for supporting our division during the past year.

Finally, I would like to thank all the division members for their contributions and active participation as DED members; authors; members of DED technical and award committees; IDETC and IMECE track, session, and symposium organizers; associate editors of DED ASME journals; reviewers for journal and conference papers; and members of the special and standing committees. This active participation will ensure that our division will remain strong and will continue to contribute to our society.

REPORT ON DED TECHNICAL COMMITTEES

William W. Clark, Technical Committee Executive

Design Engineering Division Technical Committees

- **Design Automation (DAC)**
- **Design Education (DEC)**
- **Design for Manufacturing and the Life Cycle (DFMLC)**
- **Design Theory and Methodology (DTM)**
- **Fastening and Joining (F&J)**
- **Mechanisms and Robotics (M&R)**
- **Mechatronic and Embedded Systems and Applications (MESA)**
- **Micro & Nano Systems (MNS)**
- **Multibody Systems and Nonlinear Dynamics (MSND)**

The center of activity of any ASME division is its technical committees, and the Design Engineering Division is no exception. The DED sponsors thirteen different technical committees that promote research and dissemination of knowledge in a wide range of areas related to engineering design. The primary activities of the technical committees are organization of conferences through which the community shares the latest research results and presents tutorials on topics of interest; support of technical journals; and recognition of individuals who have made outstanding contributions in research, education, or service to the engineering design community.

The dynamic nature of the Design Engineering Division is evident in its technical committees, as it has facilitated the creation of three new committees within the past seven years to address areas of current engineering relevance, including the Multibody Systems and Nonlinear Dynamics committee (MSND), the Micro & Nano Systems committee (MNS), and the newest committee, the technical committee on Mechatronic and Embedded Systems and Applications (MESA). MESA is just completing its first year, and it already has a vibrant program of conferences, awards, and journal support.

This past year has seen a great deal of activity within the division's committees. The primary conferences in which the committees participate are the International Design Engineering Technical Conferences (in which each committee sponsors or co-sponsors a conference) and the International Mechanical Engineering Congress and Exposition. Some committees participate in additional conferences throughout the year, such as the Smart Materials, Adaptive Structures, & Intelligent Systems Conference (SMASIS), the Power Transmission and Gearing Conference, and the International Conference on Mechatronic and Embedded Systems and Applications.

One of the most gratifying activities for committee members is the opportunity to recognize researchers, innovators, and educators who have made significant contributions to the field. The technical committees sponsor a wide variety of awards each year, from best paper awards at conferences to young investigator awards to lifetime achievement awards. Currently there are over twenty different awards presented by technical committees.

Whether you work in industry, government, or academia, participating in a technical committee is a great way to get involved in the Design Engineering Division. The first meeting that you attend can lead to a lifelong process of learning about people and developments in your field, building relationships, and giving back to your technical community.

REPORT ON HONORS AND AWARDS

Georges Fadel, Committee Chair

The following people received ASME Society or Division Awards at the 2009 IDETC: Dr. J. Michael McCarthy, University of California, Irvine, received the ASME Machine Design Award for "breakthrough contributions in kinematic theory of machine design that expand the classical theory of linkage synthesis to robot manipulators, for excellence in Engineering Education, and for his distinguished service as technical Editor of two ASME Journals". Dr. Daniel J. Segalman from the Sandia National Laboratories received the Robert E. Abbott Award for "his innovative leadership and devoted and distinguished service to the Division, to the design engineering community and to the profession," and Dr. S.V. Sreenivasan from the University of Texas, Austin received the Leonardo Da Vinci Award for "his research and inventions that have led to the development of practical low-cost nanolithography machines and processes that are already enabling applications such as terabit magnetic storage, high brightness LEDs, and solid state memory devices". Congratulations!

As we look forward to 2010 and 2011, the DED H&A Committee asks that you identify a qualified candidate for an award and submit a nomination. The deadline for receipt of nomination materials is February 1 for most Society and Division Awards; it is helpful in planning when a potential nominator gives some early notice about a nomination to the Chair of the DED H&A Committee. The ASME Society Awards include the Machine Design Award, the Spira Outstanding Design Educator Award and the Ralph Barnett-Carl Uzgiris Award. Division Awards include the Robert E. Abbot and Leonardo Da Vinci Awards. In addition, there are several Division-Committee awards that are administered by the different technical committees within the DED. Information about these awards, and greater detail about the above-listed ones, is available within the ASME website, along with the nominating procedures and forms. For something specific, please feel free to contact Georges Fadel at fgeorge@clemson.edu or at (864)656-5620.

IDETC-CIE 2009

Kurt Anderson • George Flowers
2009 IDETC-CIE General Conference Co-Chairs

Harry Dankowicz • Dane Quinn
General Conference Program Co-Chairs

The 2009 ASME International Design Engineering Technical Conferences (IDETC) & Computers and Information in Engineering Conference (CIE) took place during August 30- September 2, 2009 at the San Diego Convention Center, in San Diego, California. The 2009 IDETC-CIE received 1,403 papers submitted to all thirteen participating conferences. 1,200 papers were accepted and scheduled for the technical presentations. Three tutorials and five workshops sponsored by the participating technical committees and conferences, with the splendid organizational support of Dr. Albert Luo. The general plenary lecture was presented by Dr. Fariba Farhoo of the Air Force Office of Scientific Research and Dr. Eduardo Misawa of the National Science Foundation.

The IDETC-CIE 2009 Opening Reception took place at Petco Park on Monday evening August 31, 2009. The reception consisted of a barbeque (vegetarian options were available) and a San Diego Padres baseball game for the evening's entertainment.

Dan Negrut (University of Wisconsin – Madison) was responsible for venders and displays, while Matthew Parkinson (Penn State) directed the conference organization effort to enhance the student experience. These student activities included a student breakfast, student mixer/reception, student scavenger hunt, and promotion of student involvement and attendance at awards luncheons.

We would like to take this opportunity to express our sincere thanks again to conference and symposium chairs, program chairs, and all those who helped in the organization of this conference. We would also like to express our thanks to all authors, reviewers, and all other conference participants. A very special thanks is also due to the ASME staff (Erin Dolan in particular) for their tireless efforts in organizing the conference. ●

IDETC/CIE 2010

Pierre Larochelle • General Conference Chair
Florida Institute of Technology • pierrel@fit.edu

Andrew Murray • Technical Program Chair
University of Dayton • Andrew.Murray@notes.udayton.edu

On behalf of the ASME Design and the Computers in Engineering Divisions, it is our pleasure to invite you to join us at the 2010 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. This event will take place August 15-18, 2010 in Montréal, Québec, Canada. The Conference is the flagship international meeting for Design Engineering and includes the following technical conferences:

- 36th Design Automation Conference
- 34th Annual Mechanisms and Robotics Conference
- 30th Computers and Information in Engineering Conference
- 22nd International Conference on Design Theory and Methodology
- 15th Design for Manufacturing and the Lifecycle Conference
- 12th International Conference on Advanced Vehicle and Tire Technologies
- 7th Symposium on International Design and Design Education 4th International Conference on Micro- and Nanosystems
- Special Conference on Mechanical Vibration and Noise

The Conference will include hundreds of technical presentations in addition to workshops, tutorials, exhibits, the finals of the student design competition, panel sessions, and keynote addresses from experts in many of the above listed conferences. This Conference provides a unique forum for the sharing of recent research results as well as for networking with friends and colleagues. Industry participation is particularly encouraged to provide opportunities for fruitful exchanges between the academic and industrial communities.

The Conference Hotel, the Fairmont Queen Elizabeth, is centrally located in the heart of downtown Montréal near McGill University and École de Technologie Supérieure. Tours of research facilities at both of these Universities are being planned as well as a tour of the Canadian Space Agency.

We look forward to welcoming you to Montréal in August, 2010! ●


Fairmont Queen Elizabeth Hotel


Montréal, Quebec

IDETC-CIE 2011

Dr. Nader Jalili - Northeastern University - Phone: (617) 373-3629 - n.jalili@neu.edu

As the General Chair, it is with my great pleasure and honor to report on the progress of the 2011 ASME International Design Engineering Technical Conferences and Computers in Engineering Conference (2011 IDETC-CIE). Since late 2007, we have been actively working, in consultation with ASME conferences management, to develop a comprehensive and effective plan for a variety of activities ranging from local attractions and entertainment to students activities, industrial tours, family activities and many more to bring lasting memory and enjoyment to the participants. We are hoping to finalize all organizational efforts in the next couple of months in order to assure a perfect execution in 2010 and 2011.

Following is a brief summary of the progress made to date.

OFFICIAL DATES:

August 28 – 31, 2011 (Sunday – Wednesday)

August 28 (Sunday), Tutorials and Workshops

August 29 – 31 (Monday – Wednesday),
Technical Meetings and Exhibits

CONFERENCE VENUE:

Hyatt Regency Washington on Capitol Hill
Address: 400 New Jersey Ave. NW, Washington, DC 20001
Website: www.WashingtonRegency.Hyatt.com
Sleeping Room Rate: $169/night
Complimentary Internet Access in Sleeping Rooms
Complimentary Health Club Privileges

CONFERENCE GENERAL CHAIR:

Dr. Nader Jalili, *Northeastern University*

CONFERENCE TECHNICAL PROGRAM CO-CHAIRS:

Dr. Olivier Bauchau, *Georgia Institute of Technology*

Dr. Bogdan Epureanu, *University of Michigan*

ADVISORY COMMITTEE:

Prof. George Flowers – *2009 General Conference Co-Chair in San Diego*

Prof. H.S. Tzou – *2007 General Conference Chair in Las Vegas*

Prof. Hamid Hamidzadeh – *2005 General Conference Chair in Long Beach*

Prof. Ahmed Shabana – *2003 General Conference Chair in Chicago*

Prof. Subhash Sinha – *1999 General Conference Chair*

We hope to see you all in Washington DC in August 2011! ●

JOURNAL ACTIVITY REPORTS

Journal of Computing and Information Science in Engineering

Jami Shah, Editor

The Journal of Computing & Information Science in Engineering (JCISE) is now in its 10th year of publication. We are organized around eight major technical areas: Solid/parametric modeling, Computational Geometry, Computational Metrology, Virtual Reality/Haptics, CAE Simulation, AI/Knowledge based systems, Computer aided manufacturing and Engineering Informatics. In the past year we published a two-part special issue on Haptics in Virtual Reality (Eds: Jim Oliver, Marcia O'Malley, T. Kesavadas). This year there will be a special issue on: AI/Knowledge based systems (Eds. Ashok Goel, Andres Gomez). Two other specials are in the making: Driving Simulation (Eds: Kemeny, Allen, Buchoff), and Gaming in engineering applications (Eds: T. Lim, J. Corney).

During our period of operation so far we received more than 1700 papers. JCISE allows a maximum of two review cycles to determine the acceptance of a paper. Only about 10% of the appears get accepted in the first cycle but 50% after the revised paper is resubmitted for a second cycle of reviews. This gives us an overall acceptance rate after two review cycles between 30 and 35%. However, 15% of the authors never resubmit a paper that has been sent back for major revisions. We hope that this trend can be changed. We think that every paper has room for improvement and our editorial board strives to make a paper the best that it can be by providing very specific suggestions for improvement.

Our average review time is about 3 months and the backlog now stands at three issues. We are considering asking ASME to increase our annual page allowance from 400 to 500. JCISE publishes papers in two tracks: full length research papers and shorter application oriented papers. Application track papers include: Software Reviews, Technology Reviews, Application Briefs and Technical Notes. These categories are limited to 5 pages (5000 words) and are meant to encourage practicing engineers from industry to publish innovations in engineering software development or challenges in implementing pilot projects and prototypes. Roughly 330 full length papers and 90 Application track papers have been published. We encourage chairs and review coordinators of DED related conferences to forward their best papers to JCISE for consideration.

The bulk of the work in running the journal and ensuring high quality is done by our 15 Associate Editors who are leading experts in one or more of our eight technical areas. We finally have good international representation on our editorial board, with two Associate editors from Europe, three from Pacific Rim and one from the Middle East. I am in the last year of my second 5 year term as the Chief Editor. We hope to announce my replacement in November. Not that we are well established, the next goal is to become the top journal in our field both in terms of technical quality and circulation. JCISE has already doubled its impact factor to 0.81, putting it in the top one-third of ASME transactions.

JCISE is preparing to migrate from its own web based paper management system (eLane) to ASME's journal tool, as ASME makes improvements and function upgrades to its own system. However, in the mean time we continue to use eLane (jcise.eas.asu.edu:8080/JCISE/index.jsp).

We thank the authors, reviewers and associate editors for their continued support of JCISE. For more information, please visit our web pages at: asudesign.eas.asu.edu/links/journal/index.html.

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Journal of Computational and Nonlinear Dynamics Editor

Subhash C. Sinha, Editor

The Journal of Computational and Nonlinear Dynamics (JCND) is a quarterly journal that provides a forum for the exchange of new ideas and applications in computational rigid and flexible multi-body system dynamics and all aspects (analytical, numerical and experimental) of dynamics associated with nonlinear systems. Last year, Associate Editors Claude Lamarque, ENTPE, Vaulx-en-Velin, France; Albert Luo, SIU, Edwardsville, USA; Aki Mikkola, Lappeenranta University of Technology, Finland and Nobuyuki Shimizu, Iwaki MeiseiUniversity, Fukushima, Japan were re-appointed to a second three year term to serve in their areas of expertise related to multibody systems and nonlinear dynamics. Professors Dan Negrut and Olivier have co-edited a special issue of JCND on 'Computational Multibody Dynamics'. This would be the July 2010 issue of the JCND.

I encourage you to choose JCND as the medium of dissemination of your research if it falls within the scope of the Journal. All manuscripts must be submitted electronically through the 'journal tool' of ASME. Please take a look at the journal web site journaltool.asme.org/Content/JournalDescriptions.cfm?journalId=21&Journal=CND. JCND is indexed in – Science Citation Index Expanded, Journal Citation Reports/Science Edition and Current Contents/Engineering Computing and Technology starting from the very first issue of January 2006. All of us associated with the JCND are committed to a fair and rapid review process. And, please contact me directly if you have any comments or suggestions.

As most of you know, I would be completing my term as the Founding Editor of the journal in December of this year. I am very happy to report that Professor Ahmed Shabana of the University of Illinois at Chicago is the incoming Editor of the journal. I would like to take this opportunity to congratulate Professor Shabana and thank all Associate Editors, reviewers and numerous people in the Design Division and ASME Publication Department without whose help it would have been impossible to perform this service.

Journal of Mechanical Design

Panos Y. Papalambros, Technical Editor

The Journal of Mechanical Design (JMD) serves the broad design community as the venue for scholarly, archival research in all aspects of the design activity. JMD has traditionally served the ASME Design Engineering Division and its technical committees, but it welcomes contributions from all areas of design with emphasis on synthesis. JMD topics include:

Design automation, including design representation, virtual reality, geometric design, design evaluation, design optimization, risk and reliability-based optimization, design sensitivity analysis, system design integration, ergonomic and aesthetic considerations, and design for market systems;

Design of direct contact systems, including cams, gears and power transmission systems;

Design education;

Design of energy, fluid, and power handing systems;

Design innovation and devices, including design of smart products and systems;

Design for manufacturing and the life cycle, including design for the environment, DFX, and sustainable design;

Design of mechanisms and robotic systems, including design of macro-, micro- and nano-scaled mechanical systems, machine component, and machine system design;

Design theory and methodology, including creativity in design, decision analysis, design cognition, and design synthesis.

In 2009, special effort was placed on reducing the time from submission to publication. The journal received 426 submissions with overall acceptance rate of about 20%. The mean time from manuscript submission to final decision by the Editor was 3.74 months. The Journal presented a highly successful special issue on smart products and systems in September 2009 establishing itself as a preferred venue for design-oriented research work in this domain. JMD maintains a custom website for its constituents with updated information, special instructions, advanced publication information and an editorial archive. Please visit asmejmd.org.

Journal of Medical Devices

Arthur G. Erdman, Co-Editor
Gerald E. Miller, Co-Editor

The Journal of Medical Devices (JMED) offers an important opportunity to our biomedical and design community to describe innovative devices used in the clinic and the laboratory that cannot be easily presented in other journals or venues.

Papers in this Journal focus on applied research and development of new medical devices or instrumentation. The Journal publishes papers on devices that improve diagnostic, interventional and therapeutic treatments. Of particular interest are novel devices that allow new surgical strategies, new methods of drug delivery, or other devices that are intended to reduce the complexity, cost, or adverse results of health care. Significant biomechanical, clinical, or engineering content is expected. The Design Innovation paper category is encouraged for reporting about novel devices for which there may be less extensive clinical or engineering results.

Papers are invited for submission to the Journal of Medical Devices in the following suggested categories: new medical sensors/actuators, orthopedic devices, cardiovascular devices, rehabilitation devices, neurological devices, bioheat transfer devices, medical instrumentation, image guided intervention/treatment, endoscopic/laparoscopic devices, minimally invasive devices, human performance/force assessment, tissue engineered devices, drug/cell delivery systems, medical robotics, medical device design processes, medical device manufacturing, human factors in medical devices, and sports biomechanics related to devices.

The Journal takes advantage of the annual Design of Medical Devices Conference (www.dmd.umn.edu) and its review process. In 2009, 101 abstracts were published and 86 will be published in the June '10 Issue for the 2010 DMD Conference. The March 2010 issue will mark three full years of this Journal. We encourage you to submit a paper or subscribe to the journal. Please visit www.asme.org.

Journal of Vibration and Acoustics

Noel Perkins, Editor

I am delighted to start my term as the new Editor of the Journal of Vibration and Acoustics and I want to "introduce" you to my assistant Ms. Kimberly Conklin (JVA.kkeifer@umich.edu). Right off, Kim and I owe a great debt of thanks to the previous Editor, Dr. Kon-Well Wang and his assistant Ms. Terri Gorowski who masterfully guided this journal. We hope to continue Kon-Well and Terri's tradition.

In keeping with recent tradition, JVA continues to experience increased submissions. Over the past six years, the number of papers submitted has nearly tripled from 112 papers in 2003 to 312 in 2009. During the first quarter of 2010 alone, we received nearly 100 submissions suggesting perhaps another record number for the current calendar year.

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In response to this trend, the number of pages allocated to the journal was increased to 800 pages per year in 2006. The historic acceptance rate for papers submitted to the journal remains approximately 30-35%.

The day to day operation of the journal is facilitated by an exceptional group of twenty-one Associate Editors. During 2010, the following five Associate Editors will complete their final three-year term: Dr. William Clark (Univ. Pittsburgh), Dr. Karl Grosh (Univ. Michigan), Dr. Sotirios Natsiavas (Aristotle Univ.), Dr. Robert Parker (Ohio State Univ.), and Dr. D. Dane Quinn (Univ. Akron). On behalf of ASME, I want to thank these individuals for their outstanding service in support of our journal. Starting in 2010, the following five Associate Editors were nominated, approved and appointed to their first three-year term: Dr. Philip Bayly (Washington Univ.), Dr. Liang-Wu Cai (Kansas State Univ.), Dr. Yukio Ishida (Nagoya Univ.), Dr. Wei-Hsin Liao (The Chinese Univ. of Hong Kong), and Dr. Ranjan Mukherjee (Michigan State Univ.). We welcome each to our editorial board and thank them in advance.

Starting in 2010, JVA is preparing a special issue on the theme of "Vibration Energy Harvesting" as organized by Dr. William Clark, Dr. D. Dane Quinn and Dr. Mohammed Daqaq (who is also serving as a Guest Associate Editor for 2010.)

Finally, I would like to thank our authors, reviewers and our readers for your efforts in supporting our journal. We encourage you to submit your original research findings to JVA as the journal of choice for the fields of vibration and acoustics. Moreover, please contact me with your ideas and suggestions of how lwe can further improve this already vibrant journal. ●

COMMITTEE REPORTS

Design Automation

Kazuhiro Saitou, Committee Chair

The ASME DAC promotes research and disseminates knowledge in four key areas related to Design Automation: (1) Design Representation, (2) Design Optimization, (3) Design Evaluation, and (4) Design Integration.

For the 2009 ASME IDETC held in San Diego, CA, 158 papers were submitted to the Design Automation Conference, of which 123 papers were accepted. These papers were presented in 27 technical sessions in three parallel tracks at the conference. Dr. Mian Li (University of Maryland at College Park), Prof. Shapour Azarm (University of Maryland at College Park), and Dr. Nathan Williams (Shell Energy North America) received the Ford Motor Company Best Paper Award for their paper entitled, "Interval Uncertainty Reduction and Single-Disciplinary Sensitivity Analysis with Multi-Objective Optimization" (DETC2009-86282).

Our DAC Keynote Speaker, Dr. Stewart Coulter (DEKA Research and Development), shared his experiences and views on fostering successful design innovation. Two panels were also held at the conference. Our Industry Liaison, Dr. David Dietrich from Boeing Research and Technology, assembled a panel of experts from industry who shared their experiences "on taking advantage of emerging manufacturing capabilities through innovative design and rapid manufacturing." Also, Dr. Judy Vance from Iowa State University has assembled another industrial panel "on successful stories and future challenges in virtual reality application in industry." This panel was co-organized by DAC and CIE.

We continue to attract many applicants to serve on the DAC Executive Committee. In 2009, Dr. Gary Wang (Simon Fraser University) was elected to serve on the Executive Committee as the Special Sessions Paper Chair for the 2010 ASME IDETC - Design Automation Conference. He joins Committee Chair Dr. Kazuhiro Saitou (University of Michigan), Conference Chair Dr. Zissimos P. Mourelatos (Oakland University), Program Chair Dr. Kemper Lewis (University at Buffalo – SUNY), and Industry Liaison Mr. David Dietrich (Boeing Research and Technology). Dr. Frank Liou (Missouri University of Science and Technology) is the Committee's immediate past Chair, and Dr. Horea Ilies (University of Connecticut) maintains the websites for our conference and committee at cdl.engr.uconn.edu/asmeda.

Design Education

Gül Kremer, Committee Chair

The Symposium on International Design and Design Education is maintaining a steadily increasing interest in design education. IDETC 2010 marks the 7th year for our participation in the conference. Last year, DEC had 33 technical papers in addition to 6 student papers featuring the best submissions to the Young Design Engineer's Paper Competition. For DEC 2010, we have received 49 initial abstracts, resulting in 35 draft technical paper submissions; 30 of which were accepted for final publication following a rigorous review process. Due to an ongoing time conflict between completion of capstone design projects and the conference submissions schedule, the DEC has opted to review the Young Design Engineer's Paper Competition submissions offline and provide recognition for the best papers in the final program and during the DED awards luncheon.

For DEC 2010, the Conference Chair is Dirk Schaefer, and the Program Chair is Katie Grantham. We have identified three themes to increasingly take the center stage in our symposia for their impact on design education: (1) interdisciplinary design, (2) globalization, and (3) creativity and innovation. The Seventh Symposium on International Design and Design Education will feature sessions on these topics, along with sessions on best practices, service focused design, and design education via distance learning. We have several parallel efforts targeting an increased rigor in the technical paper submissions. For example, as a technical committee, we sponsor a "Best DEC Paper" award. Through this award we recognize the author(s) for their implementation of rigorous research methods on design education and international design topics. In the near future, we aim to grow our visibility under the IDETC umbrella through encouraging our colleagues to participate in both the DEC symposium as well as design related conferences represented at IDETC. We believe that design education and international design (our central topics) work synergistically with design engineering theory and practice. Accordingly, we hope to strengthen our collaborative efforts.

If you have ideas/suggestions in this regard please contact one of the DEC officers.

Our current officers are: Gül Kremer, Chair; Phil Doepker, Associate Vice Chair and Chair of the International Activities Subcommittee; Jeffrey Mountain, Vice Chair; Mike Keefe, Secretary; and Al Karvelis, Treasurer. We are seeking nominations for the Program Chair position for the 2011 conference. Those interested in learning more about opportunities within DEC are asked to contact Gül Kremer (Penn State) at gkremer@psu.edu.

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Design for Manufacturing

Peter Sandborn, Committee Chair

The primary activity of the DFM Technical Committee is organizing the Design for Manufacturing and the Life Cycle Conference (DFMLC) at the ASME International Design Engineering Technical Conferences. In recent years, the conference organizers have worked to increase the scope of the papers presented at the conference, especially in the areas of design for environment and other life cycle concerns. The ASME Design for Manufacturing and the Life Cycle Conference has become a primary international forum for the exchange of technical and scientific information on the theory and practice of DFX and product life-cycle management (PLM) including DFMA, GD&T in product life-cycle, integration of CAD/CAM, manufacturing systems modularity, convertibility, diagnosability, reconfigurability and reusability, and product field performance. The conference features tutorials, workshops, panel discussion and papers presented in lecture format and interactive presentation sessions, in diverse areas of DFX and PLM. Marcos Esterman (Rochester Institute for Technology) and Shun Takai (Missouri University of Science and Technology) organized the 2009 DFMLC. Forty one papers were submitted, and thirty five were accepted. The DFM Technical Committee had its official face-to-face meeting in San Diego during the DFMLC.

The 2009 DFMLC conference Best Paper Award was awarded to Yuan Zhao, Vijitashwa Pandey, Harrison Kim and Deborah Thurston, for their paper Varying Lifecycle Lengths within a Portfolio for Product Take-Back. This award was presented by the program chair Shun Takai to all four authors at the Design Engineering Division Awards Lunch on September 1, 2009.

It is with great sadness that this year saw the passing of a thought leader in the DFM field, Kosuke (Kos) Ishii. Kos' contributions to academia and to industry spanned more than 20 years and his contributions to design education were recognized with the awarding of the 2008 ASME Ruth and Joel Spira Outstanding Design Educator Award. Kos was our advisor, our mentor and our friend.

For the 2010 DFMLC in Montreal, Shun Takai will be the conference chair and Gül Kremer (Penn State) will be the papers chair. The committee officers for 2008-2009 are Peter Sandborn (Chair), Kazu Saitou (Vice-Chair), and Marcos Esterman (Secretary). The following persons have represented the DFM community as Associate Editors for ASME journals: Jeffrey W. Herrmann is an Associate Editor (Design for Manufacturing) for the Journal of Mechanical Design (JMD); and Satyandra K. Gupta is an Associate Editor (Computer Aided Product Development) for the Journal of Computing and Information Science in Engineering (JCISE). For more information, please contact Peter Sandborn at 301-405-3167 or Sandborn@umd.edu.

Design Theory and Methodology

Li Shu, Committee Chair

The mission of the Design Theory and Methodology Committee is to facilitate and enhance the development of design theories and the methods that grow from them.

For IDETC 2009, 97 papers were submitted to the DTM conference for peer review, of which 51 were selected for presentation. Four papers included industrial authors, and 28 papers included authors from institutions outside of the U.S.

The 2009 Best Paper Award went to "The Characteristics of Innovative Mechanical Products," by Matthew N. Saunders and Dr. Carolyn C. Seepersad of the University of Texas at Austin and Dr. Katja Hölttä-Otto of The University of Massachusetts Dartmouth.

The Committee would like to thank Bob Paasch and Dan McAdams for their able service as 2009 Conference Chair and Papers Chair, respectively. For IDETC 2010, Dan McAdams will serve as Conference Chair and John Clarkson as Papers Chair.

Continuing in the second year of two year terms, are Li Shu of the University of Toronto as committee Chair, Janis Terpenny of Virginia Tech as Vice-chair, and Dan Frey of MIT as both Secretary and Webmaster.

The DTM Committee welcomes the participation of all who are interested. For more information contact Dr. Li Shu at shu@mie.utoronto.ca.

Fastening and Joining

Timothy Breitzman, Committee Chair

The Fastening and Joining Technical Committee of the Design Engineering Division serves ASME members and others who are interested in novel developments related to fastening, welding and adhesive joining of polymeric, metallic, ceramic, and other advanced materials and structures. Particular areas of interest include design and manufacturing, cost-effective and rapid joining methods, nano technology and innovations in adhesive bonding, dynamic behavior and long term durability of joined structures, nondestructive evaluation and characterization, industrial applications and case studies as well as many others.

On its annual meeting in November of 2009 in Lake Buena Vista, FL, USA during the ASME IMECE, the committee thanked Dr. Endel V. Iarve, University of Dayton Research Institute, for his leadership in the past three years and elected Dr. Timothy Breitzman, Air Force Research Laboratory, to become its new chair.

The committee sponsors symposiums with a specific theme at the annual International Mechanical Engineering Congress and Exposition. The theme for the 2010 IMECE in Vancouver, BC, Canada is "Joining Technologies for Advanced Materials and Structures." The organizers for this symposium are Dr. Thomas J. Whitney, University of Dayton Research Institute, Dr. Xinran Xiao, Michigan State University, and Dr. Endel V. Iarve, University of Dayton Research Institute.

The committee currently has about 12 active members and welcomes experts and distinguished researchers from government, industrial, and academic fields to participate in the activities of the committee. If you are interested in joining the committee or need further information, please contact the Committee Chair: Dr. Timothy Breitzman, AFRL/RXBC, 2941 Hobson Way, WPAFB, OH 45433-7750, phone (937) 255-3104; fax (937) 656-4706; e-mail: timothy.breitzman@wpafb.af.mil.

Mechanisms and Robotics

Jahangir Rastegar, Committee Chair

The Mechanisms and Robotics Committee has the mission of promoting advances in research and education in the theory, design and applications of mechanisms, machines, robots and mechatronic systems. Areas of interest include: kinematics and dynamics of mechanisms, design and analysis of robotic systems, design of linkages, cams, gears, transmissions, bio-inspired machines, mechatronics, compliant mechanisms, and micro and nano machines. The flagship conference for this committee is the Mechanisms and Robotics Conference at the ASME IDETC. The main journal for this committee is the Journal of Mechanisms and Robotics.

Last year was another very active year for the Mechanisms and Robotics Committee. A summary of the main highlights of its activities are as follows:

The committee was responsible for the oversight and organization of the 33rd

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Mechanisms and Robotics Conference at the ASME 2009 International Design Engineering Technical Conferences (IDETC) & Computers and Information in Engineering Conference (CIE) in San Diego. The conference program included approximately 137 technical papers, one plenary keynote lecture, and an undergraduate and a graduate student mechanism and robot design competition.

The committee recognized Dr. Larry L. Howell of the Department of Mechanical Engineering at Brigham Young University, with the DED Mechanisms and Robotics Committee Award for cumulative contributions to the field of mechanism design and theory.

The Mechanisms and Robotics committee has worked diligently on establishing the new ASME Journal of Mechanisms and Robotics. Dr. J. Michael McCarthy, University of California, Irvine, is its current and founding editor. The journal has now completed its first year of publication with great success, which has forced the editor to request for additional pages in an attempt to reduce the long publication backlog that has been generated due to the large number of paper submissions.

The committee has established an ASME Mechanisms & Robotics Video Web-Portal. Submissions to this YouTube channel can be made through Video sub-committee website.

Please visit our web site at: alliance.seas.upenn.edu/~asmemr/cgi-bin/pmwiki/index.php?n=Main.HomePage.

Mechatronic and Embedded Systems and Applications

YangQuan Chen, Committee Chair

The mission of the Technical Committee on MESA is to provide a forum for technical discussions and interactions on topics related to emerging technologies in mechatronic and embedded systems that impact critical research and engineering issues. The primary goal of the MESA Committee is to enhance the practice of engineering through dissemination of technological advances and innovations of mechatronic and embedded systems. It aims to bring multi-disciplinary researchers in Mechanical Engineering, Electrical Engineering, Computer Science, and other disciplines together to contribute to and influence the future directions of design and applications of mechatronic and embedded systems.

In odd numbered years, the MESA Committee sponsors the ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (ASME/IEEE MESA) held within the ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conferences (IDETC-CIE) mainly organized by the ASME. IEEE is the non-financial cosponsor of the ASME/IEEE MESA Conference. In even numbered years, the MESA Committee cosponsors the IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications (IEEE/ASME MESA) mainly organized by the IEEE. ASME is the non-financial co-sponsor of the IEEE/ASME MESA Conference.

At the conference, the MESA committee awards best papers in the categories: 1) Best Paper in Theory; 2) Best Paper in Computational Methods and Software; 3) Best Paper in Applications; 4)Best Student Paper.

MESA TC established the MESA Achievement Award in 2009. The Inaugural Award was presented to Prof. David M. Auslander of UC Berkeley during 2009 IDETC-CIE MESA Award Banquet in San Diego Conventional Center. The 2010 MESA Achievement Award will go to Prof. Masayoshi Tomizuka in Qingdao, China in July. The website for the 6th MESA 2010 conference is www.asmemesa.org and MESA TC official website is at iel.ucdavis.edu/mesa

Micro & Nano Systems

Arvind Raman, Committee Chair

The mission of the Micro- and Nanosystems (MNS) Committee is to promote research and development activities related to advancement of microsystems and nanotechnology within the broad scope of the design engineering field. The committee is currently comprised of twenty elected members including four officers: the Chair (Arvind Raman), the Vice Chair (Gloria Wiens) and treasurer (Ed Berger), and the secretary (S. V. Sreenivasan).

As one of the youngest technical committees in the DED, MNS is already hosting its 4th annual conference at the Montreal IDETC this year. The quality and number of papers at the conference is growing steadily. The keynote speakers have been of international stature in MEMS/NEMS. These include Professors Kurt Petersen (2007), Al Pisano (2008), Chih-Ming Ho (2009), and Harold G. Craighead (2010). Each conference has hosted industry speakers and panels with participation from industry/national labs. Since the 2009 IDETC a new format for poster sessions has been implemented wherein the poster authors get to present a brief snapshot of their paper in a rapid-fire session after which the door is opened to the poster session. This has been well-received and has greatly increased the impact of this session. 2009 also featured a new event—the MEMS/NEMS Photography contest which was organized to provide a forum to display interesting photos of novel micro/nano creations.

The visibility of the conference will be further cemented by the establishment in 2009 of a division/committee level award called the "Micro- and Nano Systems (MNS) Innovator Award" that will be presented at the MNS conference to an individual for a major innovative contribution to the micro/nano systems engineering. The award recipient will selected through a rigorous process of seeking nominations (along with nominee's CV and letters of support) from the MNS community and a full committee vote. The award will comprise a plaque and $500 cash award. The awardee will become the keynote speaker at the following MNS conference. We anticipate making the first award in time for the 2011 MNS conference.

Arvind Raman (Chair), Phone 765 494-5733, Email raman@purdue.edu.

Multibody Systems and Nonlinear Dynamics

Balakumar Balachandran, Committee Chair

The mission of the Technical Committee on Multibody Systems and Nonlinear Dynamics (TC-MSND) MSND is to promote research, application, and education in experimental, symbolic, computational, and analytical activities pertaining to multibody systems, nonlinear dynamics, control, and related technical areas. The current officers of TC-MSND include Professor Olivier Bauchau of the Georgia Institute of Technology who serves as the vice-chair and Professor Harry Dankowicz of the University of Illinois at Urbana-Champaign who serves as the recording secretary. The TC-MSND committee has a diverse body of members from academia, industry, and government.

One of the main activities of the committee is to organize the Biennial International Conference on Multibody Systems, Nonlinear Dynamics and Control (ICMSNDC) in the odd year IDETC, with the 8th ICMSNDC to be organized in Washington, DC in August 2011. This year, the TC-MSND is supporting the Technical

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Committee on Vibration and Sound (TCVS) in organizing the Special Conference on Mechanical Vibration and Noise as a part of the 2010 IDETC in Montréal, Canada, August 15–18, 2010. In addition, TC-MSND supports symposia and sessions at ASME IMECE and other international conferences. The committee held its first ever tele-conference on February 5, 2010, which was well attended by its members and friends, and another tele-conference is planned for the fall of this year.

A new collaborative initiative between TC-MSND and TCVS aimed at the formal organization of a technological discipline known as Dynamics for Design has grown out of discussions amongst members TC-MSND and TCVS, and a working group has been formed. The broad range of interests of TC-MSND is also reflected in the ASME Journal of Computational and Nonlinear Dynamics that is closely affiliated with the committee. This journal has been doing well under the leadership of Professor Subhash Sinha of Auburn University. Since Fall 2009, TC-MSND has also revised its bylaws, established operating procedures for its subcommittees, and elected new members. Related information can be found by contacting Professor Bala Balachandran of the University of Maryland at balab@umd.edu and/or visiting the committee website at divisions.asme.org/ded/multibody_systems_nonlinear.cfm.

Power Transmission and Gearing

Avinash Singh, Committee Chair

The objective of the Power Transmission and Gearing (PTG) Committee is to promote the activity and education supporting the art and science of power transmission and gearing as related to the research, design, and development of processes, machines, and manufacturing in the global academic community and industry. We promote the dissemination of knowledge and information pertinent to power transmission and gearing through sponsorship of technical papers, technical meetings, and seminars. Towards this end, the PTG Committee organizes a conference every two years, alternating between a large scale international conference and a smaller mostly domestic conference.

The PTG Committee successfully hosted its smaller conference as part of the 2009 IDETC-CIE in San Diego, CA. There were 35 papers presented in 8 single track sessions covering a diverse range of topics including design and analysis, dynamics and noise, tribology, strength and durability, and manufacturing of gears and power transmission components. Although this was our smaller "domestic" conference, authors from 13 countries presented their cutting edge research findings. Dr. Ahmet Kahraman served as the Conference Chair and Dr. Avinash Singh served as the Program Chair for this conference.

The conference also marked the completion of Dr. Kahraman's term as the Chair of the PTG Committee. The Committee thanks him for his leadership and tireless efforts on behalf of the committee during the past four years. During his tenure we organized two major conferences, updated our bylaws, and launched a new web site. Dr. Avinash Singh now serves as the Chair of the PTG Committee. The Committee also elected Dr. Timothy Krantz to serve as the Vice-Chair. Currently, we are seeking nominations from interested professionals who wish to serve on the committee. For more information about our activities please visit our website at www.asmeptg.org or contact the Chair at avinash.singh@gm.com.

Vehicle Design

Brian Gilmore, Committee Co-Chair

Corina Sandu, Committee Co-Chair

The Vehicle Design Committee (VDC) promotes innovative analytical, computational, and experimental investigations in control, dynamics, and design of full vehicle (including conventional IC engine powered platform as well as hybrid EV platform) systems and their subassemblies. With the ever-rising demands on passenger safety, human-vehicle interface and human behavior modeling/simulation are also embedded into the technical spectrum of VDC. Our members perform fundamental research, applied research, and successful technology implementations for light and heavy vehicle design, modeling, and validation.

VDC is pleased to welcome you at the 12th International Conference on Advanced Vehicle and Tire Technologies (AVTT) under the 2010 ASME IDETC. This year our Conference will consist of five symposia for a total of nine sessions in the areas of: vehicle systems design; vehicle systems product development; vehicle design tools to enhance safety, health, and ergonomics; multibody systems modeling and validation for vehicle dynamics applications; vehicle systems dynamics and control; and nonconventional, energy efficient and environmental friendly vehicles. One Best Paper Award will be conferred by the VDC at the 2010 AVTT conference. The 2010 AVTT Best Paper Award is sponsored by the University of Waterloo, Department of Mechanical and Mechatronics Engineering. This year we have two invited keynote speakers: Dr. Amir Khajepour, Professor at University of Waterloo, Canada, and Dr. Gary J. Smyth, Director of Powertrain Systems Research Lab, GM Research and Development Center, Michigan.

In addition to organizing the 2010 AVTT conference, our committee members continued to be very active and increased their service as editors or associate editors for ASME and other professional journals. Some of these activities include: Dr. Corina Sandu and Dr. Dongpu Cao, Guest Co-Editors, J of Mechanical Systems and Signal Processing (2009-date); Dr. Xiaobo Yang and Dr. Dongpu Cao, Guest Co-Editors, Int. J. of Vehicle Design (2009-date); Dr. Dongpu Cao, Associate Editor, Int. J. of Vehicle Design (2010-date); Dr. Xubin Song, Associate Editor for the ASME JDSM&C (2009-present); Dr. Corina Sandu, Editor of J. of Terramechanics and Editorial Board member for Int. J. of Vehicle Systems Modelling and Testing. Dr. Ming Cao recruited two new VDC members: Dr. Hong Yang from GM Powertrain, an expert on hybrid vehicle control and Dr. Xiaofeng Yang from GM R&D, an expert on internal combustion engine analysis. He also initiated a special IJVD issue on enabling technologies of energy efficient vehicle, with fellow VDC member, Dr. Hong Yang.

Vibration and Sound

Chris Rahn, Committee Chair

The Technical Committee on Vibration and Sound (TCVS) provides leadership for promoting research and disseminating knowledge in all areas related to mechanical vibration, acoustics, dynamics and controls. The TCVS membership consists of representatives from academia, government, and industry. One of its main activities is the organization of the Biennial Conference on Mechanical Vibration and Noise, which is a part of the odd-year ASME IDETC. In addition, TCVS sponsors reviewed paper sessions, lectures and panel sessions at the annual IMECE and other conference venues. Further activities related to disseminating information include biannual interactions with the ASME Journal of Vibration and Acoustics when the Editor reports to the committee.

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In 2009, TCVS sponsored the odd-year vibrations conference at IDETC with former TCVS Chair George Flowers co-chairing IDETC and TCVS member Dane Quinn as IDETC Technical Program Co-Chair. IDETC 2009 was held in San Diego from August 30 to September 2 and 174 papers were presented at the vibrations conference. TCVS also had members and friends participating in the 2009 IMECE. TCVS members Bogdan Epureanu, Marco Amabili, Dumitru Caruntu, and Liming Dai organized six symposia with over 100 papers.

In 2010, TCVS is sponsoring a special vibrations conference at IDETC. Dane Quinn is the conference chair and 58 papers have been submitted. IDETC 2010 will be held in Montreal from August 15 to September 18.

For more information, please visit the TCVS web page at: divisions.asme.org/ded/Vibration_Sound.cfm or contact Professor Chris Rahn, Department of Mechanical and Nuclear Engineering, 150A Hammond Building, Penn State University, University Park, PA 16802; phone (814) 865-6237; fax (814) 863-7222; cdrahn@psu.edu.

Student Affairs

Matthew Parkinson, Committee Chair

Integrating students and early career professionals into the ASME community is vital to the community and profession. We have been working to achieve this, primarily through activities at the annual DETC. 2008 and 2009 featured scavenger hunts in which hundreds of students participated in activities that ranged from attending technical committee meetings, meeting academic relatives, and getting autographs of famous baseball players. We were able to award great prizes due to the generosity of our sponsors (Herman Miller, Inc., TechSmith, GM, ASME, and the DED). We also enjoyed a special student reception and other activities. The 2010 DETC will feature more opportunities for networking, mentoring, and getting to know the community and host city.

We are also working to revamp the web resources available to students. We would like to consolidate information about the many disparate design activities at ASME, including those outside of the DED, into one location. This ASME design portal will provide relevant information to students and early career professionals, making them aware of the many opportunities available to them. If you have an activity or event you would like to publicize here, please contact Matt Parkinson at parkinson@psu.edu.

ASME Design Engineering Division

Executive Committee Roster, July 1, 2010 – June 30, 2011

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