

# **ASME Design Engineering Division**

## **General Committee Meeting**

**Tuesday, August 5<sup>th</sup>, 2008**

**3:00 – 6:00 pm**

**New York Marriott at Brooklyn Bridge**

**Brighten Beach Room**

**New York City, New York**

**Report Submitted for the ASME Design Engineering Division  
General Committee Meeting**

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**3:00 - 6:00PM**

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New York City, New York**

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## Agenda

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|-----|---|----------------------------|-------|
| 1.  | Call to Order   | K.Kazerounian              | 15:00 |
| 2.  | Approval of Minutes   | V. Kumar                   | 15:02 |
| 3.  | Report of the Executive Committee                               | K.Kazerounian              | 15:05 |
| 4.  | Technical Committee and IMECE Reports                           | W. Clark                   | 15:15 |
|     | <b>(Please limit each report to 3 minutes)</b>                  |                            |       |
|     | (a) Design Automation   | T. Simpson                 |       |
|     | (b) Design Education  | G. Kremer                  |       |
|     | (c) Design for Manufacturing                                    | E. Morse                   |       |
|     | (d) Design Theory and Methodology                               | M. Scott                   |       |
|     | <i>Break for coffee</i>   |                            |       |
|     |   |                            | 15:30 |
|     | (e) Fastening and Joining                                       | E. Iarve                   | 15:50 |
|     | (f) Mechanisms and Robotics                                     | G. Pennock                 |       |
|     | (g) Micro and Nano Systems                                      | L. Saggere                 |       |
|     | (h) Multibody Systems and Nonlinear Dynamics                    | K. Anderson                |       |
|     | (i) Power Transmission and Gearing                              | A. Kahraman                |       |
|     | (j) Reliability, Stress Analysis, and Failure Prevention        | T. Sawa                    |       |
|     | (k) Vehicle Design  | B. Gilmore and C. Sandu    |       |
|     | (l) Vibration and Sound   | C. Rahn                    |       |
| 5.  | Liaison Reports   |                            |       |
|     | <b>(Please limit each report to 4 minutes)</b>                  |                            |       |
|     | (a) Journal of Mechanical Design                                | P. Papalambros             | 16:10 |
|     | (b) Journal of Vibration and Acoustics                          | K.W. Wang                  |       |
|     | (c) Journal of Computational and Nonlinear Dynamics             | S. Sinha                   |       |
|     | (d) Journal of Computing and Information Science in Engineering | J. Shah                    |       |
|     | (e) Journal of Medical Devices                                  | A. Erdman and G. E. Miller |       |
|     | (f) Journal of Mechanisms and Robotics                          | J. M. McCarthy             |       |
| 6.  | Vice Chair/Treasurer's report                                   | A. Shabana                 | 16:35 |
|     | (Funding levels allocations in committee accounts)              |                            |       |
| 7.  | IDETC report  | H. Hamidzadeh              | 16:40 |
| 8.  | ASME Meeting Department   | R. Ulvila                  | 16:55 |
| 9.  | Standing/Special Committee Reports                              |                            | 17:05 |
|     | <b>(Please limit each report to 3 minutes)</b>                  |                            |       |
|     | • Constitution and Bylaws                                       | H. Lipkin                  |       |
|     | • National Design Engineering Conference                        | Z. Mourelatos              |       |
|     | • Honors and Awards   | G. Fadel                   |       |
|     | • Nominating Committee  | J. Vance                   |       |
|     | • US Council for the Theory of Machines and Mechanisms          | H. Lipkin                  |       |
|     | • Government Relations  | F. Tahmasebi               |       |
|     | • Design Society  | W. Seering                 |       |
|     | • Fellow Nominations  | R. Hirsch                  |       |
|     | • Publicity and Newsletter                                      | J. Michalek                |       |
|     | • Student Affairs   | M. Parkinson               |       |
|     | • Information Management  | S. Gooch                   |       |
|     | • Journal Relations   | W. Clark                   |       |
|     | • K-12 Awareness of Design Engineering                          | K. Jacobson                |       |
|     | • Professional Engineering Licensure                            | A.V. Karvelis              |       |
| 10. | Old Business  |                            | 17:40 |

- 11. New Business 17:45
- 12. Adjourn 17:50

**ASME Design Engineering Division General Committee Meeting**  
**Minutes of the meeting on**  
**Wednesday, September 5, 2007, 9:30am – 12:00pm**  
**Rio All-Suite Hotel & Casino, Palma H Room**  
**Las Vegas, Nevada**

**Present:** K. Anderson, S. Azarm, W. Clark, P. Doepker, G. Flowers, K. Gupta, L. Howell, K. Jacobson, A. Kahraman, A. Karvelis, K. Kazerounian, P. Klasky, V. Kumar, M. McCarthy, Z. Mourelatos, L. Saggere, M. Scott, A. Shabana, J. Shah, T. Simpson, S. Sinha, H. S. Tzou, R. Ulvila, K.W. Wang

1. **Call to order.** The meeting was called to order by J. Vance at 9:35 am.
2. **Approval of minutes.** The minutes of the General Committee Meeting on Monday, September 11, 2006 held in Philadelphia, Pennsylvania, were unanimously approved.
3. **Report of Executive Committee.** J. Vance presented the Executive Committee report (oral and written). A summary of the oral report is as follows:
  - *Terms of Technical Committee Officers:* There is concern that some technical committees are not abiding by the division constitution which states that chairs may not serve for more than four years. The Executive Committee will address the situation (see action item in Executive Committee Meeting minutes under Past Chair's Report).
  - *Proposal to Create New Journal:* There was discussion on the proposal to create a new journal (splitting from the Journal of Mechanical Design). Several issues were raised. There is some concern by the ASME Publications Committee that the division's journals are being split into too many smaller journals, as opposed to the Journal of Applied Mechanics which continues to grow as a single publication. The issue of relieving the load on the Editor was raised and is a key factor to be addressed. The original concept of creating a layer of senior editors beneath a single chief editor was rejected by the Publications Committee. Three alternative scenarios were suggested for consideration: 1) creating a new journal, 2) leaving JMD intact but creating two co-editors to handle different research areas, and 3) creating "sub-journals", such as JMD-a, -b, etc. The third option was deemed not reasonable because it would result in losing the reference history of JMD. The other two alternatives will be considered further by the affected committees and a revised proposal will be created by M. McCarthy for review by the Executive Committee (see action item in the Executive Committee Minutes under the Journal Relations Committee).
4. **Technical Committee and IMECE Reports.** A. Shabana presented a report on the IMECE (oral and written). The 2007 IMECE will be held in Seattle. Approximately 1500 people are expected. Papers will be divided into 17 tracks containing 460 sessions. Revenues will be distributed 40% to ASME and 60% to divisions. A plan for restructuring the congress has a goal of reducing the size of the meeting to 225 sessions within the next two years.

Technical Committee Reports:

- (a) *Design Automation.* Oral (T. Simpson) and written (H. C. Gea) reports submitted. **A motion was made (S. Azarm) and seconded (A. Shabana) to approve the revised bylaws of this committee (see report for specific revisions).** The motion was approved.
- (b) *Design Education.* Written and oral report P. Doepker. The committee is stronger than in recent years, with good attendance at the conference and sponsorship of seven sessions. Improvements are being planned for the student design competition.
- (c) *Design for Manufacturing.* Written report submitted by J. Herrmann.
- (d) *Design Theory and Methodology.* Written and oral report submitted by M. Scott. A concern was raised about the revised wording of the ASME 1903 copyright form. The specific concern is the "work for hire" phrase. It was suggested that this be addressed by the technical committees and by the division with the plan to petition ASME for a change in the wording.
- (e) *Fastening and Joining.* Written report submitted by E. Iarve.
- (f) *Mechanisms and Robotics.* Written and oral report by V. Kumar. The M&R committee does not normally participate in odd-year IDETC's, but this year 139 papers were accepted for sessions at the conference.

Money is being raised for the Mechanism Design Competition. The committee is investigating expanded use of the internet, including a YouTube site and a Wiki site.

- (g) *Micro and Nano Systems*. Written and oral reports submitted by L. Saggere. Bylaws have been approved by the committee. Five vacancies in committee membership have been filled.
- (h) *Multibody Systems and Nonlinear Dynamics*. Oral and written reports by K. Anderson.
- (i) *Power Transmission and Gearing*. Oral and written reports by A. Kahraman.
- (j) *Reliability, Stress Analysis, and Failure Prevention*. Written report submitted by E. Sancaktar.
- (k) *Vehicle Design*. Written report submitted by M. El-Gindy.
- (l) *Vibration and Sound*. Oral and written reports by G. Flowers. The Vibrations Conference included 22 symposia containing 54 sessions with a total of 255 papers. Planning for VIB 2009 is well under way with G. Flowers as the General Chair and D. Quinn as the Technical Chair. IMECE 2007 participation is primarily in the Mechanical Systems and Control Track with 60 papers. The two committee awards, Myklestad and Den Hartog, are being given at this IDETC meeting. The committee will propose to make the Den Hartog award a society award since it is now over the required endowment level.

#### 5. **Liaison Reports.**

- (a) *Journal of Mechanical Design*. Written and oral reports were given by M. McCarthy. A discussion of impact factors took place. JMD is now at #2 of the ASME journals with an impact factor of 1.2. M. McCarthy claimed that the biggest effect on impact factor was shortened review time, as it helps to build commitment to journal.  
More discussion of the proposed new journal took place. The same options as discussed during the Executive Committee Report (item 3 above) were rehashed. M. McCarthy feels that it is important to maintain a single chief editor if two senior co-editors are put into place.
- (b) *Journal of Vibration and Acoustics*. Oral and written reports were submitted by K.W. Wang. Three new Associate Editors have been approved and put into place, including M. Brennan, J. Zu, and W. Zhu. A special issue on Vibration-Based Structural Health Monitoring is being published. The journal is in good shape, having increased from 112 papers submitted in 2003 to 260 in 2006. To help reduce the backlog, the journal page numbers are increased from 600 to 800 per year, starting 2006. The Editor has begun providing authors with a list of related JVA articles for possible citation, after acceptance of a paper.
- (c) *Journal of Computational and Nonlinear Dynamics*. Oral and written reports were submitted by S. Sinha. The first year of the journal has been very active with 112 papers accepted so far out of 359 submissions. The journal has been submitted to Thompson ISI for tracking. One special issue has been published and one is being planned for 2008.
- (d) *Journal of Computing and Information Science in Engineering*. Oral and written reports by J. Shah. Last year the DED accepted the journal as a joint sponsor. The Advisory Committee of the journal has two members each from DED and CIE. The DED needs to confirm who its members are since the terms are indefinite. Papers are being solicited from the appropriate conferences (e.g. DAC, DTM, DFM, etc) for consideration by the journal. More input is needed from the Technical Committees in the nomination of Associate Editors. The first impact factor numbers for the journal were released this year from Thompson ISI.

*Action Item: Confirm members of JCISE Advisory Committee (J. Vance).*

- (f) *Journal of Medical Devices*. Written report submitted by A. Erdman.

- 6. **Vice Chair/Treasurer's report.** K. Kazerounian presented oral and written reports. Current balances stated in the report are projections from May balances (since those are the most recent numbers available from ASME), based on known transactions since that time. A question was posed concerning whether award accounts are the best place to apply division matching funds. Are there other more important activities to match? K. Kazerounian will pose this question to technical committees for input. A question was raised about the distribution of funds from the 2006 National Manufacturing Week, and possibly prior years. It is unclear what the distribution was and when it will be received.
- 7. **IDETC Technical Conferences.** L. Howell presented an oral report. The IDETC is a very large event this year. Some concern has been raised that it is becoming too large. Feedback on the meeting program is that it is confusing to follow. Some questions were raised as to whether the odd and even years should be made more uniform in size, with possible reduction of the odd-year conferences. These questions should be considered by the DED. The event will be held in New York in 2008 and San Diego in 2009. Montreal is being considered

for 2010. Proposals are being accepted for 2011. There was concern expressed that the conference is being moved too early in the fall, causing problems for faculty to leave school at the beginning of the term. A comment was made that organizers should consider avoiding a conflict with the International Conference on Engineering Design.

8. **ASME Meetings Department.** R. Ulvila reported that ASME headquarters has been made aware of the concerns over the accounting system, and the lack of or slow response to status requests. A database is being adopted that will automate information input for volunteers and division/committee positions. It was noted that the Dynamic Systems and Control division has pulled out of the IMECE, and will have a separate meeting in 2008 in Ann Arbor, Michigan.

9. **Standing/Special Committee Reports.**

- *Constitution and Bylaws.* Written reports by H. Lipkin.
- *NDEC.* Oral and written report submitted by Z. Mourelatos. This is a smaller conference this year. ASME's participation is only 7 sessions (compared to 31 last year). The culprit for the radical reduction in size is likely the time change of the conference, from spring to fall. The sponsor has also changed. P. Doepker raised the possibility of aligning the IDETC with the NDEC to boost industry participation in IDETC.
- *Honors and Awards.* Oral and written reports by J. Davidson. Some successors are needed on awards committees, including J. Davidson. It was suggested that industrial members be added. A proposal should be submitted for upgrading the Product Safety Award to a Society level award now that the moratorium on new Society awards has been lifted.

*Action Item: Submit a proposal for raising the level of the Product Safety Award to a Society award (J. Davidson).*

- *Nominating Committee.* Oral and written reports by S. Azarm. The committee is currently soliciting nominations for the Executive Committee.
- *USCToMM.* Written report by H. Lipkin.
- *Government Relations Committee.* Written Report by F. Tahmasebi.
- *Design Society.* Written report by W. Seering
- *Fellow Nominations.* Written report by R. Hirsch
- *Publicity and Newsletter.* Written report submitted by J. Michalek, oral report given by S. Azarm. Comments were solicited on the new look of the newsletter. The cost per copy is 50 cents.
- *Student Affairs.* No written or oral report.
- *Information Management.* Written report by S. Gooch.
- *Journal Relations Committee.* Written report by W. Clark. Previous discussions in the meeting covered the relevant topics.
- *K-12 Awareness of Design Engineering.* Oral and written reports by K. Jacobson. The committee is looking into activities, e.g. working with the Girl Scouts. A budget will be submitted. A question was asked about whether it would make sense to present a poster at the IDETC to promote the activities of this committee. It was mentioned that there could be ties to the new Broadening Participation Committee.
- *Professional Engineering Licensure.* Written and oral reports by A.V. Karvelis. A working group on international licensure has ended its work. There was concern that there could be an overall lowering of standards to the lowest common denominator in order to make this work. The NCEES is now actively working to create a mechanism for international licensure, which necessarily must pre-empt ASME's effort. A new concept is being considered, that is creating a certificate for qualified "Design Professional" or "Test Professional," to avoid the use of the term "engineer," which is already the domain of State licensing organizations. It is not clear how to best proceed with this. The National Fluid Power Association does this type of thing, so it was suggested that ASME could follow their lead. Another option is to follow the approach used in the UK. The committee will pursue this if the DED is interested.

10. **Old Business.** No old business.

11. **New Business.** It was pointed out (H. Lipkin) that the DED Constitution and By-Laws need to be approved at the ASME Group level, as well as the procedure for voting in new Executive Committee members.

12. **Adjourn.** The meeting was adjourned at 11:57 A.M.

Respectfully submitted,

William W. Clark  
Secretary of the Division

**DED Chair's Report**  
**Kazem Kazerounian**  
**July 23, 2008**

**Personnel Changes on July 1<sup>st</sup>, 2008**

I have assumed the role of the Division Chairman on July 1<sup>st</sup>, 2008. The Division was passed to me by Judy Vance in excellent financial and operational shape.

I want to welcome Vijay Kumar to the DED Executive Committee. He began his service on the committee July 1, 2008 as Secretary. He is currently Professor and Chairman of Mechanical Engineering and Applied Mechanics at the University of Pennsylvania. He is past chair of the Technical Committee on Mechanisms and Robotics, IDETC/CIE 2006 general Chairman, and a current Associate Editor for the ASME Journal of Mechanisms and Robotics.

Ahmed Shabana is now the Vice Chair and the treasurer. W. (Buddy) Clark is the Technical Committees Executive, and Hamid Hamidzadeh continues to be the IDETC Executive and Zissimos P. Mourelatos is the NDEC Chair.

George Fadel has been appointed by Judy Vance as the Chair of the Honors and Awards Committee, also as a member on the Machine Design and Spira Design Educator committees. George is the Exxon Mobil Employees chair in Engineering and Professor of the Department of Mechanical Engineering, Clemson University. George replaces Professor Joseph K. Davidson. We cannot thank Joe enough for his meticulous and tireless work of organizing the many awards of the conferences, Technical Committees and the Division. Qiaode Jeffrey Ge has been reappointed by Judy Vance to the Honors and Awards Committee and the Machine Design Award Committee for another two years.

Matt Parkinson, Assistant Professor of Engineering Design and Mechanical Engineering at Penn State

University, has been appointed by Judy Vance as the new chair of the Student Affairs and Early Career Committee, replacing Pierre Larochelle.

Subhash Sinha has been appointed by Judy Vance as a member-at-large to the Operating Board of the Systems and Design Group, beginning July 1, 2008. One of the efforts he will be participating in will be long range planning for the S&DG.

Two standing committee chairs are vacant and I am in the process of discussing it with potential candidates. These are Constitution and Bylaws Committee and Government Relations.

**Finances**

The finances of the division are in good shape. As detailed in the treasurer's report, the surplus from the 2006 IDETC/CIE conference was \$39,897 and from 2007 IDETC/CIE was \$195,253. In addition to IDETC surplus, and the investment income, profit sharing from journals will be a major source of income for DED in future.

**ASME Congress of Divisions**

Judy Vance and Kazem Kazerounian participated in the "ASME Congress of Divisions" in Orlando, in June 2008. The meeting entailed an overview of the new reorganization of the Knowledge and Community Sector of ASME, roles and responsibilities.

**Enhancements to Group & Division Websites**

ASME will be employing Content Management System (CMS) software content driven websites for the Divisions. The first step is to migrate the existing content from all the Division websites over to the CMS system. This is targeted for the end of September 2008. Once all the Division websites are mounted on the CMS platform, the next step is to put in place the "back-end" infrastructure needed to enable volunteers to enter content on their own. That's expected in early 2009. Shayne Gooch DED will be on a staff-volunteer team that will implement this.

**Agreement with ISSMO**

An agreement and MOU was signed between International Society for Structural and Multidisciplinary Optimization (ISSMO) and ASME for co-sponsorship of the World Congress of Structural and Multidisciplinary Optimization (WCSMO) **beginning with the 2009 event**. This agreement had been approved by the DAC and the DED Executive committee. Thanks to KK Choi (president of ISSMO), Shapour Azarm and Richard Ulvila for following it to completion.

**Technical Committee  
and  
IMECE Reports  
(W. Clark)**

## Technical Committees & IMECE Report

### Technical Committees

- **Change of the Committee Chairs:** The changes in the committee leadership since the March Conference Call are as follows:
  1. Education Committee: Phil Doepker is replaced by Gul Kremer of Penn State.
  2. Technical Committee on Vibration and Sound (TCVS): George Flowers is replaced by Chris Rahn of Penn State.
  3. Design for Manufacturing Committee (DFM): Jeffrey Herrmann is replaced by Edward P. Morse of the University of North Carolina at Charlotte.
  4. Reliability, Stress Analysis and Failure Prevention (RSAFP) Committee: Erol Sancaktar is replaced by Prof. Toshiyuki Sawa of Hiroshima University Japan).
  5. Mechanisms and Robotics Committee: Vijay Kumar is replaced by Gordon Pennock
  
- **Mechanism and Robotics Committee Bylaws:** M & R Committee Bylaws was submitted in June 2008 for approval by the DED Executive Committee.

### IMECE

#### Summary of the 2007 IMECE Data

- Finances
  - Net above cost = \$118,462.60
  - Revenue to General fund (ASME, 40%) \$53,863.60
  - Revenue returned to units programming (Divisions, 60%). \$64,599
- Totals
  - Attendance = 3184
  - Paid registrations = 2004
  - Papers = 1390
  - Exhibitors = 38

#### 2008 Congress

The 2008 Congress will be held in Boston during the period of November, 2-6, 2008. A list of the DED recommended track representatives is given in this report.

### Design Engineering Division Track Representatives

Track	Proposed DED Track Chair of Co-Chair	DED Technical Committee	E-Mail Address
Mechanics of solids and Structures	<b>Erol Sancaktar</b>	Reliability, Stress Analysis, and Failure Prevention	erol@uakron.edu
Mechanical Systems and Control	<b>Albert Luo</b>	Sound and Vibration	aluo@siue.edu
Materials in Engineering Applications	Erol Sancaktar	Reliability, Stress Analysis, and Failure Prevention	erol@uakron.edu
Fluid Dynamics, Heat Transfer and Thermal Systems			
Nanotechnology and Microtechnology	<b>Laxman Saggere</b>	Micro and Nano Systems	saggere@uic.edu
Energy Technologies			
Transportation Systems	<b>Khaled Zaazaa</b>	Multibody Systems and Nonlinear Dynamics	Zaazaa.Khaled@ensco.com
Design and Manufacturing	Endel Iarve	Fastening and Joining Committee	Endel.Iarve@WPAFB.AF.MIL
Emerging Technologies	George Flowers	Sound and Vibration	gflowers@eng.auburn.edu
Engineering Education			
Biomedical and Safety Systems	<b>Xiaopeng Zhao</b>	Multibody Systems and Nonlinear Dynamics	xzhao@duke.edu
Electronics and Photonics	Erol Sancaktar	Reliability, Stress Analysis, and Failure Prevention	erol@uakron.edu
Advances in Aerospace			

Technology			
New Developments in Software for Engineering Applications			
Engineering Management and Ethics			
Recent Advances in Engineering Research			
Early Career Development			
Engineering Entrepreneurship			

Submitted by

William W. Clark (with a great deal of input from Ahmed A. Shabana)

July 2008

## **ASME Design Automation Committee Report July 19, 2008**

The ASME Design Automation Committee 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 2007 ASME IDETC held in Las Vegas, NV, 172 papers were submitted to the Design Automation Conference, of which 125 papers were accepted – an acceptance rate of 73%, which is on track with previous years. These papers were presented in 27 technical sessions in three parallel tracks at the conference. Dr. Matthew Parkinson (Penn State University) and his graduate student, Mr. Christopher Garneau, received the 2007 FORD Motor Company Best Paper Award for their paper, “Including Preference in Anthropometry-Drive Models for Design” (DETC2007-35479), and Prof. Shapour Azarm (University of Maryland) was awarded the 2007 ASME Design Automation Award. The 2007 DAC Plenary Speaker, Dr. Chris Unger (GE Healthcare), shared his experiences with thermo-mechanical challenges in diagnostic imaging and discussed the challenges and opportunities for research in Design Automation. Two industry panels were also held at the conference. The committee’s Industry Liaison, Mr. Joe Donndelinger (General Motors Corporation), organized a panel of recent graduates who discussed how their research in Design Automation prepared them for working in industry, and former Committee Chair, Dr. Wei Chen (Northwestern University), organized a panel of industry, government, and academic experts that discussed verification and validation of analytical models commonly used in Design Automation.

We anticipate another exciting Design Automation Conference (DAC) in 2008. This year, 174 papers were submitted to the conference, and 126 papers were accepted after a rigorous peer review process. These accepted papers cover 28 topics spanning Design Automation’s four key research areas, and they will be presented in 34 technical sessions, running in three parallel tracks. Following DAC’s annual tradition, one of these outstanding papers will be selected for the Best Paper Award sponsored by the FORD Motor Company – the winner will be announced at the DED Awards Luncheon at the conference. The winner of the 2008 Design Automation Award will also be announced at the luncheon.

We also have an exciting Plenary Speaker planned for this year’s DAC. Dr. David Gorsich, Associate Director for Modeling and Simulation, Tank Automotive Research, Development and Engineering Center (TARDEC), U.S. Army, will discuss the condition-based maintenance and reliability-centered maintenance of ground vehicles. Two panels have also been scheduled, including a panel of industry experts who will share their experiences on the use of commercially available software packages for automated design integration, analysis, and optimization in industrial settings.

We continue to attract many applicants to serve on the Design Automation Executive Committee. In 2008, Dr. Kemper Lewis (University at Buffalo-SUNY) was elected to

serve on the Executive Committee. He will serve as the Special Sessions Paper Chair for the 2009 ASME IDETC - Design Automation Conference, joining Committee Chair Dr. Frank Liou (Missouri University of Science & Technology), Conference Chair Dr. Kazuhiro Saitou (University of Michigan), and Program Chair Dr. Zissimos Mourelatos (Oakland University). Dr. Ashwin Gurnani (Vanderplaats Research & Development, Inc.) was also selected to serve as our Industrial Liaison, replacing Mr. Joe Donndelinger (General Motors Corporation) who completed his two-year term of service. Finally, Dr. Horea Ilies (University of Connecticut) continues to maintain the websites for the Design Automation Conference <<http://cdl.engr.uconn.edu/asmeda/>> and our committee <<http://cdl.engr.uconn.edu/asmeda/dac/index.html>>.

Respectively submitted,

Timothy W. Simpson  
Penn State University  
Chair, 2008 Design Automation Executive Committee

## DESIGN EDUCATION

Gül Kremer, DEC Chair

While DEC remains focused on advancing awareness and sharing experiences in engineering design and research, we anticipate three themes to increasingly take the center stage in the upcoming conferences for their impact on design education: (1) interdisciplinary design, (2) globalization, and (3) creativity and innovation. Accordingly, newly appointed slate of DEC officers will be recruiting potential speakers for panels and workshops we plan as well as technical sessions.

The 5<sup>th</sup> Symposium on International Design and Design Education was a success at IDETC 2008, thanks to **Mike Keefe**, **Jeffrey Mountain** and **Peter Jones**. There were 23 technical papers in addition to 5 student papers featuring the best submissions to the recently revised Young Design Engineer's Paper Competition. Also in the conference program was a panel session organized by **Timothy Simpson** (Penn State) focusing on "Challenges and Opportunities for Interdisciplinary Graduate Design Programs". DEC Keynote Speaker was **Clive Dym**. His talk articulated the macro- and micro-challenges while arguing that teaching design was essential to, central to, and highly beneficial to the future of engineering education. The Conference Chair for DEC 2009 is **Peter Jones**.

Several committee positions were recently assigned. **Gül Kremer** replaces Phil Doepker, as the Chair of DEC. **Phil Doepker** continues, however, as the Associate Vice Chair, and Chair of the International Activities Subcommittee. **Jeffrey Mountain** assumes the responsibility of Vice Chair. **Mike Keefe** continues as the Secretary of DEC. Phil Doepker and Mike Keefe will also co-chair the Young Design Engineer's Paper Competition Subcommittee. Finally, **Al Karvelis** is named Treasurer.

We are seeking nominations for the Program Chair for the 2009 conference as well as Associate Editor (Design Education) for Journal of Mechanical Design. Those interested in learning more about opportunities within DEC are asked to contact Gül Kremer (Penn State) as [gkremer@psu.edu](mailto:gkremer@psu.edu).

To: ASME Design Engineering Division Executive Committee

From: Edward Morse, Chair, DFM Technical Committee  
Kazuhiro Saitou, Vice-Chair, DFM Technical Committee  
Peter Sandborn, Secretary, DFM Technical Committee

Date: July 25, 2008

Re: DFM Technical Committee Activities

We are pleased to submit this report to the Design Engineering Division about the activities of the Design for Manufacturing Technical Committee. Our main conference is the annual Design for Manufacturing and the Life Cycle (DFMLC) conference as part of IDETC. We have always sought to keep this a single track conference, so no participants need to miss any of the other paper presentations.

### **DFMLC 2008 Status Report**

We expect a successful Design for Manufacturing and the Life Cycle (DFMLC) Conference this year. Forty-four papers were submitted to the 2008 conference, and thirty-three were accepted. The paper presentations are presented in a single track over two days.

This year's conference reflects our continuing success in attracting relevant research from the Americas, Europe, and Asia. These papers are both from academia and industry, with several coming from industry/academic partnerships. Last year's plenary speaker, Vijay Srinivasan, of IBM, has taken an active role as review coordinator and session chair for this year's conference.

Peter Sandborn (Chair – University of Maryland) and Marcos Esterman (Papers Chair – Rochester Institute for Technology) are to be congratulated for their fine organization of the 2008 conference.

Marcos Esterman will be conference chair for the 2009 DFMLC conference.

### **Representation on ASME Journal Editorial Boards**

The following persons are representing 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).
- Satyandra K. Gupta is an Associate Editor (Computer Aided Product Development) for the *Journal of Computing and Information Science in Engineering* (JCISE).

## **Design Theory and Methodology Committee – Annual Report August 2008**

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.

**DTM Conference:** The 20th International Conference on Design Theory and Methodology will be held at IDETC2008 in New York City, NY. Li Shu of the University of Toronto is the Conference Chair and Bob Paasch of Oregon State University is the Papers Chair. The 2008 conference consists of 11 technical sessions and one panel discussion. The committee maintains the following statistics on submissions and acceptances:

Papers submitted: 97

Papers accepted: 47 (acceptance rate: 48.4%)

Papers accepted with at least one author with an industry affiliation: 1

Papers accepted with at least one author from an institution outside the United States: 20

The Best Paper Award will be given to “Overcoming Blocks in Conceptual Design: The Effects of Open Goals and Analogical Similarity on Idea Generation” by Ian Tseng, Jarrod Moss, Jonathan Cagan and Kenneth Kotovsky.

The following people served as review coordinators for the conference: Saeema Ahmed, Fabrice Alizon, Janet Allen, John Clarkson, Andy Dong, Dan Frey, Ping Ge, Katja Holtta-Otto, Dan Jensen, Tolga Kurtoglu, Kemper Lewis, Katie Grantham Lough, Dan McAdams, Linda Schmidt, Cris Schwartz, Michael Scott, Carolyn Seepersad, Tim Simpson, Rob Stone, Deborah Thurston, Irem Tumer, Kris Wood, and Maria Yang.

This year marks the 20<sup>th</sup> anniversary of the DTM conference. A panel session celebrating this anniversary entitled “DTM's 20 Years: Reminisce, Reflect, Move Ahead”, organized by Robert Stone and David Ullman, will be held at this year's conference. A 20th anniversary celebration led by Professor Emeritus David Ullman, co-founder of DTM, will be held at the **element** nightclub in Soho from 7-11pm on Tuesday, August 5, immediately following the DTM Committee meeting. The committee is grateful to ASME for allowing conference registrants to attend this party as part of IDETC registration in lieu of the luncheon normally included with a regular registration.

For the 21<sup>th</sup> Annual DTM Conference in 2009, Robert Paasch of Oregon State University will be the Conference Chair and Daniel McAdams of Texas A & M University will be the Program Chair. These positions were elected by the membership at the DTM committee meeting at IDETC2007 in Las Vegas.

**Officers:** Committee officers serve two-year terms, the current term ending June 30, 2009. The current officers are:

Chair: Michael J. Scott (UIC)

Vice-chair: Dan McAdams (new affiliation: Texas A&M)

Secretary: Ping Ge (retiring; new Secretary to be elected at IDETC)

Webmaster: Rob Stone (new name of old affiliation: MST)

The next DTM Committee meeting will be held at IDETC2008 on Tuesday, August 5, 2008 from 6-7 pm. Elections will be held for officers for the two-year term beginning July 1, 2009. All are welcome to participate in the meeting.

Respectfully submitted,

Michael J. Scott

Chair of the Design Theory and Methodology Subcommittee

**Fastening and Joining Committee**  
**Design Engineering Division, ASME**  
**Report 2008**

The Fastening and Joining Technical Committee of 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. The committee sponsors symposiums with a specific theme at the annual International Mechanical Engineering Congress and Exposition. The theme for the 2008 IMECE in Boston, Massachusetts is “Joining Technologies for Advanced Materials and Structures” The organizers for this symposium are Dr. Endel V. Iarve, Dr. Thomas J. Whitney of The University of Dayton Research Institute, Dayton OH and Dr. Timothy Breitzman, Air Force Research Laboratory, WPAFB OH. The committee currently has about 12 active members and welcomes experts and distinguished researchers from 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. Endel Iarve, University of Dayton Research Institute, Dayton OH 45469-0060, phone (937) 255-9094; fax (937) 258-8075; e-mail: [endel.iarve@wpafb.af.mil](mailto:endel.iarve@wpafb.af.mil)

*Endel V. Iarve*

## Mechanisms and Robotics Committee Report July 25th, 2008

The 2007 Mechanisms and Robotics Conference had 156 papers submitted, with 135 accepted and published in the Proceedings. The conference was organized into 12 symposia, namely: (1) Mechanisms Synthesis; (2) Components and Applications; (3) Robotics: Theory; Robotics: Applications; (4) Theoretical and Computational Kinematics; (5) Dynamics of Machines; (6) Compliant Mechanisms; (7) Micro and Nano-Scale Electromechanical Systems (MEMS and NEMS); (8) Medical Devices and their Applications in Rehabilitation, Surgery; (9) Education in Mechanisms and Robotics; (10) History of Mechanisms and Robotics; (11) Mechanisms for in-Space Applications; and (12) Adaptronics in Machines and Mechanisms. In addition to traditional technical presentations, the conference included 20 interactive presentations plus 3 invited keynote speakers and one panel session, "Research around the World".

Another important event at the conference was the ASME Student Mechanism Design Competition. The scope of the "mechanism" in this contest is rather broad. For the purpose of this competition, a "mechanism" is defined as: *"Any device that transmits a force or a motion in a deterministic way to perform a mechanical task. It may consist of rigid or deformable bodies connected with kinematic or flexural joints. It may be constructed of any type of materials, including smart and other active materials. It may be actuated by means of any transduction principle and employ any form of energy input. The size of the device can range from nano-scale to macro-scale."* The undergraduate coordinator was Anurag Purwar, Stony Brook University, the graduate coordinator was Charles Kim, Bucknell University, and the sponsorship coordinator was Philip A. Voglewede, University of South Carolina. For a full set of rules and for more information, visit the contest website at: <http://cadcam.eng.sunysb.edu/mechanism2007>.

The 2008 Mechanisms and Robotics Conference had 204 papers submitted, with 166 accepted and 163 published in the Proceedings. The conference was organized into 9 symposia, namely: (1) Mechanisms Analysis and Synthesis; (2) Robot Kinematics and Motion Planning; (3) Robot Dynamics and Control; (4) Theoretical and Computational Kinematics; (5) Machine Dynamics, Vibrations, and Control; (6) Compliant Mechanisms; (7) Medical Devices and their Applications; (8) Novel Mechanisms, Robots, and Applications; and (9) Cable-Driven Mechanisms and Robots, Tensegrity Systems. In addition to traditional technical presentations, the conference included 2 invited keynote speakers.

The ASME Student Mechanism Design Competition was another important event at the conference. The contest coordinator was Charles Kim, Bucknell University, the undergraduate coordinator was Haijun Su, University of Maryland, Baltimore, the graduate coordinator was Philip A. Voglewede, University of South Carolina, and the sponsorship coordinator was Michael M. Stanisic, University of Notre Dame. For a full set of rules and for more information, visit the contest website at: <http://www.facstaff.bucknell.edu/cjk019/SMDC>.

The DED Mechanisms and Robotics Committee Award for 2008 was presented to Dr. Clement Gosselin. In addition to the Mechanisms and Robotics Committee Best Paper Award, MSC Software and General Motors each provided \$1,000 donations for the MSC Software Simulation Award and the GM/Freudenstein Young Investigator Awards, respectively.

The mechanisms and robotics community are indebted to the organizers of these conferences for a wonderful contribution to making the Mechanisms and Robotics conferences so enjoyable, productive, and profitable.

The Mechanisms and Robotics Committee has approved revisions to the by-laws of the committee and submitted the revised by-laws on July 1st, 2008, to the Executive Committee of DED for their approval.

The Mechanisms and Robotics Committee has several subcommittees that have been very active over this past year; namely:

(i) Honors and Awards Subcommittee (Chair: Stephen Canfield). This subcommittee is responsible for formalizing the process of nominating and selecting awardees.

(ii) M&R Website Subcommittee (Hashef Ashrafioun, Venkat Krovi, Dennis Hong, Thomas Sugar and James Schmiedeler). This subcommittee is responsible for making the committee website more vibrant and up to date.

New Journal: ASME Journal of Mechanisms and Robotics (JMR). This journal will publish fundamental research on the geometry, kinematics, dynamics, design, manufacture, and control of mechanisms, robots and mechatronic systems, with a view to advancing the state-of-the-art in theory and practice. Complex mechanisms, robotics, electro-mechanical systems, transmissions, micro mechanisms, bio-inspired machines, and nano-machines are illustrative topics included in this journal. The journal will be published quarterly and the first issue of the journal is scheduled for publication in September, 2008.

There have been ongoing discussions on the role of the committee with respect to three ASME journals; namely, the Journal of Mechanical Design, the Journal of Mechanisms and Robotics, and the Journal of Medical Devices. The committee strongly supports all three journals and, in particular, was actively engaged in establishing the Journal of Mechanisms and Robotics. The members have also engaged in significant discussions on the composition of the Mechanisms and Robotics Committee with regard to the number of Associate Editors that should serve on the committee. The revised by-laws state that two Associate Editors of the Journal of Mechanical Design and two Associate Editors of the Journal of Mechanisms and Robotics will serve on the committee for a period of one year (terms of office to begin on July 1st). For 2008-2009, the two Associate Editors of the Journal of Mechanical Design (as appointed by the Technical Editor, Panos Papalambros) are Mary Frecker and Pierre Larochele. The two Associate Editors of the Journal of Mechanisms and Robotics will be appointed by the Technical Editor, J. Michael McCarthy.

Future conference planning will be addressed by Gordon R. Pennock, Qiaode Jeffrey Ge, Pierre Larochele and Andrew Murray. James P. Schmiedeler and Michael M. Stanisic will be presenting a proposal to the DED Executive Committee Meeting in New York to host the 2012 IDETC Conference in Chicago.

The following table describes the involvement of the members of the Mechanisms and Robotics Committee for 2008-2012. The table also includes the names of the General Conference Chair and the General Program Chair of IDETC for 2008-2012.

Position	2008	2009	2010	2011	2012
<b>M&amp;R Committee</b>					
Program Chair	Larochele	Murray	Schmiedeler		
Conference Chair	Ge	Larochele	Stanisic	Schmiedeler	
Chair Elect	Rastegar	Ge	Larochele	Stanisic	Schmiedeler
Committee Chair	Pennock	Rastegar	Ge	Larochele	Stanisic
Past Committee Chair	Kumar	Pennock	Rastegar	Ge	Larochele
<b>IDETC</b>					
General Conference Chair	Rastegar	Anderson/Flowers	Larochele	n/a	Stanisic
General Program Chair	Ge/Ilies	Dankowicz/Quinn	Murray	n/a	Schmiedeler

More information regarding the Mechanisms and Robotics Committee and the activities of this committee can be found at the following address:

<http://www.asme.org/divisions/ded/mechcomm/index.html>.

A complete list of members of the 2008 Mechanisms and Robotics Committee is provided in the appendix below.

Submitted on July 25th, 2008, by:

Gordon R. Pennock

Chair, Mechanisms and Robotics Committee.

## Appendix: Membership of the Mechanisms and Robotics Committee

### Executive Committee:

Chair: Gordon R. Pennock

Chair Elect: Jahin Rastegar

Past Committee Chair: Vijay Kumar

Secretary: Dennis Hong

Treasurer: To be decided at the M&R Committee Meeting, August 5th, 2008.

Conference Chair: Qiaode Jeffrey Ge

### Elected General Members:

Raffaele Di Gregorio

Dennis Hong

Chintian Huang

Peng Song

Gloria Wiens

Stephen Canfield

Jian S. Dai

Laxman Saggere

James Schmiedeler

Thomas Sugar

Just Herder

Mary Frecker

Venkat Krovi

Carl A. Nelson

Andrew Murray

Michael M. Stanisic

### Ex-Officio Members:

J. Michael McCarthy

Hashem Ashrafiuon

Thomas R. Chase

Mary Frecker

Ashitava Ghosal

Larry L. Howell

Pierre Larochelle

Qizheng Liao

Harvey Lipkin

Jose M. Rico

Kwun-Lon Ting

Hong-Sen Yan

To: The ASME Design Engineering Division (DED) General Committee  
From: Laxman Saggere, Chair, Micro- and Nanosystems (MNS) Committee  
Date: July 25, 2008  
Subject: MNS Committee report for the period September 2007–July 2008.

### **Mission**

The mission of the 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.

### **Committee Membership, Meetings and By-Laws**

The committee is currently comprised of twenty elected members including three officers: the Chair, the Vice-Chair/Treasurer and the Secretary. The MNS committee held its second meeting on September 5, 2007 in Las Vegas at the venue of the 2007 IDETC. Several non-members of the committee including some who are new to the IDETC and DED also attended the meeting. There has been considerable interest in the committee's activities in the division and the committee expects to grow significantly in the coming years. The committee expects to elect a few new members next year to replace the members whose terms will expire this year. Future meetings of the committee will be held annually in conjunction with the IDETC. The committee operates according to a set of by-laws, which was formally adopted in October 2006. Some revisions to the current by-laws are being considered and will be discussed at the committee meeting on August 5, 2008.

### **Committee Activities**

- **Participation in the 2007 IMECE**

Laxman Saggere, Chair of the MNS committee, represented the DED in the Micro/Nano Track at the 2007 IMECE held in Settle, Washington in November 2007. The MNS committee co-sponsored six topics under the Micro/Nano Track.

- **1<sup>st</sup> International Conference on Micro- and Nanosystems**

The MNS committee organized its 1<sup>st</sup> International Conference on Micro- and Nanosystems at the 2007 IDETC. Laxman Saggere and Arvind Raman served as the Conference and Program Chairs respectively. The conference technical program included 47 peer-reviewed papers from 11 countries organized in 10 technical sessions on a variety of topics in micro/nano systems area. The conference featured a plenary talk by Dr. Kurt Petersen, CEO of SiTimes and a member of the NAE, and a panel session comprised of panelists from government, federal funding agencies, and academia. The MNS committee established a best paper award for the most outstanding paper in the MNS conference. This award was presented to the authors of the best paper in the 1<sup>st</sup> MNS conference during the conference luncheon.

- **2<sup>nd</sup> International Conference on Micro- and Nanosystems**

The MNS committee is organizing its 2<sup>nd</sup> International Conference on Micro- and Nanosystems at the 2008 IDETC. Arvind Raman and Gloria Wiens are serving as the Conference and Program Chairs respectively. More than 60 papers were submitted to the conference. The conference will feature 58 peer-reviewed papers in 12 oral sessions and one poster session, a keynote by Professor Albert P. Pisano of University of California, Berkeley, and a panel session on "The Present and Future of Nanomanufacturing," which will be moderated by Dr. Kevin Lyons from the National Institute for Standards and Technology. Besides the best paper award for the papers presented in oral sessions, a best poster award is also being presented for the first time at the MNS conference this year.

### **Future Activities**

The committee will continue to organize the annual Conference on Micro- and Nanosystems at the future IDETCs. The organizers of the next two conferences have been identified. The committee is also exploring opportunities to attract more industry participation in the future MNS conferences.

**Report on the  
TECHNICAL COMMITTEE ON MULTIBODY SYSTEMS AND  
NONLINEAR DYNAMICS (MSND-TC)  
August 2008**

Mission:

The mission of the *Technical Committee on Multibody Systems and Nonlinear Dynamics (MSND-TC)* is to foster experimental, symbolic, computational and analytical activities pertaining to multibody systems, nonlinear dynamics and control and other related areas. The committee consists of members from academia and industry. One of the main activities of the committee is to organize the Biennial *International Conference on Multibody Systems, Nonlinear Dynamics and Control (MSNDC)* as one of the Design Engineering Technical Conferences.

Prior Activities:

The Technical Committee on Multibody Systems and Nonlinear Dynamics had its last meeting in Blacksburg, Virginia on Tuesday, June 3, 2008, 5.00-7:00 PM, at *The Inn*, VPI Blacksburg, VA. . During this meeting, the present members of the committee discussed the preparation for and the proposed symposia of the *Seventh International Conference on Multibody Systems, Nonlinear Dynamics and Control (MSNDC2009)* which is part of the 2009 ASME International Design Engineering Technical Conferences (IDETC/CIE 2009) to be held in San Diego, CA. These discussions included debate on use of IDETC2007 revenues plus existing account assets (and requested funds matching from the DED) for the building of the endowments of previously existing *Lyapunov Award*; *D'Alembert Award*; and the new *MSND-TC Student Paper Award*. Others discussions involved obtaining industrial sponsorship at the IDETC 2009, and the desirability/need for having a even year focused Multibody Systems and Nonlinear Dynamics conference.

7<sup>th</sup> International Conference on Multibody Systems, Nonlinear Dynamics and Control:

With regard to *MSNDC2007*, I would like to thank all of the session organizers for what promises to be a very informative conference. I would especially like to thank Professor Olivier Bauchau Conference Program Chair, and Awards Subcommittee Chair for all he has done. The *MSNDC2009* currently consists 22 different symposia, and should prove again to be highly successful. Many of the best of the contributed paper are expected to be submitted for consideration for publication in the *ASME Journal of Computational and Nonlinear Dynamics*, which is doing well (Detailed statistics regarding the *Journal of Computational and Nonlinear Dynamics* have been compiled by the Technical Editor, Professor Subhash Sinha, and will not presented here).

The *MSNDC2009* will also feature the presentation of the Multibody Systems and Nonlinear Dynamics Technical Committee's *D'Alembert Award* and *Lyapunov Award*. This award has been advertised in ~10 journals, and has been broadcast though an extensive email solicitation for award nominations.

IDETC 2009 Planning:

As Multibody Systems and Nonlinear Dynamics Technical Committee Chair, I have had the pleasure of working with George Flowers of VIB on the organization of the upcoming IDETC 2009. Professor Flowers and I are serving as Co-Chairs of the IDETC 2009 and we have already made considerable progress in the organization of this conference. Specifically, the following conference items have now been set:

- Conference City: San Diego, CA.
- Conference Dates: August 30-September 2, 2009
- Conference Venue: San Diego Convention Center
- Conference Hotel: Omni Hotel – San Diego
  - ( <http://www.omnihotels.com/FindAHotel/SanDiego.aspx> )
  - Conference room rate: \$189 (single/double) \
  - Room Nights Blocked: 1300 room nights
  - Required Pickup: 80% (1040 room nights)
  - We have a total of 36 meeting rooms each day from Monday, August 31,  
2009 through Wednesday, September 2, 2009
  - Food & Beverage Minimum: \$100K (at the convention center)
  - Target reception site is i) USS Midway Aircraft Carrier Museum (preferred site), or  
ii) Petco (home of the National League Padres)
  - San Diego State University (SDSU) has agreed to act as the local host and is eager to participate.
- An initial *IDETC 2009* webpage (<http://www.rpi.edu/~anderk5/IDETC2009>) is up and we have been in communication with the ASME for the past two months about morphing this into the official IDETC webpage with all its paper submission and review, etc., webtools. A general announcement was prepared and distributed at the IDETC 2007. A similar IDETC 2009 announcement (attached) is to be distributed will materials provided to IDETC2008 participants.

The next meeting of the committee is scheduled to be in San Diego, CA, during the IDETC/CIE 2009.

Prepared by

Kurt S. Anderson  
Chair ASME MSND-TC  
July 15, 2008



# ASME IDETC 2009

## 2009 International Design Engineering Technical Conferences (IDETC2009)

San Diego, California

August 30 - September 2, 2009

Co-Chairs: George Flowers ([flowegt@auburn.edu](mailto:flowegt@auburn.edu)) & Kurt Anderson ([anderk5@rpi.edu](mailto:anderk5@rpi.edu))

### Affiliated Conferences, Conference Chairs and/or Program Chairs

1. **22<sup>nd</sup> Biennial Conference on Mechanical Vibration and Noise (VIB)** (TC of Vibration and Sound) – Conference Chair: George Flowers ([flowegt@auburn.edu](mailto:flowegt@auburn.edu)); Program Chair: Dane Quinn ([quinn@uakron.edu](mailto:quinn@uakron.edu))
2. **29<sup>th</sup> Computers and Information in Engineering Conference (CIE)** (Computers in Engineering Division) – Conference Chair: Fred Procter ([frederick.proctor@nist.gov](mailto:frederick.proctor@nist.gov)); Program Chair: Shuichi Fukuda ([shufukuda@cdr.stanford.edu](mailto:shufukuda@cdr.stanford.edu))
3. **2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09)** – Conference Chair: Harry H. Cheng ([hhcheng@ucdavis.edu](mailto:hhcheng@ucdavis.edu)); Program Chair: YangQuan Chen ([yqchen@ece.usu.edu](mailto:yqchen@ece.usu.edu))
4. **7th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC)** (Multibody Systems and Nonlinear Dynamics Committee) – Conference Chair: Kurt Anderson ([anderk5@rpi.edu](mailto:anderk5@rpi.edu)); Program Chair: Olivier Bauchau ([Olivier.Bauchau@ae.gatech.edu](mailto:Olivier.Bauchau@ae.gatech.edu))
5. **35<sup>th</sup> Design Automation Conference (DAC)** (Design Automation Committee) – Conference Chair: Kazuhiro Saitou ([kazu@umich.edu](mailto:kazu@umich.edu)); Program Chair: Zissimos Mourelatos ([mourelat@oakland.edu](mailto:mourelat@oakland.edu))
6. **ASME Power Transmission and Gearing Conference (PTG)** (Power Transmission and Gearing Committee)
7. **20<sup>th</sup> Reliability, Stress Analysis, and Failure Prevention Conference (RSAFP)** (Reliability, Stress Analysis, and Failure Prevention Committee) – Conference Chair: Erol Sancaktar ([erol@uakron.edu](mailto:erol@uakron.edu))
8. **33<sup>rd</sup> Mechanisms and Robotics Conference (MECH)** (Mechanisms and Robotics Committee) – Conference Chair: Pierre Larochelle ([pierrel@fit.edu](mailto:pierrel@fit.edu)), Program Chair: Andrew Murray ([murray@udayton.edu](mailto:murray@udayton.edu))
9. **3<sup>rd</sup> International Conference on Micro- and Nanosystems (MNS)** (Micro and Nano Systems Committee)
10. **6<sup>th</sup> Symposium on International Design and Design Education (DEC)** (Design Education Committee)
11. **21<sup>st</sup> International Conference on Design Theory and Methodology (DTM)** (Design Theory and Methodology Committee) – Conference Chair: Robert Paasch ([paasch@engr.orst.edu](mailto:paasch@engr.orst.edu))
12. **14<sup>th</sup> Design for Manufacturing and the Life Cycle Conference (DFMLC)** (Design for Manufacturing Committee)
13. **10th International Conference on Advanced Vehicle and Tire Technologies (AVTT)** – Conference Chair: Corina Sandu ([csandu@vt.edu](mailto:csandu@vt.edu)); Program Chair: Mohammad Elahinia ([mohammad.elahinia@utoledo.edu](mailto:mohammad.elahinia@utoledo.edu))

## TECHNICAL COMMITTEE ON MULTIBODY SYSTEMS, NONLINEAR DYNAMICS, AND CONTROL

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16. Professor Dan Negrut  
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## Power Transmission and Gearing Committee Report

The Power Transmission and Gearing (PTG) Committee organized the 10th International ASME Power Transmission and Gearing Conference that was held as part of the 2007 IDETC in Las Vegas. A total of 116 papers were presented in 24 technical sessions by researchers from more than 20 countries on their research. Various aspects of power transmission and gearing were covered, including the topics of gear design and analysis, gear strength and durability, gear dynamics and noise, gear manufacturing, gear tribology, lubrication, engineered surfaces and efficiency, transmissions, and other transmission components. The Buckingham Lecture was given by Mr. William Bradley of American Gear Manufacturers Association.

Awards Sub-Committee formed by N. Anderson, A. Karvelis and D. Lewicki presented a proposal for a new ASME PTG award, named *Darle W. Dudley Award*, that was approved by to ASME DED. This award will be given once every four years to an individual who have made life-long contributions to the art and science of power transmission and gearing technology. For the first time, the Dudley Award was presented to Professor Donald R. Houser of the Ohio State University at the PTG Conference dinner.

The PTG Committee is in the process of planning of the next PTG Conference as part the 2009 IDETC. The size and the scope of this conference will be discussed in the next committee meeting to be held in October 2008.

Ahmet Kahraman

PTG Committee Chair

**ASME International**  
**The American Society of Mechanical Engineers**

**VEHICLE DESIGN COMMITTEE**  
**Design Engineering Division**

Activity Report (July 30, 2008)

Prepared by:

**Brian Gilmore, Ph.D.**

Chair, Vehicle Design Committee  
Deere & Company  
Moline, IL

**Corina Sandu, Ph.D.**

Conference Chair  
Professor, Dept of mechanical Engineering  
Virginia Polytechnic Institute and State University

After several years of providing superior leadership for the vehicle design committee, Dr. Moustafa El-Gindy stepped down as committee chair.

The Vehicle Design Executive Committee was nominated and elected. The Executive Committee is:

Brian Gilmore, Ph.D.  
Chair  
Deere & Company  
Moline Technology Innovation Center

Corina Sandu, Ph.D.  
Vice-Chair  
Professor, Dept of mechanical Engineering  
Virginia Polytechnic Institute and State University

Professor Mohammad H. Elahinia  
Secretary and Treasurer  
Professor, MIME Department,  
Dynamic and Smart Systems Laboratory  
University of Toledo

The VDC is sponsoring the 10<sup>th</sup> International Conference on Advanced Vehicle and Tire Technologies. This conference serves to bring vehicle and tire designers together to share engineering design experiences from around the world. The conference is composed of 5 symposia.

The effort and hard work the session organizers, reviewers, and authors is recognized for what promises to be a very informative conference. Especially notable are the efforts of the conference

chair, Professor Corina Sandu, and the program chair Professor Mohammad H. Elahinia. Welcome to the 10<sup>th</sup> International Conference on Advanced Vehicle and Tire Technologies.

This year we have several awards including two industry sponsored awards. General Motors is sponsoring *The 2008 AVTT Best Paper Award for Excellence in Testing and Experimental Vehicle Dynamics Research*. *The 2008 AVTT Best Paper Award for Excellence in energy Efficient Powertrain System*. Recognition awards will also be presented for meritorious service to the committee.

The current active members are:

Professor Massimiliano Gobbi, Politecnico di Milano  
 Professor Farid Amirouche, University of Illinois-Chicago  
 Dr. Michael Kokkolaras, University of Michigan  
 Professor Imtiaz Haque, Clemson University  
 Dr. Scott Kimbrough, Motion Research Inc.  
 Dr. David Gunter, U.S. Army Tank Research Center  
 Mr. Mike Letherwood, U.S. Army TRC 1  
 Dr. Brian Gilmore, John Deere Corp.  
 Professor Ion Stihary, Concordia University  
 Professor J.Y. Wong, Carleton University  
 Professor Mehdi Ahmadian, Virginia Tech  
 Dr. Gary Heydinger, NHTSA  
 Dr. Ming Cao, United Technologies Research Center  
 Dr. Joel Anstrom, Penn State University  
 Mr. Hillegass, Matthew  
 Dr. Xubin Song, Eton Corp  
 Dr. Shung H. (Sue) Sung, General Motors Corporation  
 Dr. Paul Lomangino (P.F.) (Ford)  
 Dr Goldman Robert, US Navy  
 Professor Corina Sandu, Virginia Tech  
 Dr. Xiaobo Yang, Daimlerchrysler  
 Dr. Trivedi Mukesh, Volvo 3P  
 Mr. Wayne Evenson, TITAN Corp  
 Mr. Scaglione Mario, US Navy  
 Mr. Donald Nefske, GM  
 Dr. Yin-ping (Daniel) Chang, Oakland University  
 Professor Ebrahim Esmailzadeh, University of Ontario  
 Mr. Alan Mayton, NIOSH, Pittsburgh Research Lab  
 Dr. Taehyun Skim, University of Michigan  
 Dr. Yuksel Gur, FORD  
 Dr. Shung H. (Sue) Sung, GM  
 Professor Jacob Tsao (San Jose State University)  
 Professor Rajesh Rajamani (University of Minnesota)  
 Professor Mohammad H. Elahinia, University of Toledo  
 Dr. Beshah Ayalew, Clemson University

The Vehicle Design Committee has organized the 10<sup>th</sup> International Conference on "Advanced Vehicle and Tire Technologies", 2008 ASME International Design Engineering Technical

Conference (IDETC) August 3-6, 2008, New York Marriott at Brooklyn Bridge, New York City, New York, USA

**Conference Chair:**

**Professor Corina Sandu**

Assistant Professor of Mechanical Engineering  
Director of Advanced Vehicle Dynamics Laboratory (AVDL)  
101 Randolph Hall, Virginia Tech, Blacksburg, VA 24061  
Phone: (540) 231-0725  
E-mail: [csandu@vt.edu](mailto:csandu@vt.edu)

**Program Chair:**

**Professor Mohammad H. Elahinia**

Assistant Professor, MIME Department, University of Toledo  
Dynamic and Smart Systems Laboratory  
4045 Nitschke Hall, Toledo, OH 43606  
Phone: (419) 530-8224  
Email: [mohammad.elahinia@utoledo.edu](mailto:mohammad.elahinia@utoledo.edu)

**Technical Research Areas:**

The Vehicle Design Committee of the ASME Design Engineering Division is organizing an International Conference entitled "Advanced Vehicle and Tire Technologies". Papers are invited on innovative analytical, computational, and experimental investigations in control, dynamics, and design of full vehicle systems and their sub-assemblies. Papers may address fundamental research, applied research, or successful implementations relating to light or heavy vehicle design and development. Seven symposia will be organized as follows:

**Symposium 1: Advances in Methods for Vehicle Systems Design and Control**

Topics include optimal, reliable, and robust design of vehicles and their systems and subsystems, design of integrated (mechatronics) systems, and engineering applications referring to vehicle design.

**Organizer: Dr. Massimiliano Gobbi**

Politecnico di Milano (Technical University)

E-mail: [massimiliano.gobbi@polimi.it](mailto:massimiliano.gobbi@polimi.it)

**Co- Organizer: Dr. Moustafa El-Gindy**

Penn state University

E-mail: [mxe15@psu.edu](mailto:mxe15@psu.edu)

**Symposium 2: Advances in Vehicle Design Tools to Enhance Safety, Health, and Ergonomics**

A number of vehicle design tools such as finite element and biomechanics dynamics programs are used to design safety and health enhancements that reduce the probability and intensity of injuries in vehicle crashes. Topics will include finite element methods for crush-based accident analysis, seat design with airbag and seatbelt system integrations and robust structures for occupant protection during impacts, the response of the human body to vibration and mechanical shocks, general means for improving crashworthiness of vehicles, and biomechanics studies.

**Organizer: Mr. Alan Mayton**

NIOSH, Pittsburgh Research Lab,

E-mail: [amayton@cdc.com](mailto:amayton@cdc.com)

**Co-Organizer: Dr. Yin-Ping (Daniel) Chang**

Oakland University

E-mail: [ychang@oakland.edu](mailto:ychang@oakland.edu)

**Symposium 3: Advances in Multibody Systems Modeling and Validation for Vehicle Dynamics Applications**

Topics will include advanced multibody systems modeling methods and algorithms that enable a more efficient, accurate, and improved vehicle mobility and dynamic performance prediction, experimental evaluation and model validation tests. Other example topics include: full or subsystem vehicle modeling, tire modeling, advanced analytical and computational methods and algorithms, uncertainty modeling, damping modeling, new equipment and new methodologies developed for testing vehicles and vehicle systems.

**Organizer: Dr. Corina Sandu**

Virginia Polytechnic Institute and State University

E-mail: [csandu@vt.edu](mailto:csandu@vt.edu)

**Co-Organizer: Dr. Xiaobo Yang**

Chrysler LLC

E-mail: [xy1@dcx.com](mailto:xy1@dcx.com)

**Symposium 4: Advances in Vehicle Systems Dynamics and Control**

Papers in the general area of Dynamics and Controls applications to vehicle systems are welcome. Topics include integrated design, modeling, analysis, and experimental testing of ABS systems with load shifting, active and semi-active suspensions for improving vehicle ride and handling, intelligent rollover warning systems, active yaw control systems for on- and off-road vehicles, and advanced propulsion control systems for improving fuel economy, emission control and drivability for both passenger and commercial vehicles.

**Organizer: Dr. Xubin Song**

Eaton Corp.

E-mail: [XubinSong@eaton.corp](mailto:XubinSong@eaton.corp)

**Co- Organizer: Dr. Beshah Ayalew**

Clemson University

E-mail: [beshah@CLEMSON.EDU](mailto:beshah@CLEMSON.EDU)

**Symposium 5: Advances in non-conventional, energy efficient and environmentally friendly vehicles**

The recent hikes in fuel prices as well as growing environmental concerns have drawn renewed interest on research and development of more energy efficient vehicles. This session emphasizes but is not limited to the design, analysis and optimization of hybrid-electric vehicles (HEVs) and fuel cell vehicles (FCVs). Examples of topics include innovative controls and energy management strategies; new component or sub-assembly designs for non-conventional vehicles, including power electronics and electrochemical/hydro-pneumatic energy storage systems; hydrogen storage systems; PV cell design and optimization, regenerative braking systems, implications to vehicle dynamics, and the analysis of environmental impact.

**Organizer: Dr. Ming Cao**

United Technologies Research Center

E-mail: [ming.cao@gm.com](mailto:ming.cao@gm.com).

**Co-Organizer: Dr. Joel Anstrom**

Penn State University

E-mail: [jra2@psu.edu](mailto:jra2@psu.edu)

**2008 Vehicle Design Committee Meeting**

The next Vehicle Design Committee meeting will start at 7:30 pm in New York City, New York on August 5, 2008.

### Technical Committee on Vibration and Sound

Design Engineering Division

The American Society of Mechanical Engineers

<http://divisions.asme.org/ded/tcvs/tcvs%20pages/Hom>



TO: DED Executive Committee

FROM: Christopher D. Rahn, TCVS Chair ([cdrahn@psu.edu](mailto:cdrahn@psu.edu))

SUBJECT: Summary of TCVS activities during September 2007 to September 2008

DATE: July 25, 2008

- **Elections:** At our last meeting at UIC in Chicago, the committee voted on:

Officers: Chris Rahn was elected as Chair. Brian Feeny was elected as Vice Chair. Steve Shen was elected as Secretary.

Members: Caruntu, Dai, Shukla, Liao, Mei and Rook were re-elected for three-year terms. Al Ferri and Massimo Ruzzene were elected as new members with three-year terms. Tom Royston was elected to a three-year term as a returning past member.

- **TCVS Treasurer's Report:** The Den Hartog award account has a balance of \$45,720, sufficiently high to qualify this award as a Design Division award. The Myklestad award account has a balance of \$23,746. TCVS is anticipating a large distribution of funds from IDETC 2007 based on paper ratio from TCVS and the overall profit made by the conference.
- **IDETC 2007:** The VIB conference at IDETC was extremely successful with over 250 papers presented and published. The conference as a whole made a profit of over \$200K.
- **IDETC 2009:** The General Chairs are Anderson and Flowers, Dank and Quinn are the Program Chairs for IDETC and Quinn is the Program Chair for the Vibrations Conference.
- **IDETC 2011:** TCVS endorsed a proposal for IDETC 2011 by Jalili.
- **IMECE 2007:** The Mechanical Systems Track at IMECE 2007 was organized by Adams, Luo, and Mei with 237 papers.
- **IMECE 2008:** TCVS members helped organize the following tracks at IMECE 2008:
  - Mechanical Systems and Control (Luo).
  - Biomedical and Biotechnology Engineering (Al-Jumaily, Caruntu, and Epureanu).
- **SMASIS 2008:** Rahn organized the Symposium on Nonlinear Dynamics and Adaptive/Passive Control at the new Smart Materials, Adaptive Structures, and Intelligent

Systems (SMASIS) Conference to be held in Ellicott City, MD Oct. 28-30. This symposium is sponsored by TCVS, has over 40 accepted papers, and has several TCVS members on the organizing committee (Jalili, Mann, and Tang).

- **Fall 2010:** While TCVS members will continue to participate in IMECE with TCVS encouragement, TCVS has no role in the conference organization. The committee is therefore considering an alternate even year conference that would be organized and run by TCVS in collaboration with other TCs. One option is to continue to participate in SMASIS. TCVS could also develop an even year VIB conference for IDETC. A new conference focusing in vibration and nonlinear dynamics could be initiated with MSNDC. A subcommittee has been formed to investigate the even year options and provide recommendations to TCVS at the Fall meeting which will be held at SMASIS.
- **Journal of Vibration and Acoustics:** The new Associate Editors are Epureanu, Palazzolo, Ruzzene, Shaw, and Zhu. A structural health monitoring special issue was guest edited by Epureanu. There is to be some revenue sharing from ASME journal profit.
- **Interactions:** The TCVS interacts with a number of other committees and divisions, with liaisons to *Noise Control and Acoustics Division* (Grosh), *Applied Mechanics Division – Dynamic Systems and Structures Committee* (Luo), *Applied Mechanics Review* (Pierre), *Aerospace Division--Adaptive Structures Committee* (Wang), *Design Engineering Division – Power Transmission and Gearing Committee* (Parker), *DED International Activities Committee* (Liao), *Micro and Nano Systems Committee* (Raman), *DSC* (Jalili).

# **Liaison Reports Journals**



**JMD ANNUAL REPORT  
TO DESIGN ENGINEERING DIVISION EXECUTIVE COMMITTEE**

Prepared by Panos Y. Papalambros, Technical Editor  
July 24, 2008

**1. Overview**

An editorial transition took place on January 1, 2008, with Panos Y. Papalambros succeeding J. Michael McCarthy as Technical Editor of JMD. In addition, a new transactions journal was approved with the title Journal of Mechanisms and Robotics (JMR), its first issue scheduled for July 2008 with J. Michael McCarthy as Technical Editor. The scope of JMR covers a substantial portion of what has been traditionally published in JMD, therefore creating a challenge for replacing these submissions from other areas, and an opportunity for broadening the appeal of JMD to a larger audience. The two TEs have agreed that papers within the general M&R purview can be published in both JMD and JMR, with JMD placing more emphasis on papers oriented towards design synthesis while JMR placing more emphasis on analysis. This agreement has been implemented and papers are being re-assigned by the two TEs as necessary. The long-term impact of these changes is yet to be determined.

Current effort is focused on the evolution of JMD over the next several years, its interaction with all TCs of DED, and in re-assessing its scope so that it meets the needs and expectations of the various DED communities. An evolved definition of its purpose and scope will likely be in place in the next few months.

**2. Journal Statistics**

For years 2007 and 2008 (July) Journal statistics are shown in Figures 1 and 2, respectively. Cumulative data for the years included in the online Journal Tool are shown in Figure 3.

Review process data are shown in Table 1.

**Table 1. Review process data**

Year	Average Days			Average Months	
	Assigned to AE	TE Decision	TE Approval	Draft to TE Decision	Draft to TE Approval
2007	9	7	25	5.471	7.806
2008 (July)	7	7	3	1.837	0.783
All Years	13	3	14	5.363	7.761

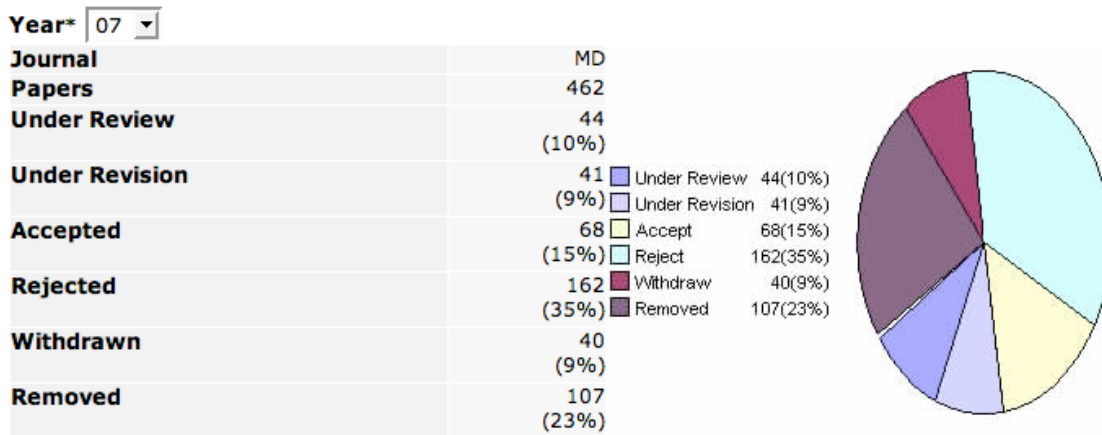


Figure 1. JMD statistics for 2007

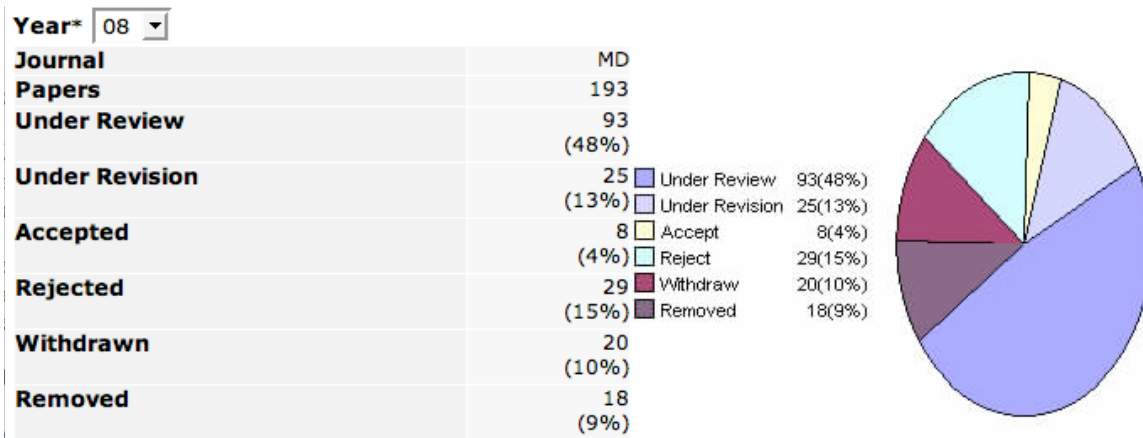


Figure 2. JMD statistics for 2008 (Jan-July)

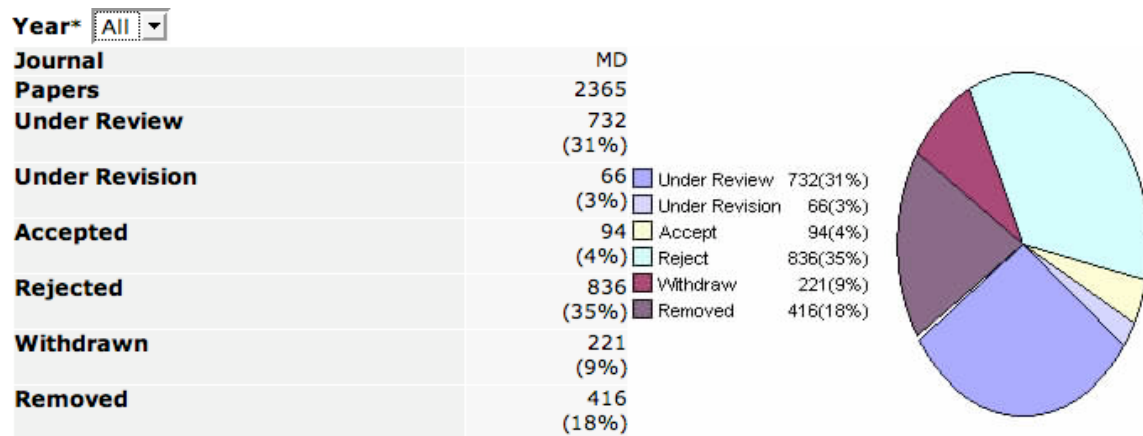


Figure 3. JMD cumulative statistics for 2002-2008

The production schedule for 2007 and 2008 is monthly with 1400 pages allocated. There was a special issue in July 2007 on Engineering Design Education (Phil Doepker and Clive Dym, eds.).

Production backlog as of July 22, 2008 is as follows.

Final Manuscript:

- Submitted Awaiting Editor Approval (Current Count: 9)
- Approved Awaiting 1903 Form (Current Count: 2)
- Approved Ready for Composition (Current Count: 17)
- Approved Staff Downloaded MS Files (Current Count: 0)
- Staff Verified (Current Count: 59)
- Files in Production (Current Count: 0)

Issue assignments for 2008 and forecasting for upcoming issues is shown in Table 2

**Table 2. Issue assignments and forecasting (2008)**

Year	Papers + Technical Briefs												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2008	11+1	12+2	10+3	13+2	13+3	15+1	10+2	13+3	7+1	12+2	8+2 est.	8+2 est.	137

### 3. Status of Associate Editors

List of AEs and their status is shown in Table 3.

**Table 3. Associate editor list and status (July 2008)**

CURRENT AEs JUNE 2008					
Technical Committee	Last Name	First Name	Term Period	Term	Status
Design Automation	Azarm	Shapour	Sept. 2008	2	to be terminated
Design Automation	Mourelatos	Zissimos	May 2009		
Design Automation	Simpson	Timothy W.	July 2009		
Design for Manufacturing	Herrmann	Jeffrey W.	July 2009		
Design Theory and Methodology	Allen	Janet K.	July 2009	1	
Design Theory and Methodology	Gershenson	John K.	July 2009		
Design Theory and Methodology	Jin	Yan	Dec 2008		nom for 2d term-accepted
Mechanisms and Robotics	Chase	Thomas R.	Sept. 2008	1	nom for 2d term-accepted
Mechanisms and Robotics	Frecker	Mary	Dec. 2008		nom for 2d term-accepted
Mechanisms and Robotics	Ghosal	Ashitava	May 2009		
Mechanisms and Robotics	Howell	Larry L.	Sept. 2008	2	design innovation?
Mechanisms and Robotics	Larochelle	Pierre	Dec 2008		nom for 2d term-accepted
Mechanisms and Robotics	Liao	Qizheng	Dec 2008		to be terminated
Mechanisms and Robotics	Lipkin	Harvey	Dec 2008		nom for 2d term-declined
Mechanisms and Robotics	Rico	Jose M	May 2009		
Mechanisms and Robotics	Schmiedeler	James	Sep 2008		nom for 2d term-accepted
Mechanisms and Robotics	Ting	Kwun Lon	Dec 2008		nom for 2d term-accepted
Mechanisms and Robotics	Yan	Hong-Sen	April 2010		
Power Transmission and Gearing	Lim	Teik Chin	Dec 2008	2	to be terminated
Power Transmission and Gearing	Singh	Avinash	May 2010		
Power Transmission and Gearing	Velex	Philippe	Dec. 2008		nom for 2d term-accepted
NOMINATED JUNE 2008					
Design Innovation	Slocum	Alexander	3 yrs		
Design Innovation	Brei	Diann	3 yrs		
Design Theory and Methodology	Cagan	Jonathan	3yrs		

Several re-appointments are planned as shown, as well as new associate editor nominations. The total number of AEs is targeted to be at least 25, with some increased emphasis on international representation.

Recognition plaques are mailed to each 'graduating' AE.

### **5. Journal Quality**

Timely handling of papers is a top priority. Targeted time for review completion is 3-6 months with no more than 6 months wait time for appearance after that. A recent editorial has focused on this matter.

Impact factors are reported as:

2002: 0.268, 12<sup>th</sup> out of 18 ASME journals  
2003: 0.354, 15<sup>th</sup> out of 18 ASME journals  
2004: 0.461, 10<sup>th</sup> out of 18 ASME journals  
2005: 1.245, 2<sup>nd</sup> out of 18 ASME journals  
2006: 1.252, 2<sup>nd</sup> out of 18 ASME journals  
2007: 1.103, 3<sup>d</sup> out of 18 ASME journals

Further in depth analysis of impact factor trends and causality is needed. A team of AEs and other community members will be tasked to explore this matter. However, the migration of M&R papers to JMR is expected to have measurable negative impact, at least in the short term.

Respectfully submitted,



Panos Y. Papalambros

July 24, 2008

**ASME Journal of Vibrations and Acoustics Report**  
**Prepared by: Kon-Well Wang**  
**July 2008**

***Purpose and Scope***

The purpose of the Journal of Vibration and Acoustics (JVA) is to serve as a vehicle for the communication of original research results of permanent interest in all areas of vibration and acoustics. Papers published by the journal are full-length articles of considerable depth. The journal also presents Technical Briefs, which are intended to serve as a means for the rapid communication of recent developments in an abridged form. Examples of specific topic areas covered include, but not limited to: vibration of continuous and lumped parameter systems; linear and non-linear vibrations; random vibration; modal analysis; mechanical signatures; structural dynamics and control; vibration suppression; vibration isolation; passive and active damping; machinery dynamics; rotor dynamics and vibration; acoustic emission; noise control; machinery noise; structural acoustics; fluid-structure interaction; aeroelasticity; and flow induced noise and vibration.

***Associate Editors***

We are increasing the numbers of Associate Editors (AEs) to reduce the AE workload and reduce paper handling/review time. Recently, Professor Bogdan Epureanu from the University of Michigan, Professor Alan Palazzolo from Texas A&M, Professor Massimo Ruzzene from Georgia Tech, and Professor Steve Shaw from the Michigan State University were nominated and approved as new associate editors.

***Special Issue***

The special issue on *vibration-based structural health monitoring techniques*, with guest editors Bogdan Epureanu (University of Michigan) and Mark Derriso (Air Force Research Labs), has been published in the December 2007 issue. There were eleven papers and a guest editorial in this issue.

***Current Status and Outlook***

We have used 549 pages of our allotted 800 so far for the publishing year of 2008 (including the August issue). The Journal is experiencing an increasing rate of paper submission during the past few years. There have been 112 papers submitted in 2003, 193 in 2004, 215 in 2005, 263 in 2006, and 241 in 2007.

To help the authors update their references, we have implemented the following process since mid 2006: When a paper is accepted for publication, in the Editor's email to the author, we provide the authors with a list of recent (last 2 years) relevant JVA publications (selected by the Editor) for their reference and citation. We made it clear to the authors that our intention is only to provide new information that might not be available when they first submitted their manuscript and to help them further refine and update their papers. It is the authors' decision whether they use it or not.

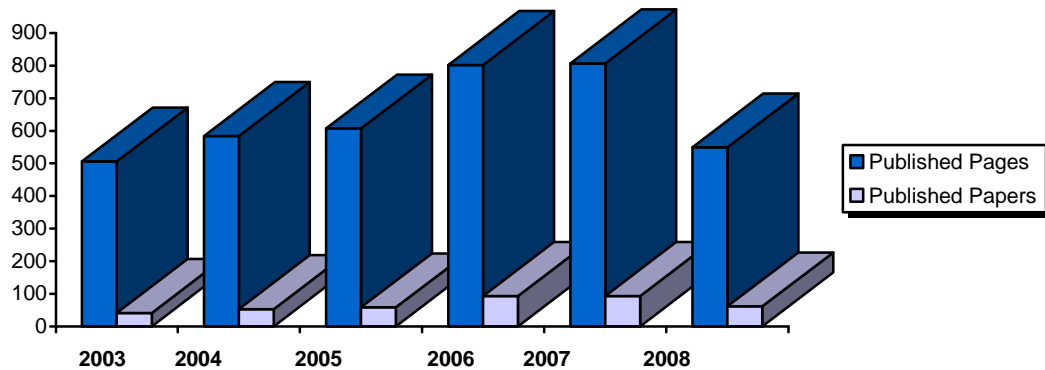
We have communicated with the 2007 IDETC symposium organizers to identify and solicit high quality papers from the Conference. These papers will go through the regular rigorous journal review process.

*Associate Editors and Areas of Expertise*

<b>Name</b>	<b>Institution</b>	<b>Term 1 End Date</b>	<b>Term 2 End Date</b>	<b>Area of Research</b>
Michael Brennan	University of Southampton, UK	12/31/2009		Vibration and noise control, smart structures
William Clark	University of Pittsburgh	12/31/2006	12/31/2009	Vibration control, smart structures, sensors & actuators
Bogdan Eputrsnu	University of Michigan	12/31/2011		Fluid structure interactions, nonlinear vibrations, structural health monitoring
Brian Feeny	Michigan State University	12/31/2008		Structural vibration, system identification, and friction dynamics
Jean-Claude Golinval	University of Liege, Belgium	12/31/2007	12/31/2010	Modal analysis, testing, finite element updates
Karl Grosh	University of Michigan	12/31/2006	12/31/2009	Structural acoustics, bioacoustics, MEMS
Stephen Hambric	Applied Research Labs	6/15/2008	6/15/2011	Structural acoustics, computational methods
Sotirios Natsiavas	Aristotle University, Greece	12/31/2006	12/31/2009	Nonlinear & multi-body systems, system identification
Alan Palazzolo	Texas A&M University	12/31/2011		Rotor dynamics, active bearings and rotor controls
Robert Parker	Ohio State University	12/31/2005	12/31/2008	Gyroscopic systems, gear and transmission dynamics
D. Dane Quinn	The University of Akron	12/31/2005	12/31/2008	Nonlinear dynamics, resonance capture, robust control
Christopher Rahn	The Pennsylvania State University	12/31/2008		Active vibration control, continuous structures, MEMS, mechatronics
Massimo Russene	Georgia Tech	12/31/2011		Structural dynamics and mechanics, fluid-structure interactions
Steven W. Shaw	Michigan State University	12/31/2011		Nonlinear vibration, MEMS dynamics
I.Y. (Steve) Shen	University of Washington	6/15/2008	6/15/2011	Rotating systems, damping, MEMS, smart structures
Cheng-Kuo Sung	National Tsing Hua University, Taiwan	5/31/2009		Machine dynamics, smart structures, precision machine design
Chin An Tan	Wayne State University	12/31/2004	12/31/2007	Vibration and control of continua, friction and braking systems
Jeffrey Vipperman	University of Pittsburgh	5/31/2009		Active noise and vibration control, smart materials and structures
Weidong Zhu	University of Maryland, Baltimore County	5/31/2010		Structural dynamics and vibration, vibration based damage detection
Jean Zu	University of Toronto, Canada	12/31/2009		Machine dynamics, nonlinear vibrations

*Summary of papers published in issues from January 1, 2003 through July 17, 2008*

	2003	2004	2005	2006	2007	2008
<b>Num. of Pages Published</b>	506	584	607	802	807	549
<b>Num. of Papers Published</b>	41	53	58	93	93	61



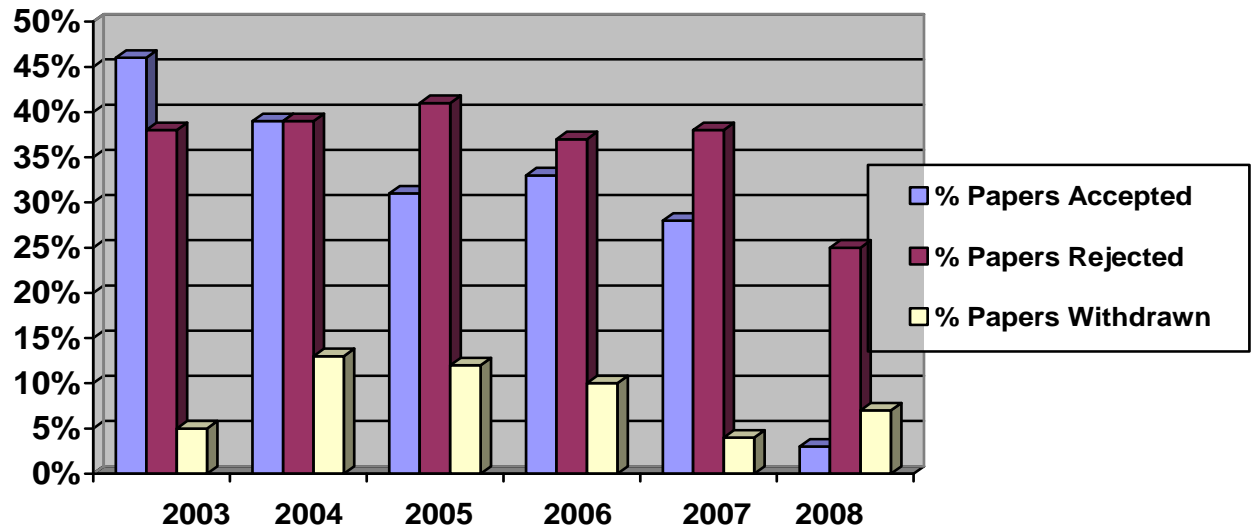
*Distributions of papers submitted each year (January 1, 2003 – July 17, 2008)\**

	2003	2004	2005	2006	2007	2008
<b>Submitted Papers</b>	112	193	215	263	241	126
<b>Accepted Papers</b>	10	22	47	85	67	4
<b>Rejected Papers</b>	42	76	88	96	91	31
<b>Withdrawn Papers</b>	6	25	25	25	30	9
<b>Removed Papers</b>	10	14	8	15	11	4

\* Note: These numbers are downloaded from the ASME web tool, which reflect the distributions of the papers *submitted* that year, but not the actual “activities” that year. The actual activities should include actions on papers submitted in prior years as well.

**Percentages of distributions of papers submitted each year\*\*  
(January 1, 2003 – July 17, 2008)**

	2003	2004	2005	2006	2007	2008
<b>% Papers Accepted/Published</b>	46%	39%	31%	33%	28%	3%
<b>% Papers Rejected</b>	38%	39%	41%	37%	38%	25%
<b>% Papers Withdrawn</b>	5%	13%	12%	10%	4%	7%



\*\* Note: These percentages are calculated based on numbers in the previous table summarizing distributions of papers submitted each year.

**ASME Journal of Computational and Nonlinear Dynamics  
Report submitted to DED Exec. Committee, July 31, 2008  
(Editor: Subhash C. Sinha, Auburn University)**

- Special Projects:
1. Special Issue (April 2008): ‘Discontinuous and Fractional Dynamical System’. Edited by Albert Luo and J. Tenreiro Machado
  2. Special issue planned on: Multidisciplinary High-performance Computational Multibody Dynamics – Edited by Dan Negrut and Olivier Bauchau. To appear early 2010

Current Status and Outlook: On track, CND Submission to Thomson Scientific for review for inclusion in Journal Citation Reports (JCR). We have not heard back from them as yet.

- Competition:
1. *Nonlinear Dynamics*, Springer Publication
  2. *International Journal of Nonlinear Mechanics*, Elsevier Publication,
  3. *Communications in Nonlinear Science and Numerical Simulation*, Elsevier Publication

Page Allocation/Paper assignment to coming issues: 400/ Papers have been assigned through January 2009 issue

Total number of Associate Editors: 23.

**Journal Statistics: (January 2006 – July 2008)**

<b>Journal Papers</b>	CND	485	
<b>Under Review</b>		146	(30%)
<b>Under Revision</b>		20	(4%)
<b>Accepted</b>		54	(11%)
<b>Rejected</b>		128	(26%)
<b>Withdrawn</b>		107	(22%)
<b>Removed</b>		30	(6%)

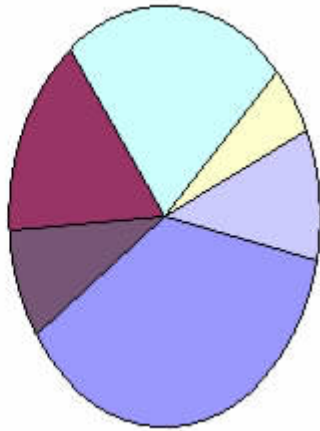
Under Review	146(30%)
Under Revision	20(4%)
Accept	54(11%)
Reject	128(26%)
Withdraw	107(22%)
Removed	30(6%)



**Journal Statistics: (Year - 2008)**

<b>Journal</b>	CND
<b>Papers</b>	72
<b>Under Review</b>	27 (38%)
<b>Under Revision</b>	7 (10%)
<b>Accepted</b>	4 (6%)
<b>Rejected</b>	17 (24%)
<b>Withdrawn</b>	11 (15%)
<b>Removed</b>	6 (8%)

Under Review	27(38%)
Under Revision	7(10%)
Accept	4(6%)
Reject	17(24%)
Withdraw	11(15%)
Removed	6(8%)



Submitted by: Subhash C. Sinha, Editor, July 31, 2008

*ASME Journal of Computing & Info Science (JCISE)  
 Annual Report to DED & CIE, July, 2008*

**Summary of Activity (January 1, 2001 – July, 2008)**

	2001	2002	2003	2004	2005	2006	2007	2008*
Submitted Papers	121	142	185	219	213	172	173	100*
Accepted Papers	40	50	55	57	42	46	48	17
Rejected Papers	35	24	62	69	67	33	22	5
Returned for Major revisions	38	54	54	63	69	53	56	11
Other <sup>s</sup>	8	14	14	30	35	39	28	21
Open Papers	0	0	0	0	0	1	9	46
Published Papers	44	41	44	43	45	44	43	32*
Number of Pages	377	340	367	388	393	418	388	314*

\* partial data for 2008 (until July 15th, 2008)

\$ includes duplicate submissions, papers rejected without review for those not within JCISE scope and withdrawn papers

**Percentages (based on total decisions made in that year)**

	y2001	y2002	y2003	y2004	y2005	y2006	y2007	y2008	Avg
% Papers Accepted	33	35.2	29.7	26.0	19.7	26.7	29.2	25	26.8
% Papers Rejected	24.8	16.9	33.5	31.5	31.4	19.2	13.4	7.35	24.6
% No decision*	<i>Balance</i>								

\* No decision means in-process, sent back for revision,...

	01	02	03	04	05	06	07	08	Avg
% Papers <b>never</b> Resubmitted after being placed in major revision category	9.7	13.9	9.6	6.7	10.5	8.2	7.7	9	9.3

**Reviewing (& publication) Time averages (Months)**

	2001	2002	2003	2004	2005	2006	2007	2008
Submission to First Review		3.86	3.88	3.29	3.86	4.03	3.8	1.51
First Review To Resubmission	3.05	2.4	1.86	2.09	1.94	1.97	1.38	1.33
Resubmission to Second Review**	2.29	2.58	3.48	3.26	3.31	5.59	3.0	1.0
Final decision to MS submission	1.76	1.00	1.13	2.81	1.96	1.29	1.30	3
MS Submission to Publication	2.19	2.67	3.67	6.19	4.72	5.46	4.58	n/a

\*\* JCISE makes a final decision after a max of 2 review cycles

**Backlog**

As of 7/14/08: 3 issues (9 months)

**Special Projects in 2007-08**

1. Identified best papers from CIE/DETC07 and invited authors to submit revised versions to JCISE; this includes DAC, DTM, DFM and CIE papers.
2. Two special issues appeared in 2007: Advances in Computer aided manufacturing (Guest ed: SK Gupta & Jon Corney) and Computational Metrology (Guest eds: Anath Fischer)
3. One special issue appeared in 2008: Engineering Informatics (E. Subrahmaniam, R. Sudarasan),
4. One special issue in the works (late 08 or 09): Haptics in Virtual Reality (Jim Oliver & T. Kesavadas)

**Associate Editors and Areas of Expertise: 2007-08**

Name	Institution	Term 1 End Date	Term 2 End Date	Area of Research
Nicholas Patrikalakis*	MIT	8/01-8/04	8/04-8/07	Comp. Geometry
Rich Crawford	UT Austin	6/02-6/05	1/06-12/08	RP, CAD
Jonathan Corney	Heroit-Watt Edinburgh UK	3/03-3/06	4/06-4/09	CAM, CAPP
Vadim Shapiro	U. Wisconsin	7/03-6/06	7/06-7/09	Solid modeling
Jan Vandenbrande	Boeing Co.	12/04-12/07	1/08 – 1/11	CAPD
Jim Oliver	Iowa State	5/05-5/08	6/08 – 6/11	Virtual Reality
Leo Joskowicz	Hebrew U, Israel	5/05-5/08	not renewed	Artificial Intelligence
John Michopoulos	ONR	5/05-5/08	6/08 – 6/11	FEA, simulation
SK Gupta	U. Maryland	1/06-12/08		CAM, features
Sean Callahan	Boeing Co.	3/06-3/09		PDM, Informatics
Kincho Law	Stanford	8/06-8/09		Informatics
Anath Fischer	Technion, Israel	1/07-12/09		CAGD, Comp metrology
Keiichi Watanuki	Saitama U, Japan	3/08 – 3/11		VR, KBS
Ian Grosse	UMass Amherst	3/08 – 3/11		Optimization; FEA
Sara McMains	UC Berkeley	7/08 – 7/ 11		Geom Modeling

\* term ended in 2007

**Impact Factors**

Journal	Publisher	2006	2007
JCISE	ASME	0.531	0.446
Adv in Eng Software	ElSevier	0.431	0.529
AIEDAM	Cambridge U Press	0.405	0.279
Computer aided Design (CAD)	ElSevier	1.446	1.22
Concurrent Eng Res & App	Sage	0.569	0.482
Int J Adv Manuf Tech	Springer	0.418	0.378
Int J CIM	Taylor & Francis	0.383	0.297
J Manuf Sys	SME	0.150	0.032
J. Intel Manuf	Springer	0.598	0.419
Manuf Science & Eng Transactions	ASME	0.536	0.595
Res Eng Design	Springer	0.667	0.517

***ASME Journal of Medical Devices***  
2008 ASME DED General Meeting

***Submitted by Editors:***

*Arthur G. Erdman, Ph.D.*  
*University of Minnesota*  
*612.625.8580*  
[\*agerdman@me.umn.edu\*](mailto:agerdman@me.umn.edu)

*Gerald E. Miller, Ph.D.*  
*Virginia Commonwealth University*  
*(804) 828-7263*  
[\*gemiller@vcu.edu\*](mailto:gemiller@vcu.edu)

***Special Projects***

*None*

***Current Status and Outlook***

*Sixth Issue nearly ready to be published.*

*The request for 3 new Associate Editors has been approved.*

<i>Danny Bluestein, PhD</i>	<i>Stony Brook University</i>
<i>Jaydev Prataprai Desai, PhD</i>	<i>University of Maryland</i>
<i>Cheng Dong, PhD</i>	<i>Pennsylvania State University</i>

*Abstracts from the 2008 Design of Medical Devices Conference were published in the June 2008 Issue.*

***Competition***

*There are no direct competitors to JMED. Some of the clinical specific publications do report device development, but not in any detailed form.*

***Associate Editors and Areas of Expertise***

Name	Institution	Term 1 End Date	Term 2 End Date	Area of Research
<i>Ted Conway</i>	<i>Virginia Commonwealth University</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Rehabilitation Engr</i>
<i>Danny Bluestein</i>	<i>Stony Brook University</i>	<i>31 Dec 10</i>	<i>NA</i>	<i>Biofluid devices including cardiovascular devices,</i>

				<i>stints and valves.</i>
<i>Jaydev Desai</i>	<i>University of Maryland</i>	<i>31 Dec 10</i>	<i>NA</i>	<i>Soft-tissue modeling for surgical stimulation, haptic feedback interfaces, laparoscopic device development for robot-assisted surgery and cell</i>
<i>Cheng Dong</i>	<i>The Pennsylvania State University</i>	<i>31 Dec 10</i>	<i>NA</i>	<i>Interface between devices and cells as well as fluid mechanics.</i>
<i>Vijay Goel</i>	<i>University of Toledo</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Spine mechanics</i>
<i>Just Herder</i>	<i>Delft University of Technology</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Interactive Mechanisms, kinematics, rehabilitation devices, novel control strategies for medical devices</i>
<i>Paul A. Iaizzo</i>	<i>University of Minnesota</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Cardiovascular devices, Neurological devices, Minimally invasive devices, Human performance/force assessment, New medical sensors/actuators and Surgical Procedures</i>
<i>Hamid M. Lankarani</i>	<i>Wichita State University</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Crashworthiness, Occupant Protection of Transportation Systems, Biodynamics, Injury Biomechanics, Multibody Dynamics, Structures, Impact Dynamics</i>
<i>M.Y. Lee</i>	<i>Chang Gung University</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>medical mechatronics, hospital automation, rehabilitation engineering, computer-aided medical modality development, technical aids design, medical</i>

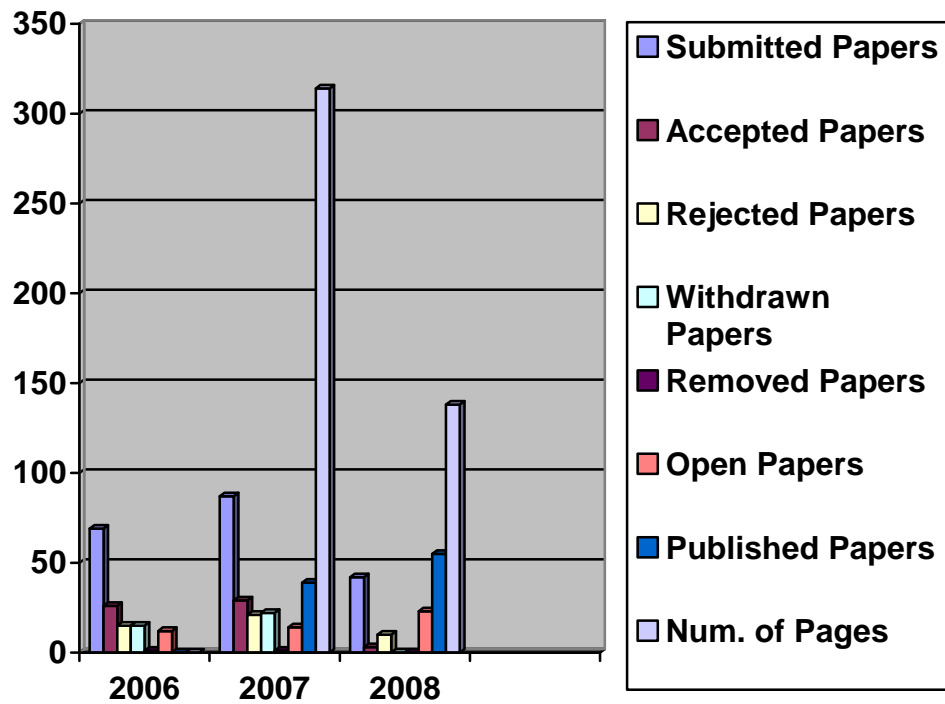
				<i>rapid prototyping, Bio-MEMS</i>
<i>Amy L. Lerner</i>	<i>University of Rochester</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Biomechanics, Orthopedic Devices</i>
<i>James Moore</i>	<i>Texas A &amp; M University</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Biofluid mechanics</i>
<i>Jahangir Rastegar</i>	<i>SUNSYB</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Surgical automation and robotics, design of novel medical devices, novel sport safety and accident prevention equipment and devices, heart-assist and circulation-assist devices, development of assist devices for rehabilitation and for the aged.</i>
<i>Erol Sancaktar</i>	<i>University of Akron</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Research interests include mechanical behavior of adhesives, polymers, composites; materials characterization; viscoelasticity; fracture mechanics; experimental and theoretical solid mechanics; design and manufacture with novel materials</i>
<i>Foster B. Stulen</i>	<i>Ethicon Endo-Surgery</i>	<i>01 Jan 09</i>	<i>NA</i>	<i>Ultrasonics, Medical instrumentation, Endoscopic/Laparoscopic devices, Medical device design processes, Medical device manufacturing, Human factors in medical devices.</i>

### *Summary of Activity*

	2006	2007	2008**
Submitted Papers	69	87	42
Accepted Papers	26	29	3
Rejected Papers	15	21	10
Withdrawn Papers	15	22	0
Removed Papers	1	1	0
Open Papers	12	14	23
Published Papers	0	39	55*
Num. of Pages	0	314	138*

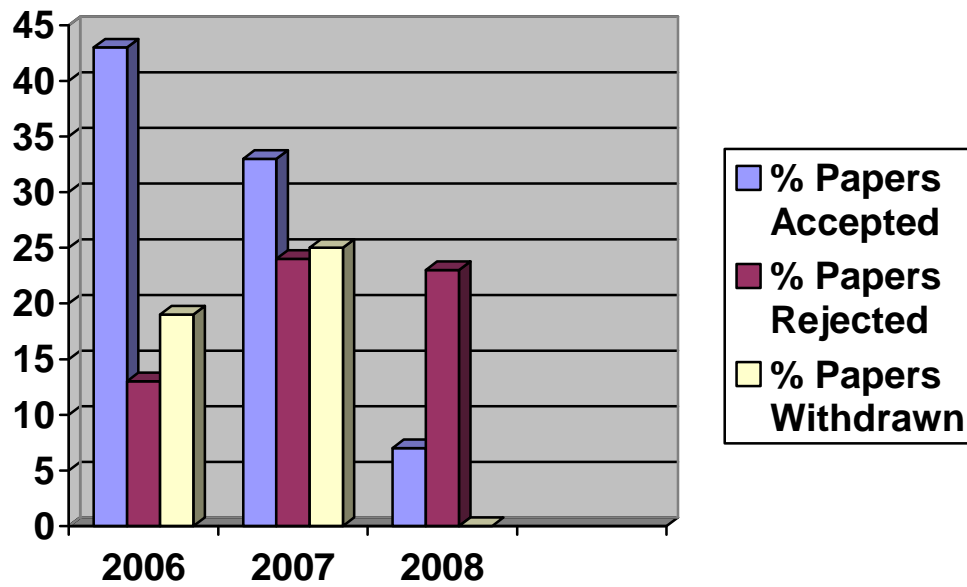
*\*Includes Abstracts from the 2008 Design of Medical Devices Conference*

*\*\*January 1 – May 31, 2008*



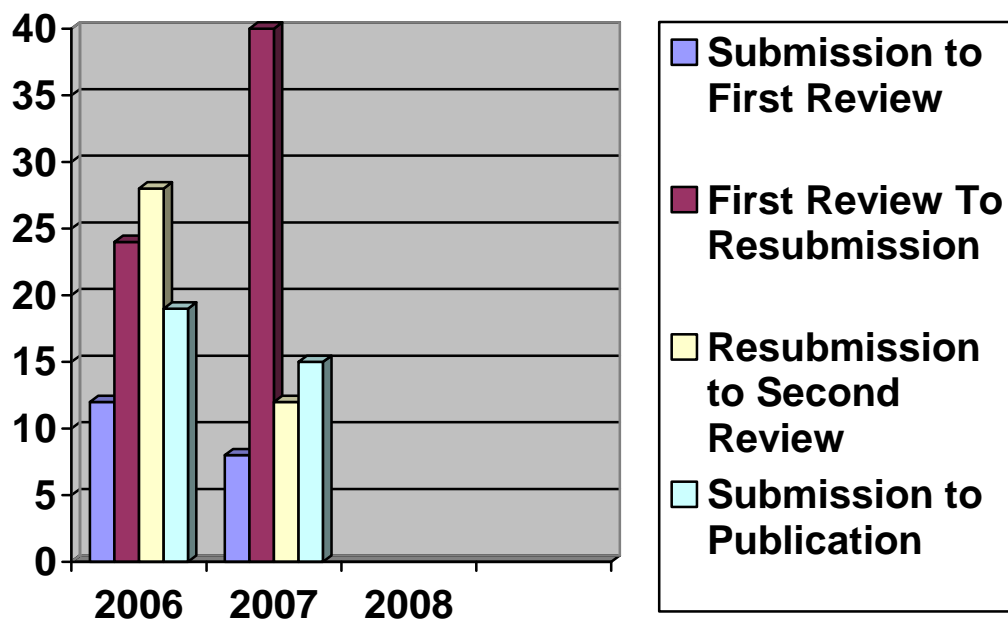
*Percentages*

	2006	2007	2008
<b>% Papers Accepted</b>	43%	33%	7%
<b>% Papers Rejected</b>	13%	24%	23%
<b>% Papers Withdrawn</b>	19%	25%	0%



***Reviewing Timing  
(Times in Days)***

	2006	2007	2008
Submission to First Review	12	8	<i>unavailable</i>
First Review To Resubmission	24	40	<i>unavailable</i>
Resubmission to Second Review	28	12	<i>unavailable</i>
Submission to Publication	19	15	<i>unavailable</i>



## UNIVERSITY OF CALIFORNIA, IRVINE

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SANTA BARBARA · SANTA CRUZ

DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING  
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## Report to the Executive Committee of the Design Division Journal of Mechanisms and Robotics

Prepared by J. Michael McCarthy  
July 28, 2008

### I. Overview

- A. Paper Review Process: November 2007 to July 2008: 107 papers submitted, 16 accepted (15% accepted)  
B. The Inaugural Issue is in production and will be mailed to attendees of the ASME Mechanisms and Robotics Conference.  
C. The Table of Contents of the Inaugural issue is as follows:

The Design of an Expressive Human-Like Socially Assistive Robot	Brian Allison, Goldie Nejat, Emmeline Kao
Whole Skin Locomotion Inspired by Amoeboid Motility Mechanisms	Dennis Hong, Mark Ingram, Derek Lahr
Analyzing Bounding and Galloping Using Simple Models	Kenneth J. Waldron, J. Estremera, Paul J. Csonka, S.P.N. Singh
Design and Movement Optimization for Biarticular Legged Robots: Theory and Experiments	Jan Babic, Bokman Lim, Damir Omrcen, Jadran Lenarcic, Frank C. Park
Design Optimization of Series-Elastic Actuators for Dynamic Robots with Articulated Legs	Simon Curran, Brian T. Knox, James P. Schmiedeler, David E. Orin
Parametric Design and Power Flow Analysis of Parallel Force/Velocity Actuators (PFVA)	Dinesh Rabindran, Delbert Tesar
Cooperative Towing with Multiple Robots	Peng Cheng, Jon Fink, Vijay Kumar, Jong-Shi Pang
A Fast and Robust Hybrid Method for the Solution of the 6-3 Stewart-Gough Platform Direct Position Analysis	Rocco Vertechy, Vincenzo Parenti-Castelli
The Kinetostatic Conditioning of Two-Limb Schoenflies Motion Generators	Jean-François Gauthier, Jorge Angeles, Scott Nokleby, Alexei Morozov
Reconfiguration of Spatial Metamorphic Mechanisms Analogous to Genome Variation	Liping Zhang, Jian S. Dai
Discretely Deformable Surface Based on Mechanical Interpolation	Jean-Philippe Jobin, Clément Gosselin
Parametric Design of a Spherical Eight-Bar Linkage based on a Spherical Parallel Manipulator	GimSong Soh, J. Michael McCarthy
Singularity Analysis of Parallel Manipulators through Static Analysis	Julien Hubert, J-P. Merlet
Singularity Analysis of an Extensible Kinematic Architecture: Assur Class N, Order N-1	David H. Myszka, Andrew P. Murray, James P. Schmiedeler
A Comparative Study of the Formulations and Benchmark Problems for the Topology Optimization of Compliant Mechanisms	Sangamesh R. Deepak, M. Dinesh, Deepak Sahu, G.K. Ananthasuresh

## II. Status of Editorial Board

A. The following Associate Editor nominations have been approved by the ASME Publications Committee. Each of their terms is three years.

- i. G. K. Ananthasuresh
- ii. Jorge Angeles
- iii. Jian Dai
- iv. Sundar Krishnamurthy
- v. Vijay Kumar
- vi. Jean Pierre Merlet
- vii. Andrew Murray
- viii. Frank Park

Many of our associate editors already have more than 10 papers assigned to them. It may be useful to add two more associate editors.

## III. Future of JMR

A. Production issues:

- i. The inaugural issue of JMR is dated February 2009. Quarterly publication will occur on the months February, May, August, November.
- ii. The page count for JMR is 600 pages, which is approximately 60 published papers. JMR is on track for 200 submissions in 2008, with 60/200 as a 30% acceptance rate.
- iii. An acceptance rate of 40% is preferred, or 80 papers, therefore an increase in page count to 800 may be appropriate.
- iv. JMR is considering relaxing the nine-page limit on research papers.

## IV. Items for Consideration by the Executive Committee

- i. Encourage (or discourage) an increase the number of associate editors to 10 or more.
- ii. Encourage (or discourage) an increase in the page count to 800.
- iii. Encourage (or discourage) a proposal for an accelerated review process.
- iv. Encourage (or discourage) relaxing the nine-page limit on research papers.

Sincerely,



J. Michael McCarthy  
Professor  
University of California, Irvine

# **Treasurer's Report**

**(A. Shabana)**

## Treasurer's report August 3<sup>th</sup>, 2008

### Ahmed Shabana Vice Chair and Treasurer

#### DED Accounts:

Account #	Account name	Balance Sept 30, 2007	Balance June 30, 2008	Comments
4-0414-XXXX	All Accounts	770,886.64	906677.99	<ul style="list-style-type: none"> <li>Includes 2007 IDETC Revenue is \$195,253 - \$18,064.44 (CIE) = \$177,1888.56.</li> <li>Transfer \$3600 to Design Education Committee for the student competition.</li> </ul>
4-0414-0000	DED Custodial	359,235.24	428455.79	

#### Award Accounts:

4-0414-5001	DAC COMM AWD	50,453.33	45,990.1	-\$1000 for Ford Best Paper Awards (2008 IDETC)?
4-0414-5002	ABBOT AWD	34,385.49	31,338	
4-0414-5003	DAVINCI AWD	11,190.87	19,261.75	
4-0414-5004	DEN. HART. AWD	46,075.20	41,961.94	
4-0414-5005	OUTSTD EDUC AW	6.68	7.58	CLOSED
4-0414-5006	MECH&ROB AWD	14,223.72	14,054.19	-\$1000 (2008 IDETC)?
4-0414-5007	MYKLESTAD AWD	23,690.13	21,550.28	
4-0414-5008	DTM COMM AWD	780.30	624.32	
4-0414-5009	N. YANG AWD	60,227.84	54,892.53	-\$1000 (2008 IDETC)?
4-0414-5053	D'ALEMBERT AWD	28,416.09	25,898.89	
4-0414-5054	LYAPUNOV AWD	28,416.09	25,867.75	
4-04145010 *	PTG award	8,187.04	7,466.47	
4-04145011 *	M&R best pap AWD	10,000.00	9,081.55	-\$1000 (2008 IDETC)?
4-04145012 *	MNS Award	2,000.00	1,779.97	

\* Established in August 2007

#### Committee Accounts:

4-0414-5032	DAC	6,982.93	20,689.57	
4-0414-5034	M&R	7,201.27	22,366.28	-\$500 (Comp. Mech Award), -\$1000 (MSC Award)?
4-0414-5035	DFM	17,164.86	19,151.89	
4-0414-5036	DTM	18,211.75	27,128.1	
4-0414-5037	RSAFP	4,251.87	5,445.87	
4-0414-5038	D-EDUC	4,097.86	6,169.76	+\$3600 from DED account for the student competition?
4-0414-5041	Vibration & Sound	12,339.74	26,416.2	
4-0414-5042	PTG	6,285.96	14,775.37	
4-0414-5048	VDGN	1,950.30	1,752.29	
4-0414-5049	F&J	2,014.71	1,836.16	
4-0414-5050	MSND	13,054.29	29,097.96	
4-0414-5060	MNS	43.08	3,617.42	-\$500 Speaker Honorarium (2008 IDETC)?

## Other Report items:

- 1- **Request from the Design Education Committee:** In light of the fact that DEC has 3 papers only this year, Phil Doepker, the chair of the committee, requested a one time allocation of \$3500. Originally, a request of \$9000/year for three years was made (See Attachment I). Phil mentioned that DEC has about \$5000 in the custodial account and the committee has other expenses associated with the conference this year. The DED Executive Committee voted in July 2008 to support this request.
- 2- **Triodyne Safety Award Accounts:** On March 6, 2005, Design Engineering Division approved the elevation of its Triodyne Award to society level. The balance of the accounts of the Triodyne Safety Award (Ralph Bernet-Carl Uzgiris Product Design Safety Award) given for outstanding contributions to teaching or research in the safety aspects of mechanical design, was approximately \$65K (more than the \$40K required for the elevation to a society award) in 2005.
- 3- **Newsletter Cost:** The cost of producing the newsletter this year is \$11506.34 (\$525 for design and produce a digital file for the web; and \$10,981.34 for printing).
- 4- **Unresolved Issues**

Issue	Comments	Status/ actions
Revenue from IDETC 2006 (Philadelphia) was projected to be about \$40K (see Attachment II).	It seems that income and expenses were deposited in the custodial account. It is not clear how much was exactly the revenue. Is CIE's portion paid? Kazem has not confirmed that money has been allocated to the committee accounts.	-Email sent by Kazem to Ken Hunt, Elaine Houser in June 2007. No response. Kazem reported the distribution. - Kazem Asked Erin Dolan to provide info and background (March 7 <sup>th</sup> ). Erin requested the distribution report from ASME accounting. -Mike Weis (ASME Deputy Exec Director and CFO) promised Kazem to look into this. -Erin confirmed on July 28, 2008 that the revenue was allocated to DED account, but not sure that the distribution has been made to the committee accounts.
Revenue from IDETC 2007 is projected to be about		Erin is to provide paper count.

\$200K to be yet distributed (see Attachment II).		Kazem+ Judy to decide distribution (see Attachment I).
IMECE 2007 (Seattle) revenues are not calculated yet.		Follow up with Richard Ulvila to see when it is done.
Revenues of NMW 2007 (\$1550.79) have been deposited into DED custodial account?	This is the last year DED will receive revenue sharing from NMW.	Kazem has not been able to confirm yet. Mike Weis (ASME Deputy Exec Director and CFO) promised Kazem to look into this.
NMW 2006 revenues (\$4,857.95) deposited?	It might have been as part of other revenue items for FY 2007? It is not clear.	e-mails sent by Judy and Kazem. Kazem was not able to confirm. <b>NEED HELP FROM ACCOUNTING.</b>  Mike Weis (ASME Deputy Exec Director and CFO) promised Kazem to look into this.
IMECE 2006 (Chicago) revenues are \$7,475.55 and are deposited into DED custodial account?		Kazem was not able to confirm. <b>NEED HELP FROM ACCOUNTING.</b>  Mike Weis (ASME Deputy Exec Director and CFO) promised Kazem to look into this.
ASME asked members to make donations to their divisions. Few months ago, a sheet was distributed that showed that DED members donated more than \$8K.	No information was provided to Judy regarding these donations.	ASME Accounting Department has been contacted to clarify this issue.

Answers to most of these unresolved issues were provided by Burt Dicht on July 30, 2008 (see Attachment II).

**ATTACHMENT I**

<b>2006 Summary</b>		
Total Revenue: \$216,266		
Total Expenses: \$176,369		
Surplus: \$39,897		
	Papers	
Total Revenue		\$ 39,897.00
DAC = 159 papers (27%)	159	\$ 5,078.96
MR = 153 papers (26%)	153	\$ 4,887.30
CIE = 122 papers (21%)	122	\$ 3,897.06
DTM = 87 papers (15%) [ adjust by 1.5 factor]	130.5	\$ 4,168.58
DFMLC = 33 papers (6%)	33	\$ 1,054.12
DEC = 27 papers (5%)	27	\$ 862.47
Total	624.5	
CIE Division	122	\$ 7,794.13
IDETC	502.5	\$ 32,102.87
Design Custodial Account		\$ 16,051.44
Total pushdown to DED committees		\$ 16,051.44

<b>2007 Summary</b>			
Total Revenue: \$592,540			
Total Expenses: \$397,287			
Surplus: \$195,253			
			\$ 195,253.00
TOTAL PAPERS: 1216			
VIB: 255 (20.9%)		255	\$ 20,027.96
CIE: 115 (9.5%)		115	
MESA: 41 (3.3%)		41	\$ 3,220.18
MSNDC: 221 (18.2%)		221	\$ 17,357.57
DAC: 125 (10.3%)		125	\$ 9,817.63
PTG: 116 (9.5%)		116	\$ 9,110.76
RSAFP: 20 (1.6%)		20	\$ 1,570.82
MECH: 139 (11.4%)		139	\$ 10,917.20
MNS: 46 (3.8%)		46	\$ 3,612.89
DEC: 21 (1.7%)		21	\$ 1,649.36
DTM: 54 (4.4%)		81	\$ 6,361.82
DFMLC: 32 (2.6%)		32	\$ 2,513.31
AVTT: 31 (2.5%)		31	\$ 2,434.77
Total conference papers		1243	
CIE Division		115	\$ 18,064.44
IDETC		1128	\$ 177,188.56
Design Custodial Account			\$ 88,594.28
Total pushdown to DED committees			\$ 88,594.28

## ATTACHMENT II

On July 30, 2008, Burt Dicht wrote:

In response to the DED request for specific financial transactions:

1. IDETC 2006: Revenue from IDETC 2006 (Philadelphia) was projected to be about \$40K. It seems that income and expenses were deposited in the custodial account. It is not clear how much was exactly the revenue. Is CIEs portion paid?. An Email was sent by Kazem to Ken Hunt and Elaine Houser in June 2007, but there was no response.

A gross revenue transfer of \$215,352.75 was made in January 2007 to account 4-04140000-4790, and gross expense transfers totaling \$175,620.43 were made in January and February 2007 to account 4-04140000-8099, netting to \$39,732.32. The CIE portion for both September 2006 and September 2007 were recently received from Events Management, and will be booked by the end of this week. The amounts going to CIE are, respectively, \$7,794.13 and \$18,064.44. They have been entered in June 2008 activity and will be reflected in the year-end closing statements/numbers.

2. IMECE 2006: It has not been confirmed whether or not the IMECE 2006 (Chicago) revenues of \$7,475.55 were deposited into DED custodial account.

This amount was transferred to DED account 4-04140000-4790 in April 2007.

3. IMECE 2007: IMECE 2007 (Seattle) revenue share has not been forwarded to DED.

The amount of \$5,771 was transferred to DED account 4-04140000-4790 in May 2008.

4. NMW 2006: It has not been confirmed whether or not the NMW 2006 revenues (\$4,857.95) were deposited in the DED custodial account.

The amount of \$4,844 was deposited to DED account 4-04140000-3903 in June 2006.

5. NMW 2007: It is not clear whether or not the revenues of NMW 2007 (\$1550.79) have been deposited into the DED custodial account.

This amount was deposited to DED account 4-04140000-3903 in January 2008.

6. Members Donations: ASME asked members to make donations to their divisions. Few months ago, a sheet was distributed that showed that DED members donated more than \$8K. DED has not received information about these donations and it is not clear whether or not the donations are deposited in DED account. Exact figure of these donations will be very much appreciated.

The amount of \$10,431 was transferred to DED account 4-04140000-3613 in June 2008.

# **IDETC Report**

**(H. Hamidzadeh)**

**IDETC REPORT**  
**DED Executive Committee Meeting**  
**Brooklyn Bridge Marriot, New York**  
**August 2, 2008**

**STATUS OF IDETC CONFERENCES**

Attached, please find the progress reports for the 2008, 2009, 2010 IDETC/CIEs respectively. In regards to the 2008 IDETC/CIE event, the organizing committee has been conducting monthly conference calls with participating conferences and the conferences are following the set schedule and deliverables. The other two upcoming conferences are on track with their planning and their required processes.

The Conference Chair for the 2011 will be Nader Jallili; he is expected to submit his proposal in by end of September. In regard to the IDETC 2012, only one person has indicated his interest in developing a proposal for organizing this event. On Wednesday August 6, there will be a session on “Future IDETC/CIE Conference Leadership Training” at 11:00 AM. IDETC executive member and conference chairs for the 2008 and 2009 IDETC are presenting informative discussion for the attendees. It is expected to receive more interest from the people who are attending this session.

**ASME CONFERENCE GUIDELINE**

A new document on “ASME Conference Guideline” listing the step-by-step process and the required document and forms has been developed. This document will be the main resource for the future conference chairs. The guideline will has been available to present IDETC chairs and will be used to train potential future IDETC Chairs.

**FUTURE CONFERENCE REQUIREMENTS**

The future IDETC Chairs is expected to complete the CA1 form before making hotel contract. The CA1 form must be completed at least two years prior to the commencing date of the conference.

**EVALUATION OF IDETC EVENTS**

The IDETC Executive would like to recommend that the success of all IDETC conferences be assessed and documented by the Conference advisory board members for the DED database.

Respectfully Submitted

Hamid R. Hamidzadeh  
IDETC Executive Member

# **Standing/Special Committee Reports**

**ASME Design Engineering Division General Committee Meeting**  
**August 5, 2008**

**Constitution and Bylaws Committee Report**  
**H. Lipkin**

OLD BUSINESS

- 1) The current chair, Harvey Lipkin, has served three consecutive years ending 30 June 2008 and cannot be reappointed to the committee according to CBOP Part II, Art. II, Sec. 1, 3(a),

"The Constitution and Bylaws Committee shall consist of one or more members each of whom shall serve not more than three consecutive years on the committee."

As a further point of information on committee reappointments according to the CBOP, members of the Standing, Technical, and Special Committees, other than the Constitution and Bylaws Committee, have no reappointment limitations to those committees.

NEW BUSINESS

- 1) A new draft of the CBOP with markups has been initiated with significant development. The changes outlined in last year's report have been incorporated. Sections requiring further revision include:
  - a. Part I, Art. V, Par. 3, Representatives to the Systems and Design Technical Group Operating Board
  - b. Part II, Art. I, Sec. 1, Par. 2, Election Procedures. New voting procedure need to be clarified and simplified.
  - c. Part II, Art. II, Sec. 5, Finance Committee. Needs to reflect the current practices of the finance committee.

The past chair will ensure a smooth transition with the incoming chair so that all outstanding issues are addressed.

**NDEC/NMW 2008 Report for the DED**

July 24, 2008

**National Manufacturing Week 2008**Prepared by: **Zissimos P. Mourelatos, Oakland University**

Canon Communications LLC sponsored the NMW Technical Conference in 2007 and also sponsors it in 2008. Since 2007, the Conference is held in late September in Rosemont, IL. In all previous years up to 2007, the ASME divisions, including Design Engineering Division, participated in NMW and the sponsoring company distributed revenues to ASME based on organized sessions and attendance.

The number of ASME sessions in NMW 2007 and the attendance dropped dramatically compared with NMW 2006 and previous years. As a result, Canon proposed to change the existing NMW agreement with ASME starting in 2008. According to the new agreement, the ASME ME magazine would become the primary contact and there would be no revenue share with participating divisions. ASME agrees to:

- list the NMW event in calendar of events for ASME.org and ASME solutions,
- post the NMW event on ASME Communities of Practice Page,
- send NMW Call for Speakers email to its members,

and NMW agrees to:

- distribute ME magazine in the publications bins,
- provide ASME with a complimentary 20x40 sq. ft. booth located in the National Design Engineering Show area,
- have the opportunity to operate a bookstore in the conference area, and
- list ASME Logo and link on all appropriate materials and web site.

ASME has accepted this new agreement with Canon starting in 2008. As a result, the existing NMW contract is over. Canon will not provide financial reimbursement for services, papers or sessions to ASME, and divisions will not provide programming. Any new agreement with NMW will be managed by John Falcioni representing ASME Publishing.

Because of these changes and the lack of financial return to ASME, the DED Executive Committee decided in its March 2008 meeting, to discontinue DED participation in the NMW, and also discontinue the NDEC Chair position in the DED Executive Committee.

Respectfully,

Zissimos P. Mourelatos,  
NDEC Chair

## Honors & Awards Committee

J. K. Davidson, Outgoing Chair

G. M. Fadel, Incoming Chair

Design Engineering Division

ASME

### Report for meeting of August 5, 2008

New York City, NY

1. This past July 1, the chair of the H&A transitioned from Joe Davidson to Georges Fadel.
2. According to Dr. Davidson, the various H&A Committee were very responsive. This year, 2008, the committees that judged the awards were:

Machine Design Award					
Chair: Joe Davidson	Alan Parkinson	Crispin Hales	Arthur Erdman	Jeffrey Ge	Gordon Kirk
outgoing	2003-06-2009	2004-07-2010	2004-07-2010	2004-07-2010	2005-2008
H&A	DAC				TCVS
Due dates:	Standing award	Due to H&A	Jan 1	Due ASME	3/1

Ruth & Joel Spira Outstanding Educator Award					
6 members (3 H&A, 3 EC) serve a maximum of 2 x 3 years					
Chair: Joe Davidson	Clive Dym	Arthur Erdman	Gul Kremer	Alan Parkinson	Alexander Slocum
Outgoing	2004-07-2010	2004-07-2010	2008-2011	2003-06-2009	2004-07-2010
H&A	EC	H&A	EC	H&A	EC
Due Dates:	Standing Award	Due to H&A Jan 1			

3. The job of the H&A Committee is to select qualified candidates who meet the qualifications for the three awards. This year there were nominations for:

Machine Design Award – Selection is: Alexander Slocum

Spira Design Educator Award – Selection is Kosuke Ishii

There were no nominations for the daVinci Award. There were strong attempts to encourage nominations for this award, but they failed.

For the Robert E. Abbot Award, two names were proposed and the committee consisting of Joe Davidson, Hamid Hamidzadeh and Ahmed Shabana selected both for the award. They are Krish Gupta and Ken Waldron.

Next year's committees are:

DED H&A					
Chair: Georges Fadel	Alan Parkinson	Crispin Hales	Arthur Erdman	Jeffrey Ge	Gordon Kirk
2008-2011	2003-06-2009	2004-07-2010	2004-07-2010	2004-07-2010	2005-2008
H&A	DAC				TCVS

**SOCIETY AWARDS:****Machine Design Award**

6 members serve maximum 2 x 3 year terms - Inform ASME by 03/01 on renewals for COH approval					
Chair: Georges Fadel	Alan Parkinson	Crispin Hales	Arthur Erdman	Jeffrey Ge	Gordon Kirk
2008-2011	2003-06-2009	2004-07-2010	2004-07-2010	2004-07-2010	2005-2008
H&A	DAC				TCVS
Due dates:	Standing	Due to H&A Jan 1		Due ASME 3/1	

**Ruth & Joel Spira Outstanding Educator Award**

6 members (3 H&A, 3 EC) serve a maximum of 2 x 3 years					
Chair: Georges Fadel	Clive Dym	Arthur Erdman	Gul Kremer	Alan Parkinson	Alexander Slocum
2008-2011	2004-07-2010	2004-07-2010	2008-2011	2003-06-2009	2004-07-2010
H&A	EC	H&A	EC	H&A	EC
Due dates:		Jan 1			

**ASME Barnett-Uzgis Product Design Safety Award**

Chair: Georges Fadel	Alan Parkinson	Crispin Hales	Arthur Erdman	Jeffrey Ge	Gordon Kirk
2008-2011	2003-06-2009	2004-07-2010	2004-07-2010	2004-07-2010	2005-2008
H&A	DAC				TCVS
Due date:		Jan 1			

**DIVISION AWARDS****Leonardo Da Vinci Award**

Chair: Georges Fadel	Alan Parkinson	Crispin Hales	Arthur Erdman	Jeffrey Ge	Gordon Kirk
2008-2011	2003-06-2009	2004-07-2010	2004-07-2010	2004-07-2010	2005-2008
H&A	DAC				TCVS
Due date		Jan 1			

Served the Design Division beyond the Call for Duty		Glass sculpture \$500
Committee formed at the request of t Chair in consultator With the executive committee		
2008-2011		

4. We need more qualified nominations for all the awards, so we are hereby soliciting nominations. Nomination packets are carried over automatically for 3 years and then removed from consideration, unless renewed by the nominator. Qualifications for each award are listed on the DED website, along with the past recipients. Our Division website leads to the nomination materials (resume of candidate, a simple form for the nominator, and 5 letters of support). (Shayne Gooch has done a splendid job of organizing the DED website, including the

H&A portion.) We hope that many of you will identify a worthy candidate for one of the awards and then undertake the nomination. Attached is a list of the awards that are handled by the DE Division. Also included in the list are the Technical Committee Awards that are typically presented at the IDETC's.

5. The Ralph Barnett-Carl Uzgiris Product Design Safety Award was proposed and elevated to a society award. It is now the ASME Barnett-Uzgiris Product Design Safety Award.

J. K. Davidson, Outgoing Chair  
G. M. Fadel, Incoming Chair  
DED Honors & Awards Committee  
July 25, 2008

**ASME Design Engineering Division General Committee Meeting  
August 5, 2008**

**US Council for the Theory of Machines and Mechanisms (USToMM)  
H. Lipkin**

OLD BUSINESS

- 1) The final report of 12th World Congress in Mechanism and Machine Science was held in Besançon, France during June 17-21, 2007 is now available at <http://130.15.85.212/documents/MinutesIFTToMM11thGeneralAssemblyBesancon2007.pdf>

NEW BUSINESS

- 1) Proceedings of the 12th World Congress in Mechanism and Machine Science, Besançon, France, June 17-21, 2007 are now available online at <http://130.15.85.212/proceedings/WorldCongress07/index.htm>
- 2) A clarification with Elsevier Publishing allows individual subscriptions to Mechanism and Machine Theory Journal and IFToMM even if her/his university or academic/technical institution has not arranged an institutional subscription (which is the common rule to have an individual subscription rate). The individual must be affiliated with a member organization of IFToMM. Through USToMM this applies to ASME members of the Design Engineering Division.
- 3) We briefly note the passing of the following members:
  - a. Professor Burton Paul passed away on October 19<sup>th</sup> 2007 at the age of 76. He made important contributions to the study of non-counterformal contacts between rigid bodies applied in the mechanics and failure mechanisms in rail wheel interactions. He authored the widely used text *Kinematics and Dynamics of Planar Machinery*. [http://130.15.85.212/annts/documents/Paul\\_Memoriain.pdf](http://130.15.85.212/annts/documents/Paul_Memoriain.pdf)
  - b. IFToMM honorary member Academician Konstantin Frolov from Russia passed away on November 18<sup>th</sup> 2007 at the age of 76. He was instrumental in the early success of the organization and by bridging the political chasm between western and the Soviet block countries through international collaboration. <http://130.15.85.212/annts/documents/frolovnew.pdf>
  - c. Professor Andrew E. Samuel passed away on December 3, 2007 at the age of 73. He was an active member and past chair of the Australian National Committee for the Theory of Machines. He was active in many areas of design and authored four textbooks on engineering design and forensic engineering. [http://130.15.85.212/annts/documents/aes\\_obituary.pdf](http://130.15.85.212/annts/documents/aes_obituary.pdf)

**Government Relations Report**  
**ASME Design Engineering Division**  
September 2007 to July, 2008  
Farhad Tahmasebi

**Global Warming**

- The Carbon Disclosure Project (CDP), a collaboration of over 315 institutional investors with assets under management of more than \$41 trillion, annually polls the world's largest publicly-owned companies on the risks and opportunities posed to them by climate change. The goal of the annual survey is to inform investors of the risks and opportunities presented by climate change in the corporate world. For more background on CDP, visit: <http://www.cdproject.net/cdpbackground.asp>.
- The House Science and Technology Subcommittee on Investigations and Oversight recently held a hearing on "The National Security Implications of Climate Change." The Committee discussed a recent report released by The CNA Corporation entitled "National Security and the Threat of Climate Change," examined current thinking on the nature and magnitude of the threats that global warming may present to national security, and explored the ways in which climate-related security threats can be predicted, forestalled, mitigated, or remedied.
- A report from the International Energy Agency (IEA) released on November 7th, finds that China's and India's increasing energy consumption will affect global oil trade, raise prices and release more greenhouse gases over the next century if that consumption is not curbed. According to "The World Energy Outlook 2007- China and India Insights," "the consequences for China, India, the OECD (Organization for Economic Cooperation and Development) and the rest of the world of unfettered growth in global energy demand are alarming. If governments around the world stick with current policies, the world's energy needs would be well over 50 percent higher in 2030 than today. China and India together account for 45 percent of the increase in demand in this scenario."
- James Hansen made several speeches on 6/24/2008 on the anniversary of testimony in front of Congress 20 years ago. This culminated in another Congressional testimony where Hansen called for drastic action to end the use of coal by 2030. In his column for the [Washington Post](#) (6/24/08, A3, 696K), Dana Milbank writes on James Hansen's, director of NASA's Goddard Institute for Space Sciences, statements about global warming on the 20th anniversary of his testimony to Congress. According to the Milbank, "As he undertook a commemorative, I-told-you-so tour...he made a point of saying the biggest worry isn't what we put in our cars, but what we put in our power plants," and said in one speech, "Our actions to deal with climate change over the past 20 years have really been minuscule and we're really running out of time." Hansen stated that a better tactic would be to phase out burning coal by 2030 and capture carbon from power plants. "Hansen's stature was raised substantially -- if accidentally -- when Bush administration political appointees a few years ago tried to silence him," which has made Hansen "untouchable." Milbank writes that Hansen "has embraced his role as polemicist as well, accusing fossil-fuel interests of 'crimes against humanity' and demanding that politicians 'have the guts' to embrace a carbon tax."

**Alternative Fuels – Energy Efficiency**

- Recently the House Committee on Science and Technology Subcommittee on Energy and Environment convened a hearing on "The Benefits and Challenges of Producing Liquid Fuel from Coal: The Role for Federal Research." The hearing examined the existing and developmental technologies for coals-to-liquids (CTL), the possibility of using CTL in the transportation sector and for electricity generation, and the long-term feasibility of their use.
- A recent report by the North American Electric Reliability Corporation (NERC) projects that electricity usage in the U.S. will grow more than twice as fast as committed resources over the next 10 years. The "2007 Long-Term Reliability Assessment" warns that unless additional resources are brought into service, some areas could fall below target capacity within the next two to three years.
- ASME recently joined with the United Engineering Foundation (UEF), American Institute of Chemical Engineers (AIChE), American Society of Civil Engineers (ASCE), American Institute of Mining, Metallurgical and Petroleum Engineers (AIME) and IEEE-USA to cosponsor a Congressional briefing entitled "Green Gasoline: an Alternative Alternate Fuel."

- The House of Representatives passed two bills which originated in the House Science and Technology Committee: H.R. 3776, the "Energy Storage Technology Advancement Act of 2007;" and, H.R. 3775, the "Industrial Energy Efficiency Research and Development Act of 2007."
- Through its Entrepreneur in Residence (EIR) Program, DOE is seeking venture capital sponsored entrepreneurs to work in three of its National Laboratories to develop plans to commercialize new clean energy technologies. DOE would provide up to \$300,000 to support the program, splitting the funding among three labs: National Renewable Energy Laboratory in Golden, CO; Oak Ridge National Laboratory in Oak Ridge, TN; and, Sandia National Laboratory in Albuquerque, NM.
- The "Energy Independence and Security Act of 2007" (H.R. 6), which was approved by the Senate on a vote of 86-8 and by the House by a margin of 314-100, has been signed into law by the President. House Speaker Nancy Pelosi (D-CA) saluted the passage of the bill by saying in part, "With one stroke of the pen, America can be on a path to cut greenhouse gas emissions by about 25 percent of what we need to do to save the planet. With one stroke of the pen, we set America on a path to produce \$22 billion in annual savings to our consumers. With one stroke of the pen, we take America down a path to create hundreds of thousands of new green jobs and train 3 million workers for new green jobs."

### **Innovation and Competitiveness**

- As Congress continues to consider funding levels for the FY 2008 budget which will take effect on October 1st, the Bush Administration has announced its research and development (R&D) priorities for FY 2009. The seven-page memorandum issued jointly by the Office of Science and Technology Policy Director John Marburger and Office of Management and Budget Acting Director Stephen McMillin calls for "improving management and performance to maintain excellence and leadership in science and technology."
- A recent poll commissioned by the Project on Emerging Nanotechnologies ([www.nanotechproject.org](http://www.nanotechproject.org)) at the Woodrow Wilson International Center for Scholars and conducted by the independent research firm Peter D. Hart Research found that Americans' awareness of nanotechnology is low and that Americans prefer that government, not industry, oversee and manage the risks associated with advances in science and technology. Only six percent of Americans, 1 in 16, say that they have "heard a lot" about nanotechnology.
- A United Kingdom (UK) coalition, led by the British Royal Society, has issued its own guidelines for the safe development of nano-materials. The "Responsible Nano Code" includes seven principles to help companies "ask the right questions" to address the environmental and health risks that the manufacturing of nano-materials may pose to their workers and customers.
- A new report released by the National Research Council on October 30th draws some sober conclusions regarding the state of American competitiveness. Entitled "Benchmarking the Competitiveness of the United States in Mechanical Engineering Basic Research," the report states that although America remains among the global leaders in mechanical engineering research, their status is being aggressively challenged by other nations.
- The House Science and Technology Subcommittee on Research and Science Education convened a hearing to determine if the grants awarded by the National Nanotechnology Initiative (NNI) are providing economic and public benefit. NNI is a \$1.35 billion research effort supported by 13 federal agencies. The Subcommittee plans to develop legislation to reauthorize the NNI during the current session.
- The House of Representatives overwhelmingly passed H.R. 5819, a bill to reauthorize the Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program, by a vote of 368 to 43. Together, SBIR and STTR comprise the largest source of federal support for private-sector technological innovation, providing over \$2.3 billion annually to small, high-tech entrepreneurial companies that are creating revolutionary new technologies. SBIR provides funds to small high-tech firms conducting innovative research that is relevant to federal agencies' missions and may have significant commercialization potential. STTR provides similar funding for small businesses that are working cooperatively with universities or nonprofit research institutions.

### **NSF (National Science Foundation)**

- NSF hosted a summit for math and science faculty from institutions around the nation to share strategies for promoting student success in science, technology, engineering and mathematics (STEM)

from the elementary grades through higher education. Among the topics covered were approaches to working with teachers to deepen their scientific and mathematical content knowledge, so that they can be increasingly effective in working with their K-12 students, as well as providing incentives to STEM faculty for the work they do with K-12 teachers.

- A study funded by NSF and conducted by Michigan State University found that middle school mathematics teachers in the U.S. are not as well prepared to teach this subject as are their counterparts in five other countries. "Mathematics Teaching in the 21st Century" cited inadequate teacher training and deficiencies in mathematics curricula as reasons contributing to lower scores for American middle-school students.
- NSF commemorated the birthday of Martin Luther King, Jr. by launching the Advancing Robotics Technology for Societal Impact (ARTSI) Alliance, an effort to encourage African-American students at both the K-12 and college levels to pursue degrees and careers in computer science and robotics. ARTSI is funded by a three-year, \$2 million grant from NSF.
- ASME president Sam Y. Zamrik, Ph.D., testified before the House Committee on Appropriations Subcommittee on Commerce, Justice, Science and Related Agencies calling on Congress to fund the NSF at a minimum of \$6.85 billion, the level proposed in the Administration's FY 2009 budget request. Timothy Wei, Ph.D., Professor and Head of the Mechanical, Aerospace, and Nuclear Engineering Department at Rensselaer Polytechnic Institute accompanied Zamrik during his testimony. Dr. Wei is the Chair of the ASME Board on Government Relations (BGR) Public Policy Committee, and the former chair of the ASME BGR NSF task force

#### **NIST (National Institute of Standards and Technology)**

- NIST announced 56 new awards for innovative industrial research and development projects under the agency's Advanced Technology Program (ATP).
- "In case of fire use the stairs, not the elevator" appears on signs posted in elevator lobbies throughout the United States. In the aftermath of Sept. 11, 2001, however, experts are starting to reconsider tall building evacuation strategies. Earlier this year, NIST recommended code changes to increase elevator use in high-rise emergencies in the report of its three-year investigation of the World Trade Center (WTC) collapses.
- Efforts to create a "hydrogen economy" to reduce U.S. oil imports will get a boost from a new 750-square-foot laboratory, located on the site of a former hydrogen test facility at the NIST campus in Boulder, Colorado. NIST has begun building a new laboratory that will evaluate tests, materials, mechanical properties and standards for hydrogen pipelines. This facility is expected to be operational by mid-2008.
- NIST is seeking public comment on its proposed regulations for operating the Technology Innovation Program (TIP). The TIP was established as part of the America COMPETES Act to "support, promote, and accelerate innovation in the United States through high-risk, high-reward research in areas of critical national need."

#### **NASA (National Aeronautics and Space Administration)**

- NASA will conduct the Beam Power Challenge and Tether Challenge, two of its seven Centennial Challenges, at the 2007 Elevator Games in Salt Lake City on October 19-21, 2007. Centennial Challenges, an element of NASA's Innovative Partnerships Program, promotes technical innovation through prize competitions to make revolutionary advances to support NASA's mission, including the return to the moon and journey to Mars.
- NASA has teamed with the Mad Science Group of Montreal, Canada in an effort to encourage more students to pursue careers in science, technology, engineering and math (STEM). Through the Space Act Agreement, the two organizations have launched the Academy of Future Space Explorers.
- NASA has awarded Phase 2 contracts to 120 small high technology firms in 27 states under the Small Business Innovation Research (SBIR) program. The total value of the selected projects is nearly \$72 million.
- The Senate Committee on Commerce, Science and Transportation Subcommittee on Space, Aeronautics, and Related Sciences recently held a hearing to address various issues facing the U.S. space program after the retirement of the Space Shuttle. Subcommittee Chairman Bill Nelson (D-FL) opened the hearing by saying, "We are all aware that NASA is being asked to do much with too little. The President

has not provided the funding necessary to implement his own Vision for Space Exploration. However, we must plan responsibly for the future, protecting and utilizing our current assets while developing new capabilities for the next generation of explorers."

- The Fundamental Aeronautics Program of the Aeronautics Research Mission Directorate (ARMD) at the headquarters of NASA announced a new aeronautics competition for high school and college students for the 2007-2008 academic year. Students have been asked to think about a revolutionary concept in aviation, perhaps a vehicle that could become a next generation DC-3-type of transport vehicle.
- The National Research Council will soon release a report entitled, "NASA's Elementary and Secondary Education Program: Review and Critique." Although this report acknowledges that NASA is uniquely positioned to interest students in science, technology, engineering, and mathematics (STEM) subject areas, it finds that the elementary and secondary education programs of NASA's Office of Education are not as effective as they could be. Among the report's recommendations are encouraging NASA to partner with outside experts in education, as well as restructuring of some of its existing programs to capitalize on the agency's own expertise and on new technologies.
- In a show of bipartisan support, Republican Sen. Kay Bailey Hutchison and Democratic Rep. Nick Lampson said, "during a visit by the two lawmakers and NASA Administrator Michael Griffin to a Lockheed Martin test lab for Orion development near the Johnson Space Center, that "they will try again this year to get an additional \$2 billion in NASA funding to help close a five-year gap between the space shuttle's retirement and the maiden voyage of the Orion moon ship." They "think the bill will pass both houses this year after the reality of the shuttle's retirement in 2010 sinks in.
- The Senate Commerce, Justice, Science (CJS) Appropriations subcommittee approved a fiscal 2009 CJS spending bill June 19 that includes \$17.8 billion for NASA. The NASA topline is \$505 million above the agency's FY '08 level and \$200 million above the Bush administration's request. It includes \$3 billion for space shuttle operations; \$2 billion for the space station; \$2.9 billion for development of the next-generation Orion and Ares vehicles; \$4.5 billion for science; and \$500 million for aeronautics. CJS subcommittee Chair Barbara Mikulski (D-Md.) hailed the committee's approval of the bill and vowed to re-introduce her perennial amendment to get an additional \$1 billion added for NASA to help it recover from the lingering effects of the Columbia disaster. It will be her third attempt to pass the amendment. The CJS bill now must go to the floor of the full Senate for a vote, which has yet to be scheduled.

#### **NOAA (National Oceanic and Atmospheric Administration)**

- The Senate Commerce, Justice, Science (CJS) Appropriations subcommittee approved a fiscal 2009 CJS spending bill June 19 that includes more than \$4 billion for NOAA. NOAA's budget includes \$556 million for the National Ocean Service; \$953 million for the National Weather Service; \$778 million for the National Marine Fisheries Service; \$1.1 billion for satellite programs; and \$421 million for research.

#### **DOE (Department of Energy)**

- DOE has awarded \$100,000 to 38 universities to enhance nuclear research and development (R&D). The one-time awards are part of the Administration's Global Nuclear Energy Partnership (GNEP) program.
- The House Science and Technology Subcommittee on Energy and Environment held a hearing to examine ways to improve the energy efficiency and environmental performance of the nation's most energy-intensive manufacturing processes. The hearing focused specifically on the DOE's Industrial Technologies Program (ITP), which leads the federal government's on going effort to improve energy efficiency and environmental performance of the nation's industrial sector in partnership with industry and universities. ITP is considered to be one of DOE's most effective programs at transferring technologies to the marketplace.
- DOE has recently published an update of its 2003 report entitled, "Facilities for the Future of Science: A Twenty-Year Outlook." The initial publication was the first long-range facilities plan prioritized across disciplines issued by a government science funding agency anywhere in the world. The 48-page original report is available at [http://www.science.doe.gov/Scientific\\_User\\_Facilities/History/20-Year-Outlook-screen.pdf](http://www.science.doe.gov/Scientific_User_Facilities/History/20-Year-Outlook-screen.pdf).
- DOE has announced that it will invest more than \$21 million in next generation photovoltaic (PV) technology to accelerate the widespread use of advanced solar power. It has selected 25 projects as part of its Funding Opportunity Announcement called the "Next Generation Photovoltaic Devices &

Processes" project. Part of the Administration's "Solar America Initiative," the project's goal is to make solar energy cost-competitive with conventional sources of electricity by 2015.

- DOE has announced that it will invest up to \$30 million to accelerate the development and deployment of plug-in hybrid electric vehicle (PHEV) technology. DOE will also participate in a cooperative, pre-competitive research and development alliance, the U.S. Automotive Partnership for Advancing Research & Technologies (USAutoPARTs).
- DOE has announced that it will award \$3.5 million to the X PRIZE Foundation for the national education and outreach component of the Automotive X PRIZE (AXP) Education Program. The AXP will award at least \$10 million in privately funded prizes to teams that can engineer clean, production-capable vehicles that exceed 100 miles per gallon, or its energy equivalent fuel efficiency, and win a cross-country state race. This contest comes on the heels of last year's law that increased Corporate Average Fuel Economy (CAFE) standards for automobiles for the first time since 1975. With oil prices reaching record highs the Administration expressed their eagerness to catalyze youth innovation.

#### **EPA (Environmental Protection Agency)**

- Both EPA and DOE are taking steps to make carbon sequestration a reality: DOE through the awarding of three large-scale carbon sequestration projects; and, EPA through the development of regulations to establish a clear path for geologic sequestration.
- A recent report from the Energy Information Administration (EIA) found that Americans would pay higher energy bills if the Bingaman-Specter global warming legislation, S. 1766, is enacted. However, if the legislation stimulates the deployment of new energy technologies that produce little or no greenhouse gases, the spike in energy costs will not be as great.
- EPA, through its Science to Achieve Results (STAR) research grants program, has awarded 21 grants totaling \$7.34 million to universities to investigate potential adverse health and environmental effects of manufactured nanomaterials.
- EPA's Advanced Coal Technology Work Group, a subgroup of its Clean Air Act Advisory Committee (CAAAC), has released a 10-page report containing 13 consensus-based recommendations to guide stakeholders in accelerating the development and use of advanced coal technologies (ACTs). For the report's purposes, the definition of advanced coal technologies "encompasses a broad and evolving suite of innovative processes and technologies that are designed to reduce substantially the overall environmental footprint of coal-based processes."
- A recent report issued by the EPA says that the Lieberman/Warner Climate Security Act of 2008, S. 2191, could be implemented with little negative impact on the economic growth of the nation if phased in over two decades, although the report fails to take into account the Energy Independence and Security Act (EISA) of 2007 passed last year. This information has emboldened Cap and Trade (C&T) advocates who claim that such policy measures are necessary to control the amount of emissions in the atmosphere.

#### **DOT (Department of Transportation)**

- DOT's Research and Innovative Technology Administration (RITA) is seeking information from private industry, research organizations and state and local governments about commercially available technology designed to improve both traffic congestion and the safety of the U.S. transportation system. "The solution to today's traffic problems does not have to be just about building new roads and infrastructure," said DOT Secretary Mary Peters. "By harnessing existing technology and adapting it for transportation needs, we can dramatically improve safety and reduce congestion for the traveling public."
- A report released January 15, 2008 by the National Surface Transportation Policy and Revenue Study Commission calls for at least \$225 billion to be invested annually for the next 50 years to upgrade the nation's existing transportation system "to a state of good repair and create a more advanced surface transportation system to sustain and ensure strong economic growth." Currently, the U.S. invests less than 40 percent of that recommended amount.

#### **DOD (Department of Defense)**

- The Director of Defense Research and Engineering (DDR&E) has called on Secretary of Defense Robert Gates to increase funding for the DOD 6.1 basic research program. The "strawman proposal" was intended as a discussion piece in anticipation of the fiscal year 2009 (FY09) budget proposal.

**Report on the Design Society**  
**Written for the ASME Design Engineering Division**  
**August 2008**

The Design Society is an international non-governmental, non-profit organisation focused on design research, design practice, and design education. The Design Society concentrates on activities that transcend national boundaries, and, where possible, will seek to complement national activities. The initiatives, themes, issues and questions addressed by the Design Society are discussed and disseminated through its conferences and workshops, along with their associated publications.

The goals of the Design Society are to contribute to a broad and established understanding of design, and to promote the use of knowledge about design for the good of humanity.

It aims to

- enhance and rationalise engineering design through design science
- develop and promote a common understanding of design activities
- support its members in consolidating, focusing and establishing theory and research methodology
- support the creation and development of a formal body of knowledge about design
- support the evaluation of research results and their implementation in education and industry
- promote interdisciplinary work in design and co-operation among researchers, managers, educators and practitioners

The Design Society was constituted in March of 2000. It builds on prior work of the International Society of Design Science, WDK. Founded in the early 1980's, WDK was an informally constituted international society based on a common interest in engineering design.

At this point, the Design Society has two primary objectives; to establish services that it can provide to its members, and to develop an effective infrastructure for delivering these services. Each year, the Society runs a major design conference. In the odd years, it holds the ICED Conferences (International Conference on Engineering Design) and in the even years it holds the DESIGN conferences.

In late August of 2007, the Design Society's International Conference on Engineering Design (ICED) was held in Paris. More than 600 people attended. Unfortunately, the meeting was scheduled just the week before IDETC in Las Vegas, forcing many people to make a difficult choice. The Design Society tried to learn from the ASME the time of the 2007 IDETC so that scheduling problems could be avoided, but we were unable to get the dates in time to affect the outcome. A similar problem has occurred for the 2009 ICED meeting which will take place at Stanford University the week before the 2009 IDETC. We hope to encourage people from around the world who will be attending the

ICED meeting to stay for a second week to attend the IDETC. In subsequent years, though, ICED will not be in the US and so more time between the meetings would be very helpful for those who would wish to attend both. The ICED meetings are expected to be held during the third week of August in each odd numbered year.

In May of 2008, the Design Society sponsored DESIGN'08 in Dubrovnik. The twelve Design Society Special Interest Groups have been very active this year. Each is expected to run a conference or workshop this year. In March of 2009, the Design Society Board of Management and the DS Advisory Board will conduct their annual meetings at MIT.

July 25, 2008

**To: General Committee, Design Engineering Division**

**From: Chair, Fellows Nomination Committee**

**Subj.: Report for the Period Ending September 2008**

The Fellows Review Committee apparently no longer routinely notifies the Division and Section Chairs when a member of their unit is elected Fellow. As a result I ask the DED staff support for the information for my report. I have been informed that since my last report in the Spring only one new Fellow has been elected from our Division, namely **Jyhwen Wang**.

As I pointed out in my recent Newsletter article, nominations are now being reviewed 4 times per year. The deadlines are 3/20, 6/20, 9/20, 12/20. All the necessary forms and requirements are available on the Fellow website.

During my tenure as Chair of this committee the Division has increased the rate at which Fellow nominations are submitted. I believe that all of our members recognize that individual members must take the initiative in nominating Fellows. I believe that it is no longer necessary to continue this committee or at least with me as Chair. I have always enjoyed serving the Division but feel that my time is up. All the best to all of you.

Richard A. Hirsch, P. E.  
Life Fellow

## **Publicity and Newsletter Committee Report**

### **J. Michalek**

The 2008 DED Newsletter was mailed out in July, and the wiki edition, which contains longer articles that could not fit in the 8-page print edition, is available online. The 2008 Newsletter contains articles from the DED Chair and Immediate Past Chair, updates on IDETC/CIE 2007, 2008, and 2009 and National Manufacturing Week 2008, six journal activity reports, eleven technical committee reports, and four standing committee reports, as well as the DED Executive Committee Roster and an announcement of DED members elected to fellow grade.

[http://ddl.me.cmu.edu/ddwiki/index.php/ASME\\_Design\\_Engineering\\_Division\\_Newsletter](http://ddl.me.cmu.edu/ddwiki/index.php/ASME_Design_Engineering_Division_Newsletter)



# Design Engineering Division

Annual Newsletter

Jeremy J. Michalek, Editor • Summer 2008

## Message from the Chair • Kazem Kazeronian, Design Engineering Division Chair



Greetings! I am humbled and excited to serve as the chairman of the Design Engineering Division (DED) in the coming year. The wisdom and the hard work of previous chairs have

left the division in excellent shape. In particular, I believe I speak for all of us in expressing sincere gratitude to the outgoing chair, **Dr. Judy Vance**, for her admirable leadership. I will continue to seek her wise counsel. Likewise, the dynamic participation of leaders and members of the Executive Committee, the General Committee, the Division's Journal Editors and the Technical Committees, have been key to the success and effectiveness of the Design Engineering Division throughout the years.

Reflecting upon the Division's achievements and growth, its rich portfolio of journals, technical committees and conferences, I am overtaken with pride. Design Engineering, more than any other technical profession, is intertwined with our society. Our Division's mission is "to lead in fostering and promoting the art, science and application of Design Engineering as well as the professional careers of Design Engineers in Education, Research and Engineering practice." We cannot be faithful to this mission without considering societal issues and trends.

The global society faces such monumental challenges as population growth, global warming and pollution, depleting energy, food and water resources, security, wealth disparity, regional and global conflicts, gender and racial inequity, and more. As a community, we have chosen to take an active role in understanding these problems and to participate in their solution. At our various conferences, for instance, one finds scholarly papers that address these important issues. The sessions organized by the Design Engineering Division are rich in discussions on the inclusion of engineering ethics, environmental, economic, and global subjects in the engineering design classroom. Nevertheless, we

must do more.

The issue of a global engineering workforce poses yet another complex enigma that affects the professions and lives of us all. These are tremendous challenges, and challenges offer opportunities. A wise person once said "opportunity will not knock if we don't build a door." We must intensify our discussions on these issues. Our Division must take bold steps in providing resources and visibility to forums that address the planet and its people. I intend to examine how we can engage our members in focusing on these issues. I will also work with you to see how we can tackle the issue of the underrepresentation of women and minorities in our Division and profession.

The Design Engineering Division is more than six decades old (founded in 1945 as the Machine Design Division). The fact that DED has existed for 63 years is a testament to our ability to adapt to change. On the technical side, the rate of change in research topics is greater now than it has been during our entire history. The viability of the Division will be determined by how quickly we are able to adapt to these changes and position the technical component of our activities to respond to developing interests and needs. Another challenge we have increasingly faced over the last decade has been coping with growth and utilizing our resources to better serve and benefit our members. The ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC/CIE) have reached record attendance. During my tenure as the chair, I will work with the Executive Committee and Technical Committee leaders to examine our practices and resources and to explore ways we can improve.

I want to welcome **Dr. Vijay Kumar** and **Dr. Hamid R. Hamidzadeh** to the Executive Committee. I also want to offer my sincere gratitude to **Dr. Larry Howell** and **Dr. Shapour Azarm** (past chair and ex-officio) for their very valuable service during their tenures in the executive committee. The continuing Executive Committee members with whom I will have the privilege of working are **Dr. Judy**

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Vance (outgoing chair), **Dr. Ahmad Shabana**, **Dr. (Buddy) W. Clark** and **Dr. Zissimios Mourelatos**. I also want to thank the ASME staff and in particular two capable individuals, **Ms. LaShion Pettiford** and **Mr. Richard Ulvila**, who have supported the Design Division.

Finally I urge all of you to visit our web site and become familiar with our Division, our mission, our Technical Committees, DED General and Executive Committees, our standing and special subcommittees, our journals, our awards, our conferences, our publications and newsletters, and our services. Find an opportunity to participate. Recognize the strengths in your colleagues and nominate them. We can make a difference in your career, and you can make a difference in another's. Contact me directly at [Kazem.Kazerounian@UConn.edu](mailto:Kazem.Kazerounian@UConn.edu) if I can be of any help.

I look forward to seeing you at the CIE / IDETC 2008 conference in New York in August. ●

### New ASME Journal: Mechanisms and Robotics

The new Transactions of the ASME, Journal of Mechanisms and Robotics began accepting submissions in January 2008 and is on track to publish its inaugural issue by September 2008. See page 4 for more information. ●

## EXECUTIVE COMMITTEE REPORTS

### Greetings from the Past Chair • *Judy Vance, Immediate Past DED Chair*



This past year has been a busy year for the Design Engineering Division. As I stated in the last newsletter, it takes the efforts of many volunteers to perform all of the tasks needed to keep the Division going throughout the year.

The International Design Engineering Technical Conferences (IDETC) held in September in Las Vegas was a very successful event. The IDETC attracted over 1400 attendees from industry, government and academia. The event served as a coordinated activity for the speakers, panels, and paper presentations for 13 separate conferences sponsored by the various technical committees of the DED as well as the annual Computers and Information in Engineering Conference. The format of holding all of these conferences at one venue allows participants whose research and interests span several technical areas to participate fully in multiple conferences. Organizing such a diverse group is a tremendous task. A report on the outcomes of the conference can be found later in this newsletter. I want to take this opportunity to congratulate the General Conference Chair **Prof. H.S. Tzou** (U of Kentucky) and the Program Chair **Prof. Nader Jalili** (Clemson) on an excellent job of managing this very successful event.

Supporting conferences continues to be a major activity of the division. Volunteers from the division are active in serving as technical track chairs for several of the 20 tracks of the ASME International Mechanical Engineering Congress and Exposition (IMECE) to be held October 31 – November 6, 2008 in Boston, MA. The DED also co-sponsored several design-related conferences throughout the year including the IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications (MESA08), the 2008 Symposium on Mechanics of Slender Structures, and the Design of Medical Devices Conference. Recently, the DED Executive Committee voted to establish a cooperative relationship with the International Society of Structural and Multidisciplinary Optimization (ISSMO), which will result in increased opportunities for members of both organizations to participate in the ASME Design Automation Conference and the ISSMO World Congress of Structural and Multidisciplinary Optimization (WCSMO).

The division remains financially healthy. A few years ago, the DED Executive Committee agreed to assume total financial

responsibility for the division-supported conference activities, primarily the IDETC. With the increased responsibility for risk came the potential for greater rewards. To date, with the continued success of the IDETC, this has proven to be a very sound decision. This year, the DED Executive Committee agreed to distribute some of the excess funds from the DED custodial fund to the technical committees to support committee awards. Approximately \$36,000 of DED custodial account funds were matched by committee funds and deposited in various committee honors and award accounts. These actions will assure us of having sufficient funds to honor those colleagues who contribute significantly to the discipline and practice of design engineering. The DED also contributed to the ASME Virginia Tech Memorial Scholarship Fund which was established to honor the victims of the VT shooting.

I am pleased to announce the creation of a new journal within our division. After considerable discussion within the community, the Journal of Mechanisms and Robotics (JMR) was created under the editorship of **Prof. J. Michael McCarthy**. In the past, the Journal of Mechanical Design contained a significant number of mechanisms- and robotics-related papers. While design-related papers dealing with mechanisms and robotics will continue to be accepted by the Journal of Mechanical Design, the creation of the new journal will provide a more focused identity for both journals and provide an opportunity for the Journal of Mechanical Design (JMD) to expand into new areas. **Prof. Panos Papalambros**, editor of JMD, is working closely with Professor McCarthy to make this transition happen smoothly. The Division now sponsors six technical journals. I sincerely thank all of the editors and associate editors of our journals for their efforts.

There are some new appointees to the DED leadership team. **Dr. Georges Fadel** will assume the chair of the Honors and Awards Committee as **Dr. Joseph Davidson** finishes his term in June 2008. Dr. Davidson has done an excellent job leading this activity and I truly thank him for his efforts. **Dr. Matthew Parkinson** will assume the chair of the Student Affairs Committee, taking over for **Dr. Pierre Larochelle**. Thank you to Dr. Larochelle for his extensive efforts in revitalizing student involvement in the division. This year, this committee's charge has been expanded to include activities for young professionals, so watch for new opportunities and activities from this committee.

I want to especially thank **Dr. Shapour Azarm**, past DED chair, and **Dr. Kazem Kazerounian**, DED Vice Chair/Treasurer, for their timely advice and help over this past year. I am very grateful for having a strong Executive Committee with committed volunteers, including **Dr. Ahmed Shabana**, **Dr. Hamid Hamidzadeh**, **Dr. Larry Howell**, **Dr. William W. (Buddy) Clark** and **Dr. Zissimos Mourelatos**. Thank you all for your efforts. I'd also like to thank the ASME staff including **Ms. Noha El-Ghobashy**, **Ms. LaShion Pettiford**, **Ms. Erin Dolan**, and our new ASME Liaison, **Mr. Richard Ulvila**, for all of the support they provide the division. This has truly been a team effort.

In conclusion, I want to thank you for your membership in ASME and your association with the Design Engineering Division. I congratulate **Dr. Kazerounian** as he assumes the position of DED chair for 2008-2009 and I look forward to seeing many of you at the CIE/IDETC in New York this summer. •

### Division Members Elected to Fellow Grade

*Richard A. Hirsch, P. E. • Fellows Nominating Committee Chair*

During the past year eight members of our Division have been elected to the Fellow Grade of membership. They are: **David M. Anderson**, **Alejandro R. Diaz**, **Imtiaz-Ul Haque**, **John S. Lamancusa**, **Robert G. Parker**, **Vadim Shapiro**, **Henry J. Sommer**, and **Hong-Sei Yan**. Congratulations to these members and special thanks to their sponsors and supporters. Since an ASME member can not apply for this distinguished grade of membership, a colleague must take the time to complete the required application and arrange for letters of support. It is not a difficult task, but it does take some time. However, if we don't take the time to do this, who will? The necessary forms and instructions can be found on the ASME website. The applications are now being reviewed four times per year. Anyone requiring assistance or having questions can contact me at [hirschr@asme.org](mailto:hirschr@asme.org). •

## CONFERENCE REPORTS

### IDETC/CIE 2007 *Horn-Sen (H.S.) Tzou, 2007 IDETC/CIE General Conference Chair*

*Nader Jalili, 2007 IDETC/CIE Technical Program Chair*



The 2007 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC/CIE07) established several new records in the DED's history: It was the largest IDETC/CIE to date, with 13 conferences, 1700+ abstracts received, 1223 papers accepted, ~1450 people in attendance, and \$200k in revenue generated.

There were 12 conference keynote lectures, 10 tutorials/workshops and a general conference welcome keynote lecture entitled "Shaking the Money Tree - Funding at NSF" reported by 3 NSF Program Directors. In addition, IDETC/CIE07 offered two receptions: 1) the Deans' reception on UNLV campus and 2) the IDETC/CIE Conference Reception at Rio, as well as several division, conference, and committee award dinners at Caesars Palace. Again, we would like to express our sincerest thanks to all conference and symposium organizers, technical committee chairs, authors, reviewers, student participants, ASME staff (especially Erin Dolan and Christina Perakis), as well as various advisory and international committee members involved in this historic event held in Las Vegas on September 04-07, 2007. ●



*NSF Keynote speakers: Program Chair: Nader Jalili (far-L), Dr. J.M. Vance (center-L), Dr. S. Jayasuriya (center-R), General Chair: H.S. Tzou (far-R)*



*MSNDC Keynote speech by Dr. Werner Schiebelen*

### IDETC/CIE 2008 •

*Souran Manoochebri, 2008 IDETC/CIE Conference General Co-Chair*

*Jahangir Rastegar, 2008 IDETC/CIE Conference General Co-Chair*

The 2008 ASME IDETC/CIE Conference will be held August 3-6, 2008 at the New York Marriot at the Brooklyn Bridge. This event is the premier international meeting in the fields of Design Engineering and Computers and Information in Engineering. It is designed to showcase cutting-edge research and accomplishments and to enrich educational experiences in these fields. It will feature tutorials, research workshops and sessions with technical papers for the following conferences:

- 34th Design Automation Conference (DAC)
- 32nd Mechanisms and Robotic Conference (MR)
- 28th Computers and Information in Engineering Conference (CIE)
- 20th International Conference on Design Theory and Methodology (DTM)

- 13th Design for Manufacturing and the Lifecycle Conference (DFMLC)
- 10th International Conference on Advanced Vehicle and Tire Technologies (AVTT)
- 5th Symposium on International Design and Design Education (DEC)
- 2nd International Conference on Micro- and Nanosystems (MNS)

This year, 875 papers were submitted to the 2008 IDETC & CIE, which is a record for an even-year conference. Technical paper sessions, as well as plenary sessions, keynote lectures, and tutorials on topics related to engineering design are being organized. Industrial participation is solicited and encouraged, and the interaction between the research and industrial communities will be strongly promoted during the conference.



The General Co-Chairs and the Program Co-Chairs (Qiaode Jeffrey Ge and Horea Ilies) are thankful to all conference organizers and ASME staff for their dedicated efforts.

On a lighter side, we are very excited about the conference evening reception, which will take place aboard a Spirit Cruise ship and will offer breathtaking views of New York City in a casual atmosphere. The New York Marriott at the Brooklyn Bridge is just across the river from Manhattan with easy access to all parts of New York City. We hope you get a chance to enjoy some of the many attractions of the city and have a great time. For details regarding the conference registration and hotel reservations, please visit the IDETC website. We look forward to welcoming you to New York in August, 2008. ●

### National Manufacturing Week 2008

*Zissimos Mourelatos, National Design Engineering Conference Committee Chair*

The 2008 National Manufacturing Week (NMW) technical conference and show will be held in Rosemont, IL on September 22-25, 2008. It is sponsored by Canon Communications, LLC. ASME contributed a total of 7 technical sessions to the 2007 NMW. The Design Engineering Division sponsored 4 of these sessions. Each session involves a workshop or presentation relevant to industrial participants. Based on the current agreement between ASME and Canon Communications LLC, Canon distributes revenues to ASME and its divisions based on organized sessions and attendance.

According to a new agreement starting in 2008, the ASME Mechanical Engineering Magazine is now the primary contact with Canon, and there will be no revenue sharing with ASME participating divisions. Because of these changes and the lack of financial return to ASME, the DED Executive Committee decided in its March 2008 meeting to discontinue DED participation in the NMW. Despite this development, the Design Engineering Division encourages members to develop presentations for the NMW 2008. The chance to address the NMW audience of practicing engineers,

technical and mid-managers, and shop floor and plant supervisors is a great opportunity. This group represents a major portion of ASME's membership base, and as an organization we have an incentive to facilitate professional growth. Appropriate presentations may offer real, practical solutions to everyday design, manufacturing and management problems, providing ways to reduce cost and increase productivity, improve quality and reliability, make money faster and more efficiently, and provide avenues to grow professionally. More information can be found at <http://www.ManufacturingWeek.com>. ●

## JOURNAL ACTIVITY REPORTS

### COMPUTATIONAL AND NONLINEAR DYNAMICS

*Subhash C. Sinha, JCND Editor*



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 of dynamics associated with nonlinear systems. Toward the end of last year, **Prof. Henryk Flashner** (U of Southern California) started his 3 year term as an AE of the JCND. His expertise will be utilized in the areas of stability and bifurcation of dynamic systems and control of nonlinear and time-varying systems. **Prof. J. A. Tenreiro Machado** (U of Porto, Portugal) and **Prof. Albert Luo** (U of Southern Illinois) edited a special issue of JCND on Discontinuous and Fractional Dynamical Systems. 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. 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: [ssinha@eng.auburn.edu](mailto:ssinha@eng.auburn.edu). ●

### COMPUTING AND INFORMATION SCIENCE IN ENGINEERING

*Jami J. Shah, JCISE Editor*



JCISE began publication at the start of the new millennium, recognizing the vital role that computing and information science play in mechanical product development and the rapid evolution of these technologies: Mechanical engineers are not just users of these methods and tools but are heavily involved in their development. JCISE provides a forum for publishing high quality archival research that falls at the intersection of engineering and computer science, including geometric modeling, computational metrology, computer aided manufacturing, and information science & management. In addition to full length research articles, we also publish papers in the Application Track representing innovations in software or data technology that have mechanical design or simulation implications. In the coming year we plan to publish two special issues: one on engineering informatics and the other on haptics in immersive environments.

This year ISI released impact factors for JCISE for the first time, and our impact factor of 0.531 puts us in the top 1/3 of our peers. I would like to take this opportunity to acknowledge the key role that our AEs play; to recognize our distinguished Advisory Board; and to

thank our reviewers for their time and effort in evaluating JCISE papers. I welcome comments, suggestions, and feedback from our readers so as to make continuous improvements to the JCISE. ●

### MECHANICAL DESIGN

*Panos Y. Papalambros, JMD Editor*



In January we transitioned to a new Editor for JMD. In November 2007 the ASME Publications Committee approved my nomination submitted by then-Editor **Michael McCarthy** and the DED Executive Committee. The transition is now complete, although with several hundred papers in process, some coordination is still necessary. Mike has done an exceptional job in his editorial duties and has set a high mark for selfless performance. All of us in the community are grateful to him. The new ASME Journal of Mechanisms and Robotics (JMR), with Mike McCarthy appointed as the first Editor, will appear in 2008 and will accommodate some topics traditionally served by JMD, and thus offer JMD more space to be both more inclusive and more focused. We will be working with Mike to maintain journal excellence and quality service to the design community. This is an exciting and challenging time for mechanical engineering, for design, and for JMD. While the relevance of our traditional areas remains strong, emerging areas are claiming our attention increasingly and even urgently: “smart” and networked content, environmental impact, micro- and nano-level operation, bio-applications, energy sources and use, user interactions, and economic and policy implications of design decisions — to name a few. Mechanical engineering design is at the intersection of all these areas, and so also at a crossroads. I expect that JMD will be evolving in the years to come, following the solutions that our community offers to the emerging challenges armed with the rigorous, scholarly treatment that has always characterized JMD publications. I am grateful and honored to have the opportunity to serve the journal at this time, and I am particularly grateful to our dedicated AEs, who make JMD successful. ●

### JOURNAL: MECHANISMS AND ROBOTICS

*J. Michael McCarthy, JMR Editor*

The Transactions of the ASME, Journal of Mechanisms and Robotics (JMR) is a new archival publication that documents fundamental research on the geometry, kine-



matics, dynamics, synthesis, analysis, manufacture, and control of mechanisms, machines, robots, and mechatronic systems with a view to advancing the state-of-the-art in theory as well as practice and to encourage innovation in the development of mechanical systems. The Journal began accepting submissions in January 2008 and is on track to publish its inaugural issue by September 2008. The Journal has nine AEs spanning a wide range of experience in mechanisms and robotics science and technology who are already busy managing reviews for over 15 submitted papers per month. They are **Suresh Ananthasuresh**, **Jorge Angeles**, **Jian Dai**, **Sundar Krishnamurthy**, **Vijay Kumar**, **Qizheng Liao**, **Jean-Pierre Merlet**, **Andrew Murray**, and **Frank Park**.

JMR will be published quarterly with about 20 papers per issue. The goal is to provide a venue for fundamental contributions to mechanisms and robotics research applied to mechanical systems found in automation, manufacturing, vehicle design, medicine and rehabilitation, micro and nano systems, and more. ●

### MEDICAL DEVICES

*Arthur Erdman, JMED Co-Editor*



JMED is an exciting new venture offered by ASME with Co-Editors **Dr. Arthur Erdman** (U of Minnesota, Mech. Eng.) and **Dr. Gerald Miller** (Virginia Commonwealth Univ., Biomedical Eng.). This journal 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 the Journal are expected to focus on applied research and development of new medical devices or instrumentation. The Journal will publish 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 effects of health care. Significant biomechanical, clinical, or engineering content is expected. The Design Innovation paper category is intended for reporting about novel devices for which there are less extensive clinical or engineering results. The March 2008 issue will mark the first full year of this Journal.

*continued on page five*

## JOURNAL ACTIVITY REPORTS

*continued from page four*

We encourage you to submit a paper or subscribe to the journal. ●

### VIBRATION AND ACOUSTICS

*Kon-Well Wang, JVA Editor*

During the past year, Bogdan Epureanu (U Michigan), Alan Palazzolo (Texas A&M), Massimo Ruzzene (Georgia Tech), Steven Shaw (Michigan State), and Weidong Zhu (U Maryland) were nominated and



approved as new AEs. With this new help, we are reducing the current AE workload and improving the paper handling/review time. To solicit high quality papers, the Journal has contacted the symposium organizers of the 2007 ASME Biennial Conference of Mechanical Vibration and Noise, asking them to recommend their best papers and invite the authors to submit an enhanced version to the Journal for a rigorous journal quality review process. We have received good responses. A special

issue on vibration-based structural health monitoring, with Guest Editors Bogdan Epureanu (U Michigan) and Mark Derriso (Air Force Research Labs), was published in December 2007. I encourage you to submit your research papers in vibration and acoustics to JVA. I also want to thank the authors, reviewers, AEs, and staff members who have contributed to make the past year another good one for JVA. Please feel free to contact me — I always welcome ideas and suggestions. ●

## TECHNICAL COMMITTEE REPORTS

### DESIGN AUTOMATION

*Timothy Simpson, DAC Chair*

The DAC promotes research and disseminates knowledge in 4 key areas related to Design Automation: Design Representation, Design Optimization, Design Evaluation, and Design Integration. For the 2007 IDETC, 172 papers were submitted to the Design Automation Conference (DAC), of which 125 were accepted. These papers were presented in 27 technical sessions in 3 parallel tracks at the conference. Dr. Matthew Parkinson (Penn State) and his graduate student, Mr. Christopher Garneau, received the Ford Motor Company Best Paper Award. Our DAC Keynote Speaker, Dr. Chris Unger (GE Healthcare) discussed thermo-mechanical challenges in diagnostic imaging and opportunities for related research. Two industry panels were also held at the conference: Joe Donndelinger (General Motors) organized a panel of recent graduates who discussed how their research prepared them for working in industry, and Dr. Wei Chen (Northwestern U) hosted a panel of industry, government, and academic experts to discuss verification and validation of analytical models. In 2007, Dr. Zissimos Mourelatos (Oakland U) was elected to serve on the Executive Committee as the Special Sessions Paper Chair for the 2008 IDETC DAC. For more information, visit the DAC website at <http://cdl.engr.uconn.edu/asmeda>. ●

### DESIGN EDUCATION

*Philip Doepker, DEC Chair*

The DEC remains focused on advancing awareness and sharing experiences in mechanical engineering design. The 4th Symposium on International Design and Design Education was a success at IDETC 2007, thanks to Gul Kremer and a host of committee members. Mike Keefe, Jeffrey Mountain and Peter Jones are working on

the 5th Symposium for 2008, where Clive Dym will be the DEC Keynote Speaker. There will be over 8 sessions, including a revised Young Design Engineer's Paper Competition. Clive Dym and Phil Doepker were co-editors of the Journal of Mechanical Design's Special Edition on Design Engineering Education. Thanks to Mike McCarthy for recognizing Design Education as a new contributor to research. There will be changes within the DEC in 2008. A new chair will be selected, and new assignments will be made in a number of areas. Other steering committee positions available include Vice-Chair, Secretary / Treasurer, Conference Chair, and Paper Reviews Chair. We are also seeking volunteers to take over the Honors and Awards leadership, paper reviews chair, and coordinator for the Young Design Engineer's Paper Competition. Those interested in learning more about opportunities within the DEC are asked to contact Phil Doepker, U of Dayton; [doepker@udayton.edu](mailto:doepker@udayton.edu). ●

### DESIGN FOR MANUFACTURING

*Jeffrey Herrmann, DFM Committee Chair*

The primary activity of the DFM Technical Committee is organizing the Design for Manufacturing and the Life Cycle (DFMLC) Conference at the IDETC. 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. Edward Morse (U of North Carolina) and Peter Sandborn (U of Maryland) organized the 2007 DFMLC conference. Fifty-two papers were submitted, and 32 were accepted. Vijay Srinivasan, an expert from IBM on product lifecycle management, was the plenary speaker. For the 2008 DFMLC conference, Peter Sandborn will be the Conference Chair and Marcos Esterman (Rochester Institute for Technology) will be

the Papers Chair. The committee officers for 2007-8 are Jeffrey W. Herrmann (Chair), Edward P. Morse (Vice-Chair), and Kazuo Saitou (Secretary). For more information, please contact Jeffrey Herrmann; (301) 405-5433; [jwh2@umd.edu](mailto:jwh2@umd.edu). ●

### DESIGN THEORY AND METHODOLOGY

*Michael J. Scott, DTM Committee Chair*

The mission of the DTM Committee is to facilitate and enhance the development of design theories and the methods that grow from them. For IDETC 2007 we received 94 papers, of which 54 were selected for presentation. The 2007 DTM Best Paper Award went to Dan Frey, Paulien Herder, Ype Wijnia, Eswaran Subrahmanian, Konstantinos Katsikopoulos and Don Clausing for their paper, "An Evaluation of the Pugh Controlled Convergence Method." The Committee would like to thank Rob Stone and Li Shu for their able service as Conference Chair and Papers Chair, respectively. For IDETC 2008, Li Shu will serve as Conference Chair and Bob Paasch as Papers Chair. 2008 marks the 20th Annual DTM Conference. An exclusive DTM party at a NYC nightclub, with dinner included, is planned for the occasion. Conference attendees will be able to select the dinner in lieu of the usual awards luncheon as part of their conference registration. Further details will be sent out and posted on the DTM website as they are finalized. The DTM Committee welcomes the participation of all who are interested. For more information, visit the Committee's website at <http://function.basiceeng.umn.edu/asmedtm>. ●

### FASTENING & JOINING

*Endel V. Iarve, F&J Committee Chair*

The F&J Technical Committee serves

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## JOURNAL ACTIVITY REPORTS

*continued from page five*

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. The 2008 IMECE F&J sponsored symposium, organized by Dr. Endel V. Iarve and Dr. Thomas J. Whitney (U of Dayton Research Institute) and Dr. Timothy Breitzman (Air Force Research Laboratory), is "Joining Technologies for Advanced Materials and Structures." The committee currently has about 12 active members and welcomes experts and distinguished researchers from industrial and academic fields. If you are interested in joining the committee or need further information, please contact Dr. Endel Iarve, U of Dayton Research Institute, (937) 255-9094; endel.iarve@wpafb.af.mil. •

## MECHANISMS & ROBOTICS

*Vijay Kumar, M&R Committee Chair*

The M&R Committee has the mission of promoting advances in research and education in the theory, design and applications of mechanisms, machines, robots and mechatronic systems. Our flagship conference is the Mechanisms and Robotics Conference (M&R), the largest IDETC conference. Our main journal, until this past year, was the Journal of Mechanical Design. In the coming years, the new Journal of Mechanisms and Robotics will be the central journal for M&R. The 2007-8 year was active for the M&R Committee: We were responsible for the oversight and organization of the 2007 M&R Conference, which consisted of 2 keynote presentations, 8 symposiums featuring 139 papers, and student design competitions; We recognized Dr. Charles Wampler (General Motors) with the M&R Committee Award for cumulative contributions to the field of mechanism design and theory; We established the new ASME Journal of Mechanisms and Robotics, with Dr. Mike McCarthy as the founding editor; We built a new website that reflects the breadth of our activities and the excitement in our community; and we established a M&R Video Web-Portal. Submissions to this YouTube channel can be made through our Video sub-committee website: <http://macmotion.eng.sunysb.edu/ASMEM&RVideo>. •

## MULTIBODY SYSTEMS & NONLINEAR DYNAMICS

*Kurt Anderson, MSND Committee Chair*

The mission of MSND is to foster experi-

mental, symbolic, computational and analytical activities pertaining to multibody systems, nonlinear dynamics and control, and other related areas. The committee organizes the Biennial International Conference on Multibody Systems, Nonlinear Dynamics and Control (ICMSNDC) at IDETC. Last year two new members, Prof. Eric A. Butcher (New Mexico State U) and Prof. Dan Negrut (U of Wisconsin), were elected to the technical committee. At the 6th ICM-SNDC the D'Alembert Award for significant contribution to the field of Multibody Systems was presented to Prof. Werner Schiehlen (U of Stuttgart). The Lyapunov Award for significant contribution to the field of Nonlinear Dynamics went to Prof. Francis Moon (Cornell). A new student paper competition will be held at the upcoming 7th ICMSNDC, to be held in San Diego, CA. Students working in the fields of multibody systems, nonlinear dynamics and control are encouraged to submit papers to this competition. •

## POWER TRANSMISSION AND GEARING

*Ahmet Kabraman, PTG Committee Chair*

The PTG Committee organized the 10th International ASME Power Transmission and Gearing Conference at 2007 IDETC. A total of 116 papers were presented in 24 technical sessions by researchers from more than 20 countries. The Buckingham Lecture was given by Mr. William Bradley (American Gear Manufacturers Association). Prof. Donald R. Houser (Ohio State U) received the PTG Darle W. Dudley Award, given once every 4 years to honor a prominent power transmission and gearing researcher for outstanding contributions to the field. The PTG Committee will meet in April 2008 in Detroit to work on several scheduled committee tasks; among them, organizing the next PTG Conference at IDETC 2009. For more information, please contact Dr. Ahmet Kahraman, [kahraman.1@osu.edu](mailto:kahraman.1@osu.edu) or visit <http://www.asmeptg.org>. •

## RELIABILITY, STRESS ANALYSIS, & FAILURE PREVENTION

*Erol Sancaktar, RSAFP Committee Chair*

The RSAFP Committee participated in the 2007 IMECE with two sessions. The 10 papers presented included contributions from the U.S., Japan and Nigeria. The RSAFP Committee also had four sessions at the 2007 IDETC. The 21 papers presented included contributions from the U.S., Japan, China and the U.K. •

## VEHICLE DESIGN

*Corina Sandu, VDC Vice-Chair*

The VDC promotes innovative analytical, computational, and experimental investigations in control, dynamics, and design of full vehicle systems and their subassemblies. Our members perform fundamental research, applied research, and successful technology implementations for light and heavy vehicle design, modeling, and validation. In 2007 VDC organized the 9th International Conference on Advanced Vehicle and Tire Technologies (AVTT), for the first time as part of the IDETC. The conference consisted of 7 technical sessions and attracted high quality technical publications and presentations. Prof. Imtiaz Haque, Prof. Corina Sandu, and Prof. Moustafa El-Gindy were recognized for their service to VDC and the 2007 AVTT.

In 2008 VDC elected Dr. Brian Gilmore (John Deere) as its new committee chair. Prof. Corina Sandu (Virginia Tech) will continue to serve as the vice-chair of the committee and as the Conference Chair of the 10th and 11th AVTT. Prof. Mohammad Elahinia (U of Toledo) was elected as VDC secretary and treasurer and will serve as Program Chair of the 10th & 11th AVTT. VDC is organizing the 10th AVTT under the 2008 IDETC. The Conference will consist of 5 symposia for a total of 10 sessions. New in 2008 will be two Best Paper Awards: The Best Paper Award for Excellence in Energy Efficient Powertrain Systems Research, sponsored by General Motors, and The Best Paper Award for Excellence in Testing and Experimental Vehicle Dynamics Research, sponsored by Kistler Instruments. •

## VIBRATION AND SOUND

*George T. Flowers, TCVS Chair*

TCVS provides leadership for promoting research and disseminating knowledge in all areas related to mechanical vibration, acoustics, dynamics, and controls. TVCS organizes the IDETC Biennial Conference on Mechanical Vibration and Noise (VIB); sponsors sessions and lectures at the annual IMECE and other conference venues; and interacts with the ASME Journal of Vibration and Acoustics. The 21st VIB conference marked its 40th anniversary and covered topics from traditional areas to emerging technologies. The conference consisted of 255 papers, 22 symposia, 55 technical / poster sessions, and 2 keynote speakers: Dr. Daniel Inman delivered the Vibration Conference keynote and Dr. Fredric F. Ehrich delivered a keynote at the TCVS/VIB Awards Dinner. TCVS awarded the J.P. Den Hartog award to

*continued on page seven*

## TECHNICAL COMMITTEE REPORTS

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Daniel Inman in recognition of lifetime contributions to the teaching and practice of vibration engineering, and the N.O. Myklestad award to **Kon-Well Wang**, in recognition of a major innovative contribution to vibration engineering. **Kurt Anderson** and **George Flowers** are planning for the 22nd VIB at IDETC 2009.

TCVS sponsored sessions for a 2007 IMECE track on Mechanical Systems and

Control, organized by **Albert Luo**, **Carol Mei** and **Douglas Adams**, which accepted 243 final drafts. The committee is also involved in organizing several 2008 IMECE tracks in several symposia. TCVS is co-Sponsoring the Nonlinear Dynamics and Passive/Adaptive (NDPAC) Symposium at the new ASME Smart Materials, Adaptive Structures, and Intelligent Systems (SMASIS) Conference to be held at the Turf Valley Resort, Ellicott City, MD on October 28–30. The NDPAC

symposium is chaired by Chris Rahn, and the conference website is located at <http://www.asmeconferences.org/SMASIS08>

Members and friends interested in getting more information are invited to visit our web page at: <http://divisions.asme.org/ded/tcvs/tcvs%20pages> or contact **Prof. George Flowers**, Auburn Univ., (334)844-3330; [flowegt@auburn.edu](mailto:flowegt@auburn.edu). ●

# STANDING COMMITTEE REPORTS

## HONORS AND AWARDS

*Joseph K. Davidson, H&A Committee Chair*  
*Georges M. Fadel, incoming H&A Chair*

At the 2007 IDETC, **Dr. Steven Velinsky** (UC Davis) received the Machine Design Award for research contributions in the mechanical design field, including applied work on the development of machine elements and robotic systems for highway operations; and for professional leadership with ASME's Design Engineering Division and Systems & Design Group. **Dr. Panos Y. Papalambros** (U of Michigan) also received the Ruth & Joel Spira Outstanding Design Educator Award for significant contributions in establishing engineering design as a recognized discipline, advocating and propagating mathematical optimization as a practical design and product-development method, and integrating classical engineering intuition and modern analysis in team-oriented, open-ended design education.

As we look forward to 2009, 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 January 15 for the ASME Society's Spira and Machine Design awards, and March 1 for the other 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. Division Awards include the Robert E. Abbot, Leonardo Da Vinci, and Ralph Barnett-Carl Uzgiris Awards, and several DED technical committees administer Division-Committee awards. Further information is available on the ASME website. For specific questions, please contact **Georges Fadel** at [fgorge@clemson.edu](mailto:fgorge@clemson.edu) or at (864) 656-5620. ●

## PUBLICITY AND NEWSLETTER

*Jeremy J. Michalek, P&N Committee Chair*

The wiki edition of the 2008 ASME DED

Newsletter is available again this year for DED members to view and add updates and additional information that did not fit into the print edition. Following the wiki spirit, all DED members are encouraged to contribute content to the wiki edition, which will remain as a living document for updates during the 2008-2009 year. Members can also sign up to receive email or RSS alerts when new information is posted. If you have suggestions on how I can make the wiki more useful to our community, please let me know or simply take a lead in editing the content directly. For more information, visit [http://ddl.me.cmu.edu/ddwiki/index.php/DED\\_Newsletter](http://ddl.me.cmu.edu/ddwiki/index.php/DED_Newsletter) or contact **Jeremy J. Michalek**; Carnegie Mellon; (412) 268-3765; [jmichalek@cmu.edu](mailto:jmichalek@cmu.edu). ●

## STUDENT AFFAIRS

*Matt Parkinson, SA Committee Chair*

We are committed to integrating students into the ASME DED community. In particular we would like the students to become aware of the breadth of research activities in the DED and familiar with the people conducting them. The 2008 IDETC will feature special activities to provide opportunities for students to get involved. I encourage students to take advantage of these activities, and I encourage faculty and industry participants to reach out to students and welcome mentoring opportunities. The committee wishes to thank **Pierre Larochelle**, **Drew Murray**, and **Jim Schmiedeler**, our predecessors, for their excellent and longstanding efforts. ●

## SYSTEMS AND DESIGN GROUP

*Kenneth Waldron, S&D Committee Chair*

The Technical Communities Operating Board is completing a reorganization that puts infrastructure in place to replace many of the functions of the old Council on

Engineering that have been uncovered in the 3 or so years since the Society moved to its current configuration. The new structure includes a set of operating boards and committees to cover functions important to our divisions, like journals, conferences and honors and awards. Further, the ASME Publications Committee, Conferences Committee, and Congress Steering Committee are being moved from the Programs and Activities Operating Board to the Technical Communities Operating Board. What this means is that the volunteer functions with which our divisions are most concerned will be accountable to the same operating board as the technical groups. If the above seems confusing, remember that under the "new" organization the divisions are organized into groups. The Design Engineering Division is in the Systems and Design Group that I currently lead. The groups are organized under the Technical Communities Operating Board (TCOB). The chair of that operating board is **Vice President Dan Segalman**. The TCOB, in turn, is one of several operating boards that come under Knowledge and Communities, led by **Senior Vice President Rich Laudanat**. Over the past 3 years it had become apparent that there was a weakness in the new organization at the group and Technical Communities levels. The divisions were largely cut loose to fend for themselves, and many important functions were not getting done. That is the motivation behind the current activity.

My term as Technical Leader of the Systems and Design Group ends June 30th, 2008. My successor will be **Joe Beaman**, who was elected at the Operating Board meeting at Congress in Seattle. Two members-at-large of the Operating Board were also elected. They are **Bharat Bhushan**, who will be in his second term on the board, and **Nejat Olgac**. I wish them every success in the coming 3 years. ●



# Design Engineering Division

Three Park Avenue, New York, NY 10016-5990

<http://divisions.asme.org/ded/newsletIndex.html>

## IDETC/CIE 2009

*George Flowers, 2009 IDETC/CIE General Conference Co-Chair*

The ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC/CIE) will take place August 30 - September 2, 2009 at the San Diego Convention Center in conjunction with the Omni San Diego Hotel. San Diego State University is the local host for the conference. San Diego is easily accessible from anywhere in the world and provides a near ideal combination of outstanding meeting facilities, beaches, beautiful California weather, and world famous attractions. The Conference will feature plenary sessions, keynote lectures, paper presentations, workshops, and tutorials on topics related to engineering. We encourage you to visit the conference web site for further information or contact the conference chairs. We welcome you to San Diego in August / September, 2009!

<http://www.rpi.edu/~anderk5/IDETC2009> •



*San Diego Omni Hotel*

### Conference Co-Chairs

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*San Diego Convention Center*

## ASME Design Engineering Division

**Executive Committee Roster, July 1, 2008 – June 30, 2009**

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## **Student Affairs and Early Career Professionals Committee Report**

Chair: Matt Parkinson  
Committee Members: Brian Jensen  
Seth Orsborn  
Greg Roach

### **Past events**

The committee was reorganized in early 2008. We wish to thank Pierre Larochelle, Drew Murray, and Jim Schmiedeler, our predecessors, for their excellent and longstanding efforts. At the time of reorganization the committee was renamed to include a shared emphasis on both students and early career professionals.

### **Present Philosophy**

We are committed to integrating students into the ASME DED community. In particular we would like the students to become aware of the breadth of research activities in the DED and familiar with the people conducting them. We expect that this will improve the experience of students and give them confidence and breadth of experience that will ease their transition into professionals.

### **Future Plans**

The Design Engineering Technical Conferences in August will feature a special activity (a scavenger hunt) geared towards providing opportunities for the students to enjoy the conference, become involved in the community, and get to know individuals from academia and industry. A number of sponsors including ASME, GM, TechSmith, ScreenSteps, Missouri A&T, and the OPEN Design Lab have provided prizes for the students (everyone wins!).

We are optimistic about the activity, but will have to see how it goes before we decide how to proceed at future conferences.

### **Present action items**

- I have been contacted by a number of individuals asking what can be done to reduce the student registration fees. This is also a concern of mine: as a student I paid my own way to conferences (back when it was \$25) a number of times and I know that the high fees are presently keeping many away.
- It has been proposed that we provide a clearinghouse for faculty interested in having graduate students share their rooms with other students from other institutions. There are two motivating factors for this: 1) To reduce the financial burden of having student attendees, and 2) To provide an opportunity for students to get to know their peers at other institutions. I'm giving this a try with my students at this conference to see how it goes. Jeremy Michalek has put

together a prototype of a website that might meet this need:  
<http://ddl.me.cmu.edu/ddwiki/index.php/IDETC>

Respectfully,

mattparkinson

# ASME Design Engineering Division Information Management Report

## March 2008

### Summary

The Information Management Committee is responsible for the Design Engineering Division (DED) website. Activities have involved web page maintenance. ASME is creating a new enhanced web template for Divisions. Further work will involve working with ASME to facilitate any enhancements to the DED website.

### 1. Introduction

The DED Information Management Committee provides reference information for ASME members via the DED web site. This includes information and links to technical committee home pages, conferences, journals, committee rosters and minutes of meetings.

### 2. Recent Activities

The primary activity of the Information Management Committee has been to post and update information on the DED Internet site. Duties have involved updating committee rosters, posting minutes from meetings, posting information on events and repairing links.

### 3. Further Work

ASME is creating a new enhanced web template for Divisions. Current Division pages were last designed in 2002 however the DED did not adopt the standard template. The current layout for the DED website was last updated in June 2006. The proposed new enhanced web template employs Content Management System (CMS) technology that enables automatic, dynamically driven content to improve information relevance and cross promotion via taxonomy.

Further activities will involve working with ASME to establish the implications of web format changes for the DED.

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## **Journal Relations Committee Report ASME Design Engineering Division Fall 2008**

The objective of the DED Journal Relations Committee (JRC) is to facilitate increased impact of the journals affiliated with the Design Engineering Division. The committee shares best practices, decides appropriate metrics, and determines and implements strategies that influence the journals' impact.

### **New Journal**

The new journal, *ASME Journal of Mechanisms and Robotics*, has been formed and is now in operation. Michael McCarthy is the editor, and associate editors have been selected.

### **Journal Revenue Distribution**

This year, the ASME Publications Committee approved a journal revenue sharing plan that includes a 15% net revenue share to the divisions from each journal. Journal revenue distributions were reported in the spring 2008 DED Executive Committee Report by the Treasurer, and total approximately \$30,000 for DED.

The discussion of these revenues resulted in two action items that were delegated to this committee:

1. How should future distributions from co-sponsored journals (JCISE, JVA, and Journal of Medical Devices) be split among divisions?
2. How will the money be used? (Waldron said that this spending plan will be requested by ASME eventually.) For example, should a portion of this revenue be passed to sponsoring technical committees?

A proposal addressing these two issues will be distributed to the Executive Committee and discussed at the Fall 2008 DED Executive Committee meeting.

*Report Submitted by William W. Clark  
Former Chair of Journal Relations Committee*

**ASME Design Division K-12 Awareness of Design Committee Report**  
**July 24, 2008**  
**Kathy Jacobson - Chair**  
**Kathy.J.Jacobson@LMCO.com**  
**770-494-7818**

**2008 program involvement:**

- Reviewed papers for the Design Education track at 2008 DETC.

The following are examples of activities that I have been involved with organizing to get kids excited about engineering, math & science. Contact me if you would like information on how you can implement similar programs for students in your area.

- Engineers Week Girl Scout Badge Workshop
  - Lockheed Martin sponsored the 8<sup>th</sup> Annual Girl Scout Badge Workshop for 300 Girl Scouts and leaders during Engineers Week. Junior Girl Scouts earned their Aerospace badges, and the older girls worked on career related badge requirements. Both groups toured the Lockheed Martin aircraft assembly line as well. 40 women engineers from Lockheed Martin worked with the girls on their badge requirements.
- Science Olympiad
  - Continued coaching local middle school Science Olympiad team, with Dodgen MS team earning top 10 at state competition for 9<sup>th</sup> year in a row.
  - Organized Road Scholar workshop for 20 middle school students from Georgia. Students learned math, map reading, and other science skills in the workshop.
  - Volunteered at State Science Olympiad competition.
- Mentored Senior high school Girl Scouts in conducting science badge workshops for younger girls.

**Resources:**

Great web sites for activities to help you get K-12 school kids interested in Engineering.

ASME/Girl Scout Collaboration

[http://www.asme.org/Education/PreCollege/Partnerships/Girl\\_Collaboration.cfm](http://www.asme.org/Education/PreCollege/Partnerships/Girl_Collaboration.cfm)

ASME Pre-College Education

<http://www.asme.org/Education/PreCollege/>

Engineers Week  
[www.eweek.org](http://www.eweek.org)

Science Olympiad  
[www.SOINC.org](http://www.SOINC.org)

**Professional Engineering Licensure**  
**A.V. Karvelis**

There is no activity to report at this time.