# ASME Design Engineering Division General Committee Meeting
## Agenda

**Tuesday, August 14th, 2012, 13:30 – 16:30 CDT, Meeting Suite 3**

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<tr>
<td>1</td>
<td>Call to Order</td>
<td>V. Kumar</td>
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<td>2</td>
<td>Approval of Minutes</td>
<td>T. Simpson</td>
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<td>3</td>
<td>Report of the Executive Committee</td>
<td>V. Kumar</td>
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<td>4</td>
<td>Technical Committee and IMECE Reports</td>
<td>C. Rahn</td>
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**Please limit each report to 3 minutes**

- Design Automation  
  K. Lewis  
- Design Education  
  J. Mountain  
- Design for Manufacturing and Life Cycle  
  M. Esterman  
- Design Theory and Methodology  
  D. McAdams  
- Fastening and Joining  
  T. Breitzman  
- Mechanisms and Robotics  
  P. Larochelle  
- Mechatronic and Embedded Systems and App. (MESA)  
  M. Horauer  
- Micro and Nano Systems  
  E. Berger  
- Multibody Systems and Nonlinear Dynamics  
  A. Mikkola  
- Power Transmission and Gearing  
  A. Singh  
- Vehicle Design  
  C. Sandu  
- Vibration and Sound  
  B. Feeny  

10 minute Coffee Break  

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<td>5</td>
<td>Publications</td>
<td>K. Anderson</td>
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**Please limit each report to 4 minutes**

- Journal of Mechanical Design  
  P. Papalambros  
- Journal of Vibration and Acoustics  
  N. Perkins  
- Journal of Computational and Nonlinear Dynamics  
  A. Shabana  
- Journal of Computing and Information Science in Engineering  
  B. Ravani  
- Journal of Medical Devices  
  A. Erdman and G. E. Miller  
- Journal of Mechanisms and Robotics  
  J. M. McCarthy  

6. Vice Chair/Treasurer’s report  
   W. Chen  
7. IDETC report  
   S. Agrawal  
8. Honors and Awards  
   Y. Jin  
9. ASME Headquarters  
   E. Dolan and M. Jakubowski  

10. Standing/Special Committee Reports  
    **Please limit each report to 3 minutes**  
    a. Nominating Committee  
    W. Clark  
    b. Broadening Participation of Women and Minorities  
    J. Terpeny  
    c. Special Committee on Publications  
    K. Anderson  
    d. Publicity and Newsletter  
    S. Orsborn and M. Bohm  
    e. Student Affairs  
    M. Parkinson and S. Ferguson  
    f. Constitution and Bylaws  
    L. Schmidt  
    g. US Council for the Theory of Machines and Mechanisms  
    H. Lipkin  
    h. Government Relations  
    I. Tumer  
    i. Design Society  
    W. Seering  
    j. Information Management  
    S. Gooch  
    k. K-12 Awareness of Design Engineering  
    K. Jacobson  
    l. Innovation and Entrepreneurship  
    J. Rastegar  

11. New Business  
12. Adjourn  
13. DED Awards Reception
ASME Design Engineering Division General Committee Meeting

Agenda

Tuesday, August 14th, 2012, 13:30 – 16:30 CDT, Meeting Suite 3

1. **Call to Order**  
   Meeting called to order at 1:40pm  
   
   **V. Kumar**  
   13:30

2. **Approval of Minutes**  
   The minutes from last year’s DED General Meeting have been circulated for review.  
   
   **T. Simpson**  
   13:32

3. **Report of the Executive Committee**  
   Vijay Kumar presented a PPT version of his Chair report, which is appended to the minutes. He introduced the new ASME staff members for IDETC and reviewed the membership, organization, and finances related to DED. He reviewed recent IDETC finances and paper status, which shows an average of 6% growth of the past decade, and then challenged TC chairs to think about new ways to support this growth with new leadership positions at the TC and DED levels while also encouraging membership levels to remain high (e.g., students that drop their membership after one year). He suggested possibility of a separate DED/TC Chair Retreat (possible location: ASME in New York, NY) to think strategically about this growth and sustaining it, and offered two grand challenges: (1) increase ratio of attendees to papers to be 3:1 and (2) increasing industry participation to 25%.  
   
   **V. Kumar**  
   13:35

4. **Technical Committee and IMECE Reports**  
   TC Chair duties now start in October 1 (not July 1), and TC By-Laws need to be updated accordingly.  
   
   13:45

   (a) **Design Automation**  
   - Engaging larger DAC community beyond DAC Exec  
   - **K. Lewis**

   (b) **Design Education**  
   - Size of committee is good and growing as DEC gains more recognition, number of papers limits DEC revenue, how to engage students/industry with scholarships, ability to schedule TC meetings so that they do not conflict and overlap with other TC meetings  
   - **J. Mountain**

   (c) **Design for Manufacturing and Life Cycle**  
   - Ladder system seems to be working well, just need to make it more robust as TC grows, see good opportunities related to Sustainability, Entertainment Engineering, and other efforts, helping strengthen manufacturing in the US and possibly add another position to our TC leadership to support these efforts; maintaining a good candidate pool for Toshiba - Kos Ishii Award  
   - **M. Esterman**

   (d) **Design Theory and Methodology**  
   - Finally established a TC level award, which will be awarded next year; better access to our financial accounts; challenges of not having a ladder model in place for leadership to maintain corporate knowledge during transitions; how to engage younger faculty in the TC and get them involved sooner and recognize their efforts; DED also needs to look into % return for crediting papers to DTM given that it is a single track  
   - **D. McAdams**

   (e) **Fastening and Joining**  
   - **T. Breitzman**

   (f) **Mechanisms and Robotics**  
   - Need policies and guidelines as to when TC can co-sponsor a conference outside of ASME; try to improve nomination process for Society and DED level awards and ASME fellows  
   - **P. Larochelle**

   (g) **Mechatronic and Embedded Systems and App. (MESA)**  
   - Not present  
   - **M. Horauer**

   (h) **Micro and Nano Systems**  
   - Resulted as a merger of two communities but now redefining what this new community is; how to cultivate more and better nominations for MNS Award; paper numbers are down slightly but membership appears to be robust  
   - **E. Berger**

   (i) **Multibody Systems and Nonlinear Dynamics**  
   - Two new members have been added to the TC but there is a lot more interest and limited positions for appointments; challenges of the global community and timing of conference (e.g., European interest low this year due to conference time); airline tickets for August are much more expensive than in September; members want to get a lot more from their registration (e.g., on-site luncheons every day)  
   - **A. Mikkola**

   (j) **Power Transmission and Gearing**  
   - Not present  
   - **A. Singh**

   (k) **Reliability, Stress Analysis, and Failure Prevention**  
   - Not present  
   - **T. Sawa**

   (l) **Vehicle Design**  
   - Not present  
   - **C. Sandu**
a. Community has grown a lot lately; paper numbers are lower than expected as many authors expected an extension of the deadline; very large number of active TC members from industry (nearly 50%), which provides good opportunities to do tutorials, workshops, etc. by academics for industry;

(m) Vibration and Sound
   a. Paper submissions are good; student paper competition went well this time but TC noted improvements for next year’s offering;

5. Publications
   K. Anderson 14:35
   (a) Journal of Mechanical Design  P. Papalambros
      a. Tim Simpson reviewed Panos Papalambros’ report on JMD, noting that Panos’ term as Editor ends by January 2013.
   (b) Journal of Vibration and Acoustics  N. Perkins
      a. Noel Perkins shared his report on the journal activities. He noted that they have started an electronic newsletter for participants, which has been very successful acknowledging best papers and upcoming ASME events; Special Issue planned for this year along with collaborative issues with other journals (e.g., to enable longer papers); page count has grown from 800 to 900 pages; trying to recruit new AEs;
   (c) Journal of Computational and Nonlinear Dynamics  A. Shabana
      a. Growth
   (d) Journal of Computing and Information Science in Engineering  B. Ravani
      a. Not present
   (e) Journal of Medical Devices  A. Erdman and G. E. Miller
      a. Not present
   (f) Journal of Mechanisms and Robotics  J. M. McCarthy
      a. Not present and no report

6. Vice Chair/Treasurer’s report  W. Chen 15:00
   Wei Chen reviewed the Vice Chair report and finances, and noted DED and TC frustrations with ability to access and review this information regularly. Wei will start to send quarterly reports to TCs for review.

7. IDETC report  S. Agrawal 15:10
   Vijay Kumar summarized Sunil Agrawal’s IDETC report, noting proposed locations of future IDETCs. There was a considerable amount of discussion about the proposal to hold 2015 IDETC abroad (e.g., Rome, Italy). Jeff Rhoads joined the discussion and noted that they are willing to approach NSF and other agencies to help support and subsidize student travel to an international conference. There was a suggestion to make the Conference Schedule readily available for download so that people could view/search the schedule on their smartphones and mobile devices. There was also a suggestion to get information and deadlines posted as early as possible to help with planning, particularly for industry participants.

   Yan Jin presented his report, noting which awards will be given later tonight at the Awards Reception. He noted lack of nominations for some Society level awards, which can be downgraded to a lower level if no nominations are made for several subsequent years. He then shared a revised proposal for creating a new DED Awards Nominating Committee, which would include representatives from each TC and be separate from the Award Selection Committees. Vijay Kumar also encouraged TCs to think about how to promote ASME Fellow nominations within TC as well.

9. ASME Headquarters  E. Dolan and M. Jakubowski 15:30
   Mike Ireland shared updates on recent ASME reorganization and staff changes. A copy of his PPT slides (presented at the DED Executive Committee meeting on Sunday) has been appended to the meeting minutes.

10. Standing/Special Committee Reports 15:40
    a. Nominating Committee  W. Clark
       o Buddy Clark was not able to attend the meeting, and there were no updates other than the appointment of the new DED Executive member, Tim Simpson, to Secretary. A new Nominating Committee needs to be formed this fall to solicit nominations for open committee positions next year.
    b. Broadening Participation of Women and Minorities  J. Terpenny
       o Janis Terpenny introduced Kate Fu, who is now co-chairing the committee. Kate reviewed the workshop from 2011 IDETC, which was well received and attended despite the hurricane. The 4th annual workshop was held at 2012 IDETC, with over 50 people in attendance, ranging from students to
faculty to industry. Focus this year was on communicating technical ideas, and networking to get more under-represented people engaged in different TC and leadership activities. A networking Wiki is also planned to provide additional resources for the growing community. Committee will continue to submit requests to DED for support of the workshop, which includes professional workshop organizers that are determined based on the selected topic/theme for the upcoming year.

c. **Special Committee on Publications**
   - **K. Anderson** –
     - Kurt Anderson was not present; his report is available as part of the meeting minutes.

d. **Publicity and Newsletter**
   - **S. Orsborn and M. Bohm**
     - Seth Orsborn shared his report and noted that he will transition out of his duties this coming year to support Matt Bohm, the new Publicity & Newsletter Chair, as the responsibilities of this committee are expected to grow in the coming year. Vijay Kumar noted that DED is willing to provide support if there is a proposal for new initiatives to promote better communication.

e. **Student Affairs**
   - **S. Ferguson**
     - Scott Ferguson was not able to attend the regular meeting, but his report was shared with the committee. He and Vijay Kumar spoke after the meeting adjourned about new initiatives that may increase student engagement and involvement.

f. **Constitution and Bylaws**
   - **L. Schmidt**
     - Linda Schmidt was not able to attend IDETC and did not have a report as there were no updates. DED would like a review of its constitution and bylaws, and Vijay Kumar will check with Linda about her committee spearheading this effort. In fact, according to ASME, DED should be referring to these as “Operating Procedures”; not Constitution or Bylaws.

g. **US Council for the Theory of Machines and Mechanisms**
   - **J. Ge**
     - There is no report yet as Jeff Ge is newly appointed in this role.

h. **Government Relations**
   - **I. Tumer**
     - Irem Tumer is no longer chair; a replacement chair is needed. Vijay Kumar with Irem Tumer to identify potential replacements.

i. **Design Society**
   - **W. Seering**
     - Tim Simpson shared Warren Seering’s report on Design Society activity. There is interest in working together more, and we recognized that we need to do better communicating decision-making timelines so that conference planning can be better coordinated. This is particularly relevant given the proposal to hold IDETC 2015 in Rome, Italy, which will occur the same year that next ICED will take place.

j. **Information Management**
   - **S. Gooch**
     - There is no report due to last year’s earthquake in New Zealand. Shane Gooch has been promoted to a new position and seeks a replacement to take over the website given his new duties, which will likely be merged with the Publicity and Newsletter.

k. **K-12 Awareness of Design Engineering**
   - **K. Jacobson**
     - Kathy Jacobson shared her report on K-12 Awareness and talked about engaging STEM efforts in Georgia and through her company. She also shared previous conference activities in engaging local ASME chapters as part of previous conferences to foster industry engagement. She also commented on industry’s desire to network with faculty at the conference – and also network with other industry representatives. She said that Industry Panels are good for IDETC, but they need to be more heavily advertised and attended.

l. **Innovation and Entrepreneurship**
   - **J. Rastegar**
     - There was no report, and DED will evaluate whether this committee is still needed.

**Action Item #1 (Vijay Kumar):** Communicate with Linda Schmidt, Irem Tumer, Shane Gooch, and Jay Rategar to get updates on their Standing Committees and leadership transition.

**Action Item #2 (Vijay Kumar):** Communicate with Buddy Clark about appointing new members to the Nominating Committee in the Fall semester to solicit nominations for opening positions this coming year.
11. New Business
   There was no new business.

12. Adjourn
   Meeting was adjourned at 4:24pm.
EXECUTIVE COMMITTEE MEMBERSHIP

Effective July 1, 2012, the following changes were made to the membership of the DED Executive Committee:

1. Timothy Simpson was elected as the new Secretary.
2. Wei Chen is now the Vice-Chair and Treasurer.
3. William Clark completed his year as chair and is now serving as the Past Chair on the Executive Committee. Dr. Clark has worked diligently to advance the goals of the division through his service on the Executive Committee as well as in other ASME groups and his service and leadership are greatly appreciated.
4. Hamid Hamidzadeh has completed his tenure as a DED Executive Committee member. Dr. Hamidzadeh’s contributions to DED and his many years of dedicated work on the committee, including his service as the Chair of the Nominating Committee during the past year, are gratefully acknowledged.
5. The ASME DED staff has changed. Mary Jakubowski is the program manager and Jovita Frederick is the administrator. Special thanks to our former program manager, Erin Dolan, and administrator, Lashion Pettiford.

FINANCES

The DED’s finances have grown during the past year not only due to strong market performance, but also due to distributions of funds from conferences, journals, and membership. The combined balance of all Division accounts is nearly $1.5M. The steady revenue from the primary activities of the division is a good indicator of the vibrant nature of the division. Unfortunately because of difficulties in obtaining account balances, the exact number is not available.

The DED has had a history of empowering the volunteer leadership and allowing growth to be driven bottom up. The Division now has 13 technical committees, each with its own fund. The strong fiscal health of the Design Engineering Division is a direct result of this and the hard work of many volunteer leaders.

EVENTS

The showcase event of the Design Engineering Division each year is the IDETC/CIE meeting. This event has become a premier international meeting for Design Engineering researchers and practitioners, with sessions devoted to cutting edge research, tutorials, and exhibits. In addition to the IDETC, the technical committees also sponsor sessions at the ASME IMECE each year. Both these events are discussed in the attached reports.
IDETC/CIE Conferences
The IDETC/CIE conferences continue to be very successful. The number of papers in odd years (larger conference) has stabilized while this number in even years continues to grow. The average growth rate is approximately 6% per year. IDETC 2010 at Montreal included 589 technical papers and generated a surplus in revenue of $74,638, which was divided between the Division and the sponsoring Technical Committees, while the IMECE netted over $10,000. The 2011 IDETC at Washington DC included 1189 papers and generated revenues of over $102,000, in spite of the difficulties because of the bad weather.

The Technical Committees and the Division used their funds primarily to support awards, with the award accounts seeing increases of over $100,000 during the year. More details about the DED finances are presented in Wei Chen’s Treasurer’s report.

Technical Committees
The work of the DED is carried out by the 13 Technical Committees, including:

- Design Automation (DAC)
- Design Education (DEC)
- Design for Manufacturing and the Life Cycle (DFMLC)
- Design Theory and Methodology (DTM)
- Fastening and Joining (F&J)
- Mechanisms and Robotics (M&R)
- Mechatronic and Embedded Systems and Applications (MESA)
- Micro & Nano Systems (MNS)
- Multibody Systems and Nonlinear Dynamics (MSND)
- Power Transmission and Gearing (PTG)
- Reliability, Stress Analysis & Failure Prevention (RSAFP)
- Vehicle Design
- Vibration and Sound (TCVS)

A detailed report from each technical committee can be found in the DED report, which discusses the general mission of each committee and its activities for the past year.

Journals
In addition to the technical conferences, the Design Engineering Division also sponsors five technical journals that cut across a wide range of facets of design engineering. These highly-rated journals include:

- Journal of Computational and Nonlinear Dynamics (Ahmed Shabana, Editor)
- Journal of Mechanical Design (Panos Papalambros, Editor)
- Journal of Mechanisms and Robotics (Michael McCarthy, Editor)
- Journal of Medical Devices (co-sponsored with Bioengineering Division) (Arthur Erdman and Gerald Miller, Co-Editors)
- Journal of Vibration & Acoustics (Noel C. Perkins, Editor)
• Journal of Computing and Information Science in Engineering (co-sponsored with CIE Division) (Bahram Ravani, Editor)

Royalties generated by the technical journals are returned in part to the sponsoring divisions. Last year the Executive Committee approved providing a portion of these funds to the technical editors in order to support journal operations.

Honors and Awards

One of the most active missions of the DED is to recognize the outstanding research, education, and engineering accomplishments of members of the design engineering community through its vibrant awards program. This is managed by the Honors and Awards Chair, Yan Jin. There are currently up to twenty-eight awards given out within DED during any two year period, including four Society-level awards, two Division-level awards, six Division/Committee-level awards, and sixteen Committee-level awards. There is a proposal to establish a nomination committee for awards that are not under direct oversight of a committee member.

Special Initiatives

Committee on Broadening Participation of Women and Minorities

This committee was founded by Judy Vance and Jan Terpenny and has created a very popular program, highlighted by a workshop at the IDETC, to promote women and minorities in design engineering fields. This past year the Executive Committee approved establishment of a separate account through which this standing committee will have more direct control over their operating funds.

Publicity and Newsletter

DED Newsletters are now published as an 8-page special insert in the Mechanical Engineering magazine. There is a proposal to create an online presence for the content of the DED newsletter in addition to the annual print publication. Seth Orsborn is stepping down as the publicity and newsletter chair and his role will be assumed by Matt Bohm.

Respectfully submitted,

Vijay Kumar
Technical Committees Report

I. Change of the Committee Chairs:
The following changes of TC Chairs (term starting from October 1, 2012) are to be approved at the DED executive committee meeting (August 12, 2012)
1. Design Automation Committee (DAC): Kemper Lewis of the University of Buffalo is to be replaced by Gary Wang of Simon Fraser University.
2. Design for Manufacturing and the Life Cycle Committee (DFMLC): Marcos Esterman of the Rochester Institute of Technology is to be replaced by Shun Takai of Northern Illinois University.
3. Mechatronic and Embedded Systems and Applications (MESA): Martin Horauer of the UAS Technikum Wien in Austria is to be replaced by Bo Chen of Michigan Technological University.
4. Micro & Nano Systems (MNS): Edward J. Berger of the University of Virginia is to be replaced by S. V. Sreenivasan of the University of Texas.
5. Power Transmission and Gearing (PTG): Avinash Singh of General Motors is to be replaced by Timothy Kranz of NASA.
6. Reliability, Stress Analysis and Failure Prevention (RSAFP): Toshiyuki Sawa of Hiroshima University is to be replaced by Erol Sancaktar of Akron University.
7. Vibration and Sound (TCVS): Brian Feeny of Michigan State University is to be replaced by Steve Shen of the University of Washington.

No Change
1. Design Education Committee (DEC): Jeffrey Mountain of Norwich University
2. Design Theory and Methodology (DTM): Dan McAdams of Texas A&M
3. Fastening and Joining (FJ): Timothy Breitzman of the Air Force Research Laboratory
5. Multibody Systems and Nonlinear Dynamics (MSND): Aki Mikkola of Lappeenranta University of Technology (LUT) in Finland
6. Vehicle Design: Corina Sandu of Virginia Tech

II. TC Leadership Training
DED organized a Technical Committee (TC) Leadership Training meeting for its first time in the annual IDETC conference, August 29, 2011. The objective of this training is to introduce the DED Technical Committee leadership functions and provide a forum for idea exchange of best practices to further enhance the technical excellence and professional success of TCs. In the meeting, Dr. Wei Chen, the DED TC executive, first gave an overview, including subjects like the organization of ASME, the main functions of Technical Committee, and the suggested TC operating timeline (attached). She also introduced the members of the DED executive committee and their individual responsibilities. After her overview, Dr. Zissimos Mourelatos, Chair of the Design Automation Committee and Dr. Bala Balachandran, chair of the Multibody Systems and Nonlinear Dynamics TC, each gave a ten-minute talk of their best practices in TC
operations. Their talks were followed by the Q&A and open forum discussions. The leadership training was well attended by the incoming TC chairs and/or vice chairs. Many attendees thought this was a very informative session that also helped to enhance the communication between the TCs and the executive committee. It was recommended that we should continue such training in the future. The next DED Leadership Training is scheduled for the early morning of August 13, 2012, the first day of the 2012 IDETC.

III. Highlights of Semi-Annual TC Reports

To ensure each TC is being actively engaged in TC activities with its members, the DED executive now requests a semi-annual TC report from each TC in addition to the annual report. The following are the highlights of the TC activities based on the semi-annual reports submitted in February 2012.

- The Design Automation Committee (DAC) continues to sponsor the Best Paper Award, the Design Automation Award, and the Design Automation Young Investigator Award.

- The Design for Manufacturing and Life Cycle (DFMLC) committee continues to grow with its newly expanded dimension in design for life cycle issues. New tracks on this topic will be featured in 2012 IDETC. The committee also calls for nominations for the second year of the Kos Ishii-Toshiba award.

- The Mechanisms and Robotics (M & R) Committee approved a major revision to its by-laws. These changes included increasing the terms of service for the Chair, Vice-Chair and Past-Chair from 1 year to 2 years and a reduction in the number of committee members. Under the leadership of its founding editor Dr. Mike McCarthy, the ASME Journal of Mechanisms & Robotics continues its healthy growth and is now indexed by Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, and Current Contents/Engineering Computing and Technology.

- The Power Transmission and Gearing Technical (PTG) Committee bestowed the second Darle W. Dudley Award for outstanding contributions to the Power Transmission and Gearing community to Dr. Aizoh Kubo, Professor Emeritus at Kyoto University, Japan.

- To support TC functions, the Technical Committee on Multibody Systems and Nonlinear dynamics (TC-MSND) has formed several subcommittees on conference coordination, honors, and membership nominations.

- The Vehicle Design (VD) Committee has continued to work on the aspects of increasing the level of participation of its members, the visibility of the committee, and strengthening its relations with industry. Several strategies have been identified to attract new members.
IV. Update of DED and ASME Mechanical Engineering Magazine Collaboration
To bring more visibility to the activities of the Division and increase our membership, DED solicited close to 30 article ideas and passed them along to the Mechanical Engineering Magazine Editor-in-Chief John Falcioni. Unfortunately, a recent follow-up with John Falcioni indicated that none of these articles have been published so far. John Falcioni apologized for this delay. He plans to follow up immediately to contact the potential authors.

Submitted by
Wei Chen, TC executive (till July 1, 2012)
Chris Rahn, TC executive (beginning from July 1, 2012)

August 6, 2012
# Appendix: ASME Design Engineering Division (DED) Technical Committee Operation

## Suggested Timeline

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<th>Month</th>
<th>TC Leadership</th>
<th>Conference Organization</th>
<th>Awards</th>
<th>Accounting</th>
<th>Reporting /Newsletter</th>
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<tr>
<td><strong>Sep</strong>&lt;br&gt;(after IDETC)</td>
<td>Confirm organizer(s) of Special Sessions in next year’s IDETC; Solicit session descriptions; Solicit International Liaisons; Solicit track/session organizers for next year’s IMECE</td>
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<td><strong>Oct</strong>&lt;br&gt;New TC Chair term starts from Oct. 1; Provide DED updated information of current TC executive committee members</td>
<td>Advertise for next year’s conference; Finalize topic areas and special sessions; Finalize International Liaisons</td>
<td>Solicit society/division award nomination</td>
<td>Obtain a copy of the Account activities report for all their accounts from the DED Treasurer. This report should include the paid TC expenses for the awards and the IDETC.</td>
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<td><strong>Nov</strong></td>
<td>Set up all topic areas in IDETC webtool; Assign special session organizers</td>
<td>Solicit committee awards nomination; Form committee awards selection committee</td>
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<td><strong>Dec</strong></td>
<td>Update IDETC web information as needed</td>
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<td>Report all changes to the TC for possible inclusion in the DED poster for the LTC to be held in March.</td>
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<td>Month</td>
<td>Tasks</td>
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<td>Feb</td>
<td>Solicit nomination for the incoming TC executive member(s)</td>
<td>Invite review coordinators and provide them with instructions</td>
<td>Submit nominations of society/division award nominations to the Chair of DED Honors and Awards</td>
<td>Submit semi-annual Committee Report to DED on TC activities</td>
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<td>Mar</td>
<td>Monitor the review progress; Assist review coordinators; Identify conference keynote speaker</td>
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<td>Contribute news items to DED newsletter editor, which may include a review of committee activities and anticipating events</td>
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<td>Apr</td>
<td>Make paper acceptance decisions; Finalize panel sessions</td>
<td>Deadline for committee awards nomination</td>
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<td>May</td>
<td>Select the incoming executive member(s); Send formal request to DED for approval of incoming TC chair</td>
<td>Send info on keynote speaker to ASME; Prepare Chair's message for IDETC program; Obtain the title, abstract, and speaker bio and photo of keynote talk</td>
<td>Select committee awards’ recipients</td>
<td>Review account updates and report any problems; Obtain a copy of the Account activities report for all their accounts from the DED Treasurer. This report should include the received revenue from the IDETC event.</td>
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<td>Jun</td>
<td>Finalize session schedule; Assign session chairs/co-chairs; Conference events scheduling</td>
<td>Make best paper selection decision; Prepare document for award announcement</td>
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<td>Submit annual Committee Report to DED</td>
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<td>Jul</td>
<td>Promote panel sessions and special events; Proofread the final program</td>
<td>Work with DED awards committee for certificates; Notify the authors of best paper winner</td>
<td>Contact ASME to issue checks of awards</td>
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| **Aug /Sep** (at IDETC) | **Incoming TC chair attends**  
TC leadership tutorial at IDETC  
Identify authors and articles for publication in the ME Magazine and provide information to the TCs Executive Chair. | **Organize the committee meeting in IDETC** | **Attend awards banquet; Distribute certificates and awards in banquet or committee meeting** | **Both TC chair and incoming chair attend the general committee meeting in IDETC to report committee activities** |

*Some TCs may choose to select incoming TC executive committee member(s) in the TC committee meeting at IDETC.*

**Note:** The above schedule is based on the assumption that IDETC is held in late August to early September of the year. The timeline will be adjusted if the meeting time is different.
2011 IMECE

Location: The 2011 IMECE was held in Denver, Colorado, from November 11 to 17.

DED Revenue Share: $8,151.

Track Organizers from Design Engineering Division (DED):

  **Track 4: Dynamic Systems and Control**
  Track Organizer: Albert Luo, Southern Illinois University Edwardsville
  Track Co-Organizer: Liming Dai, University of Regina
  Track Co-Organizer: Marco Amabili, McGill University
  Sessions: 53

  **Track 8: Biomedical and Biotechnology Engineering**
  Track Organizer: Ahmed Al-Jumaily, Institute of Biomedical Technologies
  Track Co-Organizer: Sara Wilson, University of Kansas
  Track Co-Organizer: Ram Devireddy, LSU
  Track Co-Organizer: Erol Ulucakli, Lafayette College
  Sessions: 62

  **Track 18: Transportation Systems**
  Track Organizer: Khaled Zaazaa, ENSCO, Inc.
  Sessions: 33

  **Track 16: Design and Manufacturing**
  Track Organizer: Rama Koganti, US Army
  Track Co-Organizer: Mustapha S. Fofana, Worcester Polytechnic Institute
  Track Co-Organizer: Shuichi Fukuda, Stanford University
  Track Co-Organizer: Sanjeev Khanna, University of Missouri
  Track Co-Organizer: Cameron Turner, Colorado School of Mines
  Track Co-Organizer: Toshiyuki Sawa, Hiroshima University
  Track Co-Organizer: Franz-Josef Kahlen, University of Cape Town
  Track Co-Organizer: J. Cecil, Oklahoma State University
  Sessions: 39

2012 IMECE

Location: The 2012 IMECE will be held in Houston, Texas, from November 9 to 13.

Status: The organizer indicated that none of the tracks or topics is sponsored by DED.

2013 IMECE

TCs are encouraged to get involved in the 2013 IMECE. Interested parties should contact Assimina Pelegri pelegri@jove.rutgers.edu.

Submitted by
Chris Rahn

August 2012
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.

2011 ASME IDETC Summary
For the 2011 ASME IDETC held in Washington, DC, 152 papers were submitted to the Design Automation Conference, of which 114 papers were accepted. These papers were presented in 28 technical sessions in three parallel tracks. The Design Automation Committee presented the 2011 DAC Best Paper Award to John Whitefoot, Abigail R. Mechтенberg, Diane L. Peters, and Panos Y. Papalambros for their paper entitled "Optimal Component Sizing and Forward-Looking Optimal Dispatch of an Electrical Microgrid for Energy Storage Planning" (DETC2011-48513).

Also, last year for the first time we recognized the top 10 DAC Papers which were listed in the IDETC program. These papers were (in numerical order by paper number):

- DETC2011-47922 A Function Based Approach for Product Integration, by Vishwa Kalyanasundaram and Kemper Lewis
- DETC2011-48196 Multidisciplinary Design Optimization of Modular Industrial Robots, by Mehdi Tarkian, Johan Persson, Johan Ölvander, and Xiaolong Feng
- DETC2011-48314 Resilience-driven System Design of Complex Engineering Systems, by Byeng D. Youn, Chao HU, and Pingfeng Wang
- DETC2011-48318 Sequential Sampling with Kernel-based Bayesian Network Classifiers for Set-based Design, by David Shahan and Carolyn Seepersad
- DETC2011-48319 Random Field Characterization with Insufficient Data Sets for Probability Analysis and Design, by Zhimin Xi, Byungchang Jung, and Byeng D. Youn
- DETC2011-48532 Optimizing the Shear Beam of a Non-pneumatic Wheel for Low Rolling Resistance, Niranjan Thyagaraja, Prabhu Shankar, Georges Fadel, and Paolo Guarneri
- DETC2011-48566 Convex Estimators for Optimization of Kriging Model Problems, by Karim Hamza and Mohammed Shalaby

Our 2011 DAC Keynote Speaker, Sridhar Kota from University of Michigan, who is also a White House Office of Science and Technology Policy, spoke on “Innovation and US-based Manufacturing.” In addition, we had three special panel sessions: 1) Environmental Policy in Vehicle Design, organized by Dr. Jeremy Michalek, 2) Interdisciplinary Design Research and Education: The New Frontier, organized by Drs. Tim Simpson and Panos Papalambros, and 3) Q&A with Design Engineering Divisions Journal Editors, organized by Dr. Shapour Azarm.
2011 DAC Awards
Dr. Ram Sriram from the National Institute of Standards and Technology was the recipient of the 2011 Design Automation Award and Prof. Levent Burak Kara from Carnegie Mellon University received the 2011 DAC Outstanding Young Investigator Award.

2011-12 DAC Executive Committee
In 2011, Dr. Matt Parkinson (Penn State University) was elected to serve on the Executive Committee as the Special Sessions Paper Chair for the 2012 ASME IDETC - Design Automation Conference. He joined Committee Chair Dr. Kemper Lewis (University at Buffalo – SUNY), Conference Chair Dr. Gary Wang (Simon Fraser University, British Columbia), and Program Chair Dr. Horea Ilies (University of Connecticut). This past year, we also welcomed our new Industry Liaison, Dr. Julian Norato (Caterpillar), to the Executive Committee. Dr. Zissimos P. Mourelatos (Oakland University) was the Committee’s Past Chair. Dr. Horea Ilies also maintains the websites for our conference and committee http://cdl.engr.uconn.edu/asmeca.

2012 DAC Plans
We anticipate another exciting Design Automation Conference (DAC) in 2012. This year, 156 papers were submitted to the conference and 122 papers were accepted after a rigorous peer review process with a 78% acceptance rate. The accepted papers will cover 22 topics spanning the Design Automation’s four key research areas, and they will be presented in multiple technical sessions, running in parallel tracks. The top 10 DAC papers for the conference, as determined based on the review ratings, review coordinator recommendations, and a panel of DAC Executive Committee members are as follows:

- DETC2012-70132 Time-Dependent Reliability Analysis By A Sampling Approach To Extreme Values Of Stochastic Processes, by Zhen Hu and Xiaoping Du;
- DETC2012-70225 Optimal Design Of A Simplified Morphing Blade For Fixed-Speed Horizontal Axis Wind Turbines, by Weijun Wang, Stéphane Caro, Fouad Bennis, and Oscar Roberto Salinas Mejia;
- DETC2012-70333 Network Target Coordination For Optimal Design Of Decomposed Systems With Consensus Optimization, by Wenshan Wang, Paolo Guarneri, Georges Fadel, and Vincent Blouin;
- DETC2012-70529 An Ensemble Approach For Robust Data-Driven Prognostics, by Chao Hu, Byeng D. Youn, Pingfeng Wang, and Joung Taek Yoon;
- DETC2012-70668 Stochastic Reassembly for Managing the Information Complexity in Multilevel Analysis of Heterogeneous Materials, by Hongyi Xu, M. Steven Greene, Wei Chen, Hua Deng, Catherine Brinson, Dmitriy Dikin, Wing Kam Liu, Craig Burkhart, George Papakonstantopoulos, and Mike Poldneff;
- DETC2012-70832 Selecting And Optimizing A Regulation Compliant Robust Vehicle Portfolio Mix: An Approach And A Case Study, by Anil Kumar Maddulapalli, Parameshwaran S Iyer, and N. R. S. Raghavan;
- DETC2012-71039 Use Scenarios For Design Space Exploration With A Dynamic Multiobjective Optimization Formulation, by Shane Curtis, Braden J. Hancock, and Christopher A. Mattson;
- DETC2012-71112 A Framework For Parallel Sampling Of Design Space With Application To Vehicle Crashworthiness Optimization, by Karim Hamza and Mohammed Shalaby;
- DETC2012-71391 Design Of Crashworthy Structures With Controlled Energy Absorption In The Hca Framework, by Punit Bandi, James P. Schmiedeler, and Andrés Tovar;
- DETC2012-71507 Casting And Milling Restrictions In Topology Optimization Via Projection-Based Algorithms, James Guest, and Mu Zhu.
From these outstanding papers, the Best Paper Award, sponsored by the Ford Motor Company will be given to Hongyi Xu, M. Steven Greene, Wei Chen, Hua Deng, Catherine Brinson, Dmitriy Dikin, Wing Kam Liu, Craig Burkhart, George Papakonstantopoulos, and Mike Poldneff for their paper entitled “Stochastic Reassembly for Managing the Information Complexity in Multilevel Analysis of Heterogeneous Materials” (DETC2012-70668). The best paper award will be presented at the DAC Keynote and Awards session on Monday, August 13th from 9:30-10:50AM.

Our DAC Keynote Speaker will be Dr. Julio Mario Ottino, Dean of the Robert R. McCormick School of Engineering and Applied Sciences at Northwestern University who will speak on “Navigating the Domains of Art, Technology, and Science”. In addition, we have a special panel session this year: Industrial Design Automation in the Cloud: Opportunities and Challenges, organized by Dr. Julian Norato. Finally, Prof. Singiresu S. Rao from the University of Miami is the recipient of the 2012 Design Automation Award and Prof. Erin MacDonald from Iowa State University will receive the 2012 DAC Outstanding Young Investigator Award.

We continue to attract many applicants to serve on the DAC Executive Committee. Starting on October 1, 2012, Dr. Carolyn Seepersad (University of Texas-Austin) will begin to serve on the Executive Committee as the Special Sessions Paper Chair for the 2013 ASME IDETC - Design Automation Conference. She will join Committee Chair Dr. Gary Wang (Simon Fraser University, British Columbia), Conference Chair Dr. Horea Ilies (University of Connecticut), and Program Chair Dr. Matt Parkinson (Penn State University). Dr. Julian Norato (Caterpillar) will continue to serve as the Industry Liaison to the Executive Committee. Dr. Kemper Lewis (University at Buffalo – SUNY) will be the Committee’s Past Chair. Dr. Horea Ilies also maintains the websites for our conference and committee http://cdl.engr.uconn.edu/asmeda.

Respectfully submitted,

Kemper Lewis
University at Buffalo – SUNY
Chair, 2011-12 Design Automation Executive Committee
The Design Education Committee (DEC) is focused on the teaching of design and is interested in the educational aspects of design promoted by Engineering Design educators, as well as other Design Engineering Division technical committees. This year marks the 9th year of our participation in the International Design Engineering Technical Conferences (IDETC) with our International Conference on Design Education. Last year, DEC had 33 technical papers prepared for final submission. For DEC 2012, we have received 42 initial abstracts, resulting in 35 draft technical paper submissions; 32 of which were accepted for final publication following a rigorous review process. The DEC is also hosting two panel discussion sessions: “Designing Safe Children’s Products” and “Research Methods in Design Education,” which we hope will be of interest to the broader design engineering community.

For DEC 2012, the Conference Chair is Zahed Siddique, and the Program Chair is Robert Nagel. The sessions and panels continue our focus on interdisciplinary design, globalization, and innovation. In addition, topics of emerging importance, such as assessment, new pedagogies, and best practices have allowed us to continue planning for the future of design education. We continue to stress an increased rigor in the technical paper submissions in an effort to promote design education as a viable and important area of academic research. For example, the technical committee sponsors a “Best DEC Paper” award where we recognize the author(s) for their implementation of rigorous research methods on design education and international design topics. This year we want to recognize Christopher Williams, John Gero, and Yoon Lee for their paper "Comparing the design cognition of two engineering majors: A measurement-based approach"; listed as DETC2012-71218.

We continue to encourage authors to submit high quality manuscripts related to design education research to the Journal of Mechanical Design and appreciate the Society's commitment to an Associate Editor specifically for the design education community. We continue to encourage participation in both the DEC conference and the related design conferences represented at IDETC; educational methods should evolve synergistically with the emerging design engineering theory and practice. Accordingly, we continue to promote a broader participation in the DEC through these collaborative efforts.

The DED standing committee on K-12 Outreach has been incorporated into the DEC and is chaired by Kathy Jacobson. Interested parties should note a session on K-12 and STEM is being hosted by the DEC.

Effective October 2012, Jeffrey Mountain will be stepping down as DEC chair and Mike Keefe will assume the chair’s role. Our current officers are: Jeffrey Mountain, Chair; Mike Keefe, Vice Chair; Spencer Magleby, Associate Vice Chair and Chair of the International Activities Subcommittee; Chris Williams, Secretary; and Al Karvelis, Treasurer. We are seeking nominations for the positions of Secretary and 2013 Conference Program Chair. Those interested in learning more about opportunities to serve your profession within DEC are asked to contact Jeffrey Mountain (Norwich University) at mountainj@asme.org or Mike Keefe (University of Delaware) at keefe@udel.edu.
To: ASME Design Engineering Division Executive Committee

From: Marcos Esterman, Chair, DFMLC Technical Committee
Shun Takai, Vice Chair, DFMLC Technical Committee
Gul Kremer, Secretary, DFMLC Technical Committee

Date: 8/4/12

Re: DFMLC Technical Committee Activities

The primary activity of the DFMLC Technical Committee is organizing the Design for Manufacturing and the Life Cycle Conference (DFMLC) at the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC/CIE). The ASME Design for Manufacturing and the Life Cycle Conference has become a primary international forum for the exchange of technical and scientific information on the theory and practice of design for manufacturing and the life cycle methods. For the 2012 conference, sixty-eight papers were submitted and fifty-six were accepted. This year again, there were substantial submissions in the area of sustainable design, which resulted in four separate sessions and eighteen papers in that topic. Under the leadership of John W. Wesner, the momentum generated in the area of Entertainment Engineering has been sustained with a panel session that will be moderated by John. Ryo Amano of the University of Wisconsin-Milwaukee initiated, organized and is coordinating three sessions on thermal and energy systems. This has resulted in 13 papers that will be presented within the conference.

In 2011 the DFMLC Technical Committee established Kos Ishii-Toshiba Award in honor of the late Professor Kos Ishii, who was an internationally distinguished and influential researcher and educator in the field of design for manufacturing and the life cycle. The first recipient of the award was Satyandra K. Gupta of the University of Maryland College Park. Mrs. Naomi Ishii, the wife of the late was in attendance for the first award ceremony. Based on the nominations in response to the solicitation in the DFMLC e-mail list, the award selection committee has chosen the 2012 award recipient, who will be announced, together with the DFMLC best paper award, during the DFMLC award ceremony to be held at the 2012 IDETC/CIE during DFMLC Session 16.

Qingjin Peng (Chair - Univ. of Manitoba), Derrick Tate (Program Chair - Texas Tech) and Fu Zhao (Special Sessions Chair – Purdue) are to be congratulated for their fine organization of the 2012 conference. Derrick Tate will be the conference chair for the 2013 DFMLC conference, Fu Zhao will be the Program Chair and new Special Sessions Chair will be selected at the 2012 IDETC/CIE. The committee officers for 2012-2013 will be Shu Taka (Chair), Gul Kremer (Vice Chair) and Qingjin Peng (Secretary).

The following persons are representing the DFMLC community as Associate Editors for ASME journals.

- Kazuhiro Saitou (DFML Chair 2011-2012) is an Associate Editor (Computer Aided Engineering) for the Journal of Computing and Information Science in Engineering (JCISE), 2009-2012.
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 24th International Conference on Design Theory and Methodology is held at IDETC2012 in Chicago, IL. Irem Y. Tumer of Oregon State University is the Conference Chair and Andy Dong of The University of Sydney is the Program Chair.

The 2012 conference consists of 14 technical sessions. This year there were 108 abstracts submitted, 94 papers submitted, 52 papers accepted (for an acceptance rate of 55%), with 14 papers accepted that had at least one author from an institution outside the United States. From the accepted papers, the following papers were nominated for best paper consideration:

- DETC2012-70933 “Categorizing Affordances for Product Design” by Jun Hu and Georges Fadel;
- DETC2012-70928 “Automatically Populating the Biomimicry Taxonomy for Scalable Systematic Biologically-Inspired Design” by Dennis Vandevenne, Paul-Armand Verhaegen, Simon Dewulf, and Duflou Joost;
- DETC2012-70096 “Endogenous Progress Potential” by Andy Dong and Somwrita Sarkar;
- DETC2012-71362 “The Effectiveness of Design and Innovation Consulting” by William J. Palm, Roger and Daniel E. Whitney; and

The final selection for best paper will be announced at the awards luncheon at this year’s IDETC conference.

The process of selecting papers is at the heart of a successful conference. This year, we had an excellent group of reviewers who generously offered their time and expertise and assisted with selection decisions. As always, this peer review process was successfully managed by an exceptional group of DTM Review Coordinators: Saeema Ahmed-Kristensen, Janet Allen, Marco Aurisicchio, Thomas Bornkessel, Rob Bracewell, Ö zgür Erış, Scott Ferguson, Katja Höltä-Otto, Maaike Kleinsmann, Tolga Kurtoglu, Erin MacDonald, Richard Malak, Gregory Mocko, Jacqueline K. Nagel, Carolyn Conner Seepersad, Chiradeep Sen, Noe Vargas Hernandez, David C. Wynn, Maria Yang, Daniel A. McAdams and Bernard Yannou.

For the 25th Annual DTM Conference in 2012, Andy Dong of The University of Sydney will be the Conference Chair and Matthew I. Campbell The University of Texas at Austin will be the Program Chair. These positions were elected by the membership at the DTM committee meeting at IDETC2011 in Washington DC.
Of note this year, a Design Theory and Methodology Technical Committee Award was created. Briefly the award is to recognize sustained and meritorious contributions to research; education; service; training of researchers or practitioners; overall leadership in advancing the field; or any combination of these in the field of Design Theory and Methodology. Nominations are due by April 1st of each year and submitted to the DTM Technical Committee Chair. Details of award including the nomination and review process can be found at http://divisions.asme.org/ded/Honors_Awards.cfm. To create the award, an ad hoc committee was formed consisting of Jonathan Cagan, Levent Burak Kara, Li Shu, Joshua Summers, Irem Tumer, and Daniel McAdams serving as chair.

Officers: Officers currently serving the second year of two-year terms that began on July 1 2011 are:
Chair: Daniel A. McAdams, Texas A&M University, dmcadams@tamu.edu
Vice-chair: Joshua D. Summers, Clemson University, JSUMMER@clemson.edu
Secretary and Webmaster: Levent Burak Kara, Carnegie Mellon University, lkara@cmu.edu

New officers for the committee will be elected at the 2012 committee meeting at IDETC2012 with terms beginning July 1 2013.

The next DTM Committee meeting will be held at IDETC2012 Monday August 13 from 1-2 PM. The room location will be printed in the program. Please grab a lunch and join us.

Respectfully submitted,
Dan McAdams
Chair of the Design Theory and Methodology Committee
The Fastening and Joining Technical Committee of the Design Engineering Division serves ASME members and others who are interested in novel developments related to fastening, welding, and adhesive joining of polymeric, metallic, ceramic and other advanced materials and structures. Particular areas of interest include design and manufacturing, cost-effective and rapid joining methods, nano technology and innovations in adhesive bonding, dynamic behavior and long term durability of joined structures, nondestructive evaluation and characterization, industrial applications and case studies as well as many others. The committee sponsors symposiums with a specific theme at the annual International Mechanical Engineering Congress and Exposition. The theme for the 2012 IMECE in Houston, Texas is “Joining Technologies for Advanced Materials and Structures” The organizers for this symposium are Prof. Christoph Friedrich, University of Siegen, Germany, Dr. Thomas Whitney, University of Dayton Research Institute, and Dr. Yosef Amir, General Electric Healthcare. 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. Timothy Breitzman, Air Force Research Laboratory, WPAFB OH 45433-7750, phone (937) 255-3104; fax (937)656-4706; e-mail: Timothy.Breitzman@wpafb.af.mil.

*Timothy D. Breitzman*
Semi Annual Report to the DED
Mechanisms and Robotics Committee

The ASME Mechanisms and Robotics (M & R) Committee has the mission of promoting advances in research and education in the theory, design and applications of mechanisms, machines, robots and mechatronics systems. Areas of interest include: kinematics and dynamics of mechanisms, analysis of robotic systems, design of cams, gears, transmissions, and linkages, bio-inspired machines, mechatronics, compliant mechanisms, and micro and nano machines. Our flagship conference is the M & R Conference, which is one of the largest conferences in the annual ASME International Design Engineering Technical Conferences (IDETC) & Computers and Information in Engineering (CIE).

Here is a summary of the committee’s ongoing and recent activities:

The 2012 IDETC & CIE is being organized by two members of the M & R community: Mike Stanisic (Conference Chair) and Jim Schmiedeler (Program Chair). The 2012 M & R Conference is being organized by Jian Dai (Conference Chair) and Carl Nelson (Program Chair). The 2013 M & R Conference will be organized by Thomas Sugar (Conference Chair) and Dave Cappelleri (Program Chair).

In order to honor the contributions of two esteemed colleagues the M & R Committee has permanently named two of its Symposia: The A. T. Yang Symposia in Theoretical & Computational Kinematics and the Ashok Midha Symposia in Compliant Mechanisms.

Under the leadership of its founding editor Dr. Mike McCarthy the ASME Journal of Mechanisms & Robotics continues its healthy growth and is now indexed by Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, and Current Contents/Engineering Computing and Technology.

The committee approved a major revision to its by-laws at the 2011 DETC & CIE Conference. These changes included increasing the terms of service for the Chair, Vice-Chair and Past-Chair from 1 year to 2 years and a reduction in the number of committee members.

The next meeting of the Mechanisms and Robotics Committee will take place during the 2012 IDETC & CIE.

Respectfully submitted by,

Pierre Larochelle
ASME M & R Committee Chair
MISSION. The mission of the Technical Committee (TC) on Mechatronic and Embedded Systems and Applications (MESA) is to provide a forum for technical discussions and interactions on topics related to emerging technologies in mechatronic and embedded systems that impact critical research and engineering issues.

The primary activity of the MESA TC is the dissemination of technological advances, latest research results and innovations of mechatronic and embedded systems through the organization of the International Conference on Mechatronic and Embedded Systems and Applications (MESA).

Another important activity of the MESA TC is the attribution of the MESA Achievement Award in recognition of individuals who have made outstanding contributions in the research field of Mechatronic and Embedded Systems and Applications.

For more information please visit the MESA TC official website at http://iel.ucdavis.edu/mesa.

CONFERENCES. Since 2005 the MESA TC organizes the annual International Conference on Mechatronic and Embedded Systems and Applications (MESA). In odd numbered years ASME/DED is the main sponsor of ASME/IEEE MESA and IEEE ITSS is the non-financial co-sponsor.

In even numbered years IEEE/ITSS is the main sponsor of IEEE/ASME MESA and ASME/DED is the non-financial co-sponsor. Members of the TC nominate candidates for the MESA Achievement Award as well as Best Papers in the categories (i) Theory, (ii) Computational Methods and Software, (iii) Applications, and (iv) Student Papers.

ACTIVITIES IN 2011/2012. In 2011 the MESA TC organized ASME/IEEE MESA’11 in Washington D.C. held within the IDETC/CIE conference from Aug. 28-31. Out of 179 paper submissions 134 papers were accepted for publication and selected for oral presentation. Two keynote speeches ‘From Italy to China, Driverless!’ by Alberto Broggi (President of IEEE ITSS) and ‘Decentralized Vibration Control for Large Flexible Structures with Smart Embedded Device’ by Dong-Xu Li (National University of Defence Technology, China) enriched the conference program. In addition, two plenary talks were dedicated to the field of Fractional Order Derivatives and their Applications by Om. P. Agrawal, Southern Illinois University, and Bruce West, Army Research Laboratory. The 2011 MESA Achievement Award was given to Bernard Roth of Stanford Engineering during 2011 IDETC/CIE MESA Award Luncheon.

In 2012 the IEEE/ASME MESA’12 was held in Suzhou, China from July 8-10. Out of 83 submitted papers 59 were accepted for publication and oral presentation. The keynote was given by Huei Peng (University of Michigan, USA) on ‘Design and Control of Hybrid Electric Vehicles’. Furthermore,
a plenary talk on ‘Mobile Robots: A Journey of Walk, Claw and Climb’ by XiaoQi Chen (University of Canterbury, New Zealand) enriched the program. The 2012 MESA Achievement Award was presented to Fei-Yue Wang (Chinese Academy of Sciences, University of Arizona, Xian Jiaotong University) for a cumulative contribution to the field of Mechatronic and Embedded Systems and Applications.

**MESA Executive Committee 2011/12.**

**Chair:** Martin Horauer, University of Applied Sciences Technikum Wien, Austria  
**Co-Chair:** Bo Chen, Michigan Technological University, USA  
**Treasurer:** Yanqing Gao, University of Arizona, USA  
**Secretary:** Ja Choon Koo, Sungkyunkwan University, Korea  
**Member:** Shane Xie, The University of Auckland, New Zealand  
**Immediate Past Chair:** Primo Zingaretti, Universita Politecnica delle Marche, Italy  

**MESA Representatives of Journals and Transactions:** ‘ASME Journal of Dynamic Systems, Measurement, and Control’, YangQuan Chen, Utah State University, USA

**New Directions and Planned Changes for 2012/13.** The MESA TC is now organizing the 2013 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications in the context of IDETC/CIE 2013. Respective collaboration between Harry Dankowicz, Bo Chen and Yanqing Gao have been established.

The MESA TC has also nominated Primo Zingaretti for the Board of Governors of the IEEE ITS Society. Furthermore, the MESA chair and immediate past-chair will work with Matthew Barth (IEEE ITSS officer for conference activities) to plan date and location for IEEE/ASME MESA’14.

Furthermore, the EXCOM will try to establish closer collaboration to nominate Associate Editors for the:

- ASME Journal of Mechanisms and Robotics  
- IEEE Transactions on Intelligent Transportation Systems

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To: The ASME Design Engineering Division (DED) General Committee

From: Edward Berger, Chair, Micro- and Nanosystems Committee

Date: August 1, 2012

Subject: MNS committee report for the period July 1, 2011-June 30, 2012

Mission

The mission of the Micro- and Nanosystems (MNS) Committee is to promote research and development activities related to advancement of microsystems and nanotechnology within the broad scope of the design engineering field.

Committee Membership, Meetings and By-Laws

The committee is currently comprised of twenty-one elected members including four officers: the Chair, the Vice Chair and Treasurer, the Secretary, and Past Chair. The committee held its sixth meeting on August 30, 2011 in Washington DC at the IDETC 2011. The committee operates according to a set of by-laws, which was formally adopted in October 2006 and revised in February 2009 (with a small subsequent revision to the dates of executive committee service to come into compliance with DED committee chair service dates). Several members have rotated out and several new members have joined, where the membership rotation cycle has now reached a steady-state of full membership with no new members added in 2011. The interest in the committee and its activities is continuing to grow as evidenced by the solid conference response and good attendance at its annual meetings. Current officers are: Edward Berger, S.V. Sreenivasan, and Brian Jenson as chair, vice-chair/treasurer, and secretary respectively effective October 1, 2011. Brian Jensen and Jeff Rhoads serve as the conference and program chairs, respectively, for the sixth MNS conference (at IDETC 2012). The Past Chair is Gloria Wiens. The committee meets annually at the IDETC meetings and conducts teleconferences at last once a year. In the following a brief summary of the achievements of the MNS committee is provided.

Committee Activities

- Establishment of sub-committees
  The Micro/Nano-Scale Systems (MNS) Technical Committee has three sub-committees and two ad-hoc committees.
  1) Honors and Awards Sub-Committee – Chair: Gloria Wiens, Members: Edward Berger and S. V. Sreenivasan. Activity: Reviews best paper nominations and selects award recipient(s); solicit nominations for and select the MNS Innovator Award recipient.
  2) Public Relations and Communications Sub-Committee – Chair: Brian Jensen, Members: TBD. Activity: Has created and maintains the first generation of a MNS website.
  3) Technical Sub-Committees (members) – micro/nano robotics and manipulation (Metin Sitti, Dan Popa); nano-manufacturing and nano-metrology (Irene Fassi); dynamics and controls (Anton Sumali); micro/nano actuators (I.Y. (Steve) Shen); system and mechanical design (Martin Culpepper); tribology and contact mechanics (Mircea Teodorescu and Yong Shi), and education & photo contest (Dave Cappelleri). Activity: To promote subtopics and symposia for MNS conferences.
  4) Journal Ad-Hoc Sub-Committee – Chair: TBO, Members: Buddy Clark, Martin Culpepper, Arvind Raman and Laxman Saggere. Activity: Explore publication of MNS papers in a journal (special issue?).
5) Poster Session Ad-Hoc Sub-Committee – Chair: Jeff Rhoads, Members: Matt Allen and Dan Popa. Activity: Exploring alternate ways to organize the rapid-fire poster session/MNS reception to retain its current vitality and building upon its success.

- **MNS Liaisons**
  MEMS Division Liaison *(Laxman Saggere)*
  Nano Council and ASME/IEEE NEMB Liaison *(Laxman Saggere)*
  TCVS Liaison *(Brian Mann)*

- **5th micro and nanosystems conference (2011)**
  The 5th micro and nanosystems conference (2011) was held in Washington D.C with S.V. Sreenivasan and Brian Jensen serving as the conference and program chairs, respectively. The quality and number of papers at the conference is growing steadily and the MNS community continues to expand. This year, following a thorough peer review process, we accepted 69 papers for technical presentation. The accepted papers were grouped under 6 single-track and 5 parallel-track sessions (total of 16 sessions) with specific themes. These sessions covered basic areas such as applied mechanics, surface and contact mechanics, dynamics, measurement and control. The sessions also covered application areas such as bio-MEMS, micro/nano mechanisms and robotics, and nanomanufacturing.

  We were honored to have a keynote lecture by Prof. Thomas Kenny from the Department of Mechanical Engineering at Stanford University. Prof. Kenny's keynote session has been scheduled for Wednesday, August 31st from 10:40 a.m.-12:00 noon. His talk was entitled "Encapsulation for MEMS Resonators: How Packaging Enabled a Technology." We held a MNS Special Reception with snacks and drinks on Tuesday, August 30th from 6:00 to 7:00 PM. This gathering allowed the MNS community to network and to view the MEMS/NEMS Photo Contest entries. This photo contest has been organized as a forum to display really interesting photos of novel creations. The photo contest entries were displayed in the main MNS single-track session room from the first day with the opportunity for MNS Conference attendees to vote on who has the best photography. We announced the winners at the close of Tuesday’s MNS special reception.

- **6th micro- and nanosystems conference (2012)**
  The 6th Micro- and Nanosystems Conference includes about 50 papers organized around eight topical areas, plus one keynote address. The topical areas include traditional foci of MNS strength within the Design Division: dynamics, biomems/bionems, nonlinear mechanics and control in AFM, measurement and control, micro- and nanomechanisms and robotics, micro- and nanomanufacturing, surface engineering, and energy harvesting. Although the number of papers is slightly down from previous years, and quality remains high and several papers will be encouraged for submission to appropriate ASME journals for review and publication.

  We are delighted to have Taher Saif from the University of Illinois as this year’s keynote speaker. His keynote address, entitled “A Micro Scale Swimming Biobot Powered by Synchronous Beating of Cardiac Cells”, certainly emphasizes the multi- and interdisciplinarity of the MNS field while maintaining a strong core of engineering science and design. The talk will take place on Monday August 13 from 2-3.20 pm.

- **MNS Innovator Award**
In 2009, a division/committee level award called the “Micro- and Nano Systems (MNS) Innovator Award” was established to recognize individuals for major innovative contributions to the micro/nano systems engineering. Each year’s award recipient will be selected through a rigorous process of seeking nominations (along with nominee’s CV and letters of support) from the MNS community and a full committee vote. The award will comprise of a plaque and $500 cash award. The awardee will become the keynote speaker at the following MNS conference. In Fall 2011, we had our first announcement of this award with a February 2012 deadline for receipt of nomination packages. Unfortunately, this year the pool of nominees was not exceptionally strong, with the best candidate coming from a disciplinary area quite distinct from the intended focus area of MNS Committee activities. While this applicant’s credentials were strong, the Committee did not feel comfortable extending the reach of the MNS Committee so far across the informal boundary that defines the Committee’s scope, activities, and scholarly interests. So we decided to not award the MNS Innovator Award this year, and will instead seek a larger pool of quality candidates for next year. We will advertise more widely and work to solicit more nominations from within the closer community of MNS researchers.

To disseminate and archive MNS activities and achievements, MNS has under construction their website currently located at; http://sites.google.com/site/mnsasme/.

Future activities
The MNS committee plans to build upon and expand on the success of the MNS conferences and will continue to hold it each year with the IDETC. The MNS conference chairs for the next year have already been identified. The committee will focus on the following key initiatives in the coming year: (a) identifying and awarding the 1st MNS Innovator Award Recipient, (b) continue the expansion of industry and national laboratory involvement, (c) refining of the process by which we invite/encourage the stronger papers in the conference for dedicated issues in ASME journals.

Below is a complete list of members for the current term.

Executive Committee:
Chair: Edward Berger (member: 2005-2012)
Past Committee Chair: Gloria Wiens (member: 2005-2012)
Vice-Chair/Treasurer: S.V. Sreenivasan (member: 2008-2014)
Secretary: Brian Jensen (member: 2009-2015)

Elected General Members:
G. K. Ananthasuresh (member: 2005-2012, second 3-year term)
Martin Culpepper (member: 2005-2012, second 3-year term)
Chris Rahn (member: 2005-2012, second 3-year term)
I.Y. (Steve) Shen (member: 2005-2012, second 3-year term)
Metin Sitti (member: 2005-2012, second 3-year term)
Brian Jensen (member: 2008-2012, first 3-year term)
Jeff Rhodes (member: 2008-2012, first 3-year term)
K. "Subra" Subramanian (member: 2008-2012, first 3-year term)
Gou-Jen Wang (member: 2008-2012, first 3-year term)
Hartono (Anton) Sumali (member 2006-2013, second 3-year term)
Dave Cappelleri (member: 2010-2013, first 3-year term)
Dumitru I. Caruntu (member: 2010-2013, first 3-year term)
Daniel G. Cole (member: 2010-2013, first 3-year term)
Irene Fassi (member: 2010-2013, first 3-year term)
Dan Popa (member: 2010-2013, first 3-year term)
Mircea Teodorescu (member: 2010-2013, first 3-year term)
Yong Shi (member: 2010-2013, first 3-year term)

2013 MNS Conference Committee
Conference Chair: Jeff Rhoads
Program Chair: TBD
The purpose of the Technical Committee on Multibody Systems and Nonlinear Dynamics (TC-MSND) is to promote research, application, and education in experimental, symbolic, computational, and analytical activities pertaining to multibody systems and nonlinear dynamics and related technical areas. The TC-MSND serves as a body whose goal is to organize conferences, aid the ASME Journal of Computational and Nonlinear Dynamics, and foster meetings, student competitions, and awards.

Recent Activities:
The committee held its first 2012 meeting on February 20. The meeting was organized by means of a teleconference, and it attracted a large number of participants (13 TC-MSND members and 6 TC-MSND friends). The second 2012 meeting is scheduled to take a place on August 14.

Since October 2012, conference coordination, honors, and membership nominations subcommittees have been formed within the TC-MSND. The conference coordination subcommittee is chaired by Professor Dan Negrut, and it has been active in preparing for the 9th International Conference on Multibody Systems, Nonlinear Dynamics, and Control to be organized in Portland, OR in August 2013. The membership nomination subcommittee was chaired by Walter Lacarbonara. It put out a call for membership nominations of interested and qualified members of the technical community and was able put together ten outstanding candidates. Committee members were asked to vote for three individuals from the list. After the count, the three individuals that received the highest number of votes were Hiroyuki Sugiyama, Stefano Lenci, and Zdravko Terze. Two vacancies from July 1, 2012 were filled by Professors Hiroyuki Sugiyama and Stefano Lenci. A third open position will be available on July 1, 2013 and will be filled by Professor Zdravko Terze.

The TC-MSND is supporting the organization of the First Biennial International Conference on Dynamics for Design (DFD) to be held as part of the 2012 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC) in Chicago, IL, August 12-15, 2012. Professor Harry Dankowicz, the Vice-Chair of the TC-MSND, will serve as co-chair of the Conference.

The TC-MSND supported the organization of the second joint international conference for multibody system dynamics (IMSD2012), which was convene at the University of Stuttgart, Germany from May 29 through June 1, 2012. In the IMSD2012, 56 sessions were held, offering 192 technical presentations authored by more than 450 authors. In total, 299 participants from 29 different countries participated in the IMSD2012.
ASME Journal of Computational and Nonlinear Dynamics:
The TC-MSND is closely related to the ASME Journal of Computational and Nonlinear Dynamics. Since 2011, the editor of the journal has been Professor Ahmed Shabana from the University of Illinois at Chicago.

The purpose of the Journal of Computational and Nonlinear Dynamics is to provide a medium for rapid dissemination of original research results in theoretical as well as applied computational and nonlinear dynamics. The journal serves as a forum for the exchange of new ideas and applications in computational, rigid and flexible multi-body system dynamics and all aspects (analytical, numerical, and experimental) of dynamics associated with nonlinear systems. The broad scope of the journal encompasses all computational and nonlinear problems occurring in aeronautical, biological, electrical, mechanical, physical, and structural systems.

In 2011, the journal received 246 papers. This is more than double the number of submissions from previous years, and it is the highest in the journal’s short history. In order to maintain an acceptance rate of 25%, the ASME has increased the page journal allocation from 550 pages/year to 700 pages/year effective July 1, 2012. The journal was included in the Journal Citation Reports (JCR) in 2009. The 2009 Impact Factor was 0.557, the 2010 Impact Factor is 0.571, the 2011 Impact factor is 0.827.

TC-MSND Website:
http://divisions.asme.org/DED/MULTIBODY_SYSTEMS_NONLINEAR.cfm

TC-MSND Committee Officers

Chair:
Professor Aki Mikkola
Department of Mechanical Engineering
Lappeenranta University of Technology
Skinnarilankatu 34
53851 Lappeenranta, FINLAND
Tel: +358-40-7363095
Email: mikkola@lut.fi

Vice-Chair and Treasurer:
Professor Harry Dankowicz
Department of Mechanical Science and Engineering
University of Illinois at Urbana-Champaign 332C
Mechanical Engineering Bldg, MC 244 1206
West Green Street Urbana, IL 61801
tel: +1-217-244-1231
Email: danko@uiuc.edu

Recording Secretary:
Professor Dan Negrut
Committee Report

Power Transmission and Gearing Technical Committee

Committee Leadership:

Chair: Avinash Singh, Ph.D., General Motors Company, avinash.singh@gm.com (2009-2012)
Vice Chair: Timothy Krantz, Ph.D., NASA/Army, timothy.l.krantz@nasa.gov (2009 – 2012)

Incoming Chair: Timothy Krantz, Ph.D., NASA/Army, timothy.l.krantz@nasa.gov (2012 – 2014)
Incoming Vice-Chair: TBD

Technical Conferences:

Conference Chair: Avinash Singh
Program Chair: Tim Krantz

IDETC 2013, Power Transmission and Gearing Conference, Portland, OR
Conference Chair: Tim Krantz

Major activities of the PTG technical committee during the past year:

The objective of the Power Transmission and Gearing (PTG) Committee is to promote activities and education supporting the art and science of power transmission and gearing. We promote the dissemination of knowledge and information pertinent to power transmission and gearing through sponsorship of technical papers, technical meetings, seminars, and conferences.

In August 2011, the PTG Committee successfully hosted the 11th ASME International Power Transmission and Gearing Conference as part of IDETC 2011 in Washington, DC. This was a truly global conference and there were a total of 70 technical papers from researchers in North America, Europe, and Asia. In all, authors from twenty different countries presented their work in all aspects of gearing and power transmission fundamentals and application. Topics that were covered included Gear System Design and Analysis, Gear Strength and Durability, Gear System Dynamics and Noise, Gear Manufacturing, Power Loss in Gear Systems, Surface Engineering and Tribology, Bearings, Wind turbine gears, and Plastic gears.

In addition to the technical sessions, a special Panel Discussion was held where leading industry experts discussed the needs of their industry, and the fundamental and applied research work that is needed to solve these issues. There was also a plenary session – the Buckingham Lecture. Our guest speaker this year was Dr. Ahmet Kahraman, Professor of Mechanical Engineering at The Ohio State University. Dr. Kahraman shared his views on the Current Gaps and Future Directions in Gear Research.

The PTG Committee bestowed the second Darle W. Dudley Award for outstanding contributions to the Power Transmission and Gearing community to Dr. Aizoh Kubo, Professor Emeritus at Kyoto University, Japan. This award recognizes those who have made significant life-long contributions to the art and science of gear and power transmission technology. Dr. Kubo was honored for his life-time achievements and contributions during the Award Ceremony at the conference.

New directions and planned changes for the coming year:

The PTG Committee has just approved a change in the term of office bearers from the current 4 years to 2 years. This brings the service length in line with various other committees and with our conference
organizing schedule. The committee feels that the shorter commitments and greater leadership opportunities will help attract new members, and encourage younger professionals to volunteer their services. Current and new leadership will first serve as Vice-Chair for 2 years and then as Chair for two years. Effective Oct. 2012, Dr. Timothy Krantz will take over as Chair of the PTG Committee. In the coming weeks, the PTG Committee will also elect a new Vice-Chair. This team will lead the organization effort for our next conference which will be help with the 2013 IDETC in Portland OR.

For more information about our activities please visit our website at http://www.asmeptg.org or contact the Chair at avinash.singh@gm.com.

Avinash Singh
PTG Committee Chair
The Reliability, Stress Analysis, and Failure Prevention (RSAFP) Committee of the Design Engineering Division participated in 2011 International Design Engineering Technical Conference held in Washington, DC, August 18-31, 2011, with 21st Reliability, Stress Analysis and Failure Prevention Conference, having sessions related to RSAFP issues in "Design Process and Computer-based Analysis for RSAFP", “Stress Analysis”, and “Failure Analyses and Modeling”. Three sessions were organized with 15 papers, some of which were from overseas countries including Japan, China, United Kingdom, Iran and Russia. A good mix of papers from Industry (Toyota), Academia, and Government (Sandia National Laboratories) is represented.

The RSAFP Committee will participate at the upcoming 2013 International Design Engineering Technical Conference with 22nd Reliability, Stress Analysis and Failure Prevention Conference.

Respectfully Submitted,

Toshiyuki Sawa, Ph.D.
RSAFP Technical Committee Chair
Vehicle Design Committee Report
Design Engineering Division

Activity Report, Aug 2012

Prepared by: Corina Sandu, Ph.D., ASME fellow
Vehicle Design Committee Chair
Associate Professor, Mechanical Engineering Department
Director, Advanced Vehicle Dynamics Laboratory
Virginia Polytechnic Institute and State University

Vehicle Design Committee goals

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

Summary of Vehicle Design Committee activity since September 2011

The VDC members communicate mainly by email, and a very active exchange of ideas took place since the previous ASME IDETC conference in 2011.

The committee continued to work on the aspects of increasing the level of participation of its members, the visibility of the committee, and strengthening our relations with industry. We have been actively recruiting new members into our committee. Some of the symposia this year have new members as co-organizers.

We plan to also continue the recruitment of new members, as we did last year, by having a sign-up sheet at the conference, and by advertising the ASME VDC committee when the members of the VDC participate in other meetings or conferences.

For future conferences organized by VDC we plan on introducing a Student Best Paper Award.

Several of our committee members have been very active as journal editors or editorial board members, as well as organizers or participants in other related professional meetings. Many of these activities are done in cooperation among VDC committee members, which is in sync with our committee plan to increase the collaboration among us, as well as for the members from academia and those from industry to improve the exchange of information.
14th International Conference on Advanced Vehicle Technologies

Since the 2011 conference, the Vehicle Design Committee (VDC) has demonstrated sustained activity, specifically planning and organizing the 2012 Advanced Vehicle Technology (AVT) conference. (The title of the conference has been slightly changed from the past years.) The conference will consist of the first six symposia that attracted a total of fifty-one abstracts. (The seventh symposium failed to attract more than one paper, which will be included in a different symposium. Forty-four full papers have been submitted and reviewed.

The topics covered in our conference were revised to emphasize new technologies and to provide a more open forum for exchanging ideas. The new symposia that were proposed are:

- Symposium 1: Advances in Methods for Vehicle Systems Design
- Symposium 2: Advances in Methods for Tire Modeling
- Symposium 3: Advances in Vehicle Safety and Ergonomics
- Symposium 4: Advances in Multibody Systems Modeling and Validation for Vehicle Dynamics Applications
- Symposium 5: Advances in Dynamics and Control of Vehicle Systems and Subsystems
- Symposium 6: Advances in Electric and Hybrid Vehicles
- Symposium 7: Advances in Collaborative Driving

The final program for AVT 2012 consists of 10 sessions overall for the six symposia mentioned above.

Two awards are given for the Best Paper and the Best Student Paper this year. The student best paper award has been assigned to the paper titled “Vehicle Stability Control Through Predictive and Optimal Tire Saturation Management”, DETC2012-71182 (the presenting author will receive a registration waiver) and the general best paper award to the paper “Dynamic Performance of Neck Protection Devices: Performance Analysis Based on a Simplified Multi-body Model of the Human Neck”, DETC2012-70888.

This year, we are also glad to have two invited keynote speakers. The first invited speaker is Mr. Stefan Edlund, Chief engineer at the department of Chassis Strategies and Vehicle Analysis within Volvo Group Trucks Technology, Sweden. The second speaker is Rajesh Rajamani, Professor in the department of mechanical engineering, University of Minnesota, USA.

Honors received by VDC members

Dr. Corina Sandu, the chair of the VDC, has been elected ASME fellow in January 2012.
Selected editorial work conducted by VDC members

Dr. Corina Sandu:
- Associate Editor, ASME J. of Vibration and Acoustics (elected August 2012)
- Editor-in-chief, SAE Int. Journal of Commercial Vehicles
- Editor, Journal of Terramechanics
- Editorial Board Member, Int. Journal of Vehicle Systems Modelling and Testing

Dr. Moustafa El-Gindy:
- Editor-in-Chief, Int. J. of Heavy Vehicle Systems

Dr. Xubin Song
- Founding Editor-in-chief at Int. Journal of Powertrains

Dr. Mehdi Ahmadian
- Editor, Vehicle System Dynamics
- Editor-in-Chief, Shock and Vibration

Dr. Lin Li
- Associate Editor, SAE Int. Journal of Commercial Vehicles
- Guest co-editor, Int. Journal of Vehicle Design, Special Issue on “Advanced Developments in Tyre Modelling, Analysis and Dynamics”

Dr. Brendan Chen
- Associate Editor, SAE Int. Journal of Commercial Vehicles
- Guest co-editor, Int. Journal of Vehicle Design, Special Issue on “Advanced Developments in Tyre Modelling, Analysis and Dynamics”

Other relevant activities

Eight VDC committee members helped organized and/or participated in the 2012 International Conference on Advanced Vehicle Technologies and Integration (VTI) conference in Changchun, China, July 16-19, 2012:
- Dr. Corina Sandu – Chair, Advanced Vehicle Dynamics and Controls track
- Dr. Vladimir Vantsevitch – Chair, Advanced Technologies for Commercial Vehicles track
- Dr. Xiaobo Yang – VTI Technical Council Member
- Dr. Xubin Song - VTI Technical Council Member
- Dr. Dongpu Cao - VTI Technical Council Member
- Dr. Hong Yang - VTI Technical Council Member
- Dr. Mehdi Ahmadian – keynote speaker and panelist
- Dr. Lin Li – attendee

Dr. Corina Sandu and Dr. Vladimir Vantsevich were also keynote speakers at the 2012 Chengdu International Forum on Advanced Vehicle Technology (CIFAVT) in Chengdu, China, July 12-13, 2012. Dr. Xiaobo Yang was on the CIFAVT Organizing Committee.
TO: DED Executive Committee

FROM: Brian F. Feeny, TCVS Chair (feeny@egr.msu.edu)

SUBJECT: Summary of TCVS activities from August 2011 to August 2012

DATE: August 3, 2012

- **Elections:** At our April 22, 2012, meeting at UIC in Chicago, the committee voted on new officers and members. New officer positions are effective October 1.

  Officers: Steve Shen (Chair), Dane Quinn (Vice Chair and Treasurer), and Rob Parker (Secretary).

  Members: Marco Amabili was re-elected for a second term. Matt Allen, Mahmood Hussein, Stefano Lenci, Guilhem Michon, and Stephanos Theodossiades were elected as new members.

- **TCVS Treasurer’s Report:** The general TCVS fund has a balance of about $15K, and the Myklestad award account has a balance of around $66.5K. As of April, the Den Hartog award account had a balance of about $11.3K.

- **Awards:** The Den Hartog Award, now at the Society level, was awarded to Prof. C. S. Hsu during the IDETC meeting in August, 2011. The committee also presented the Myklestad Award to Prof. Noel Perkins during the IDETC meeting. The committee had voted to take steps to elevate the Myklestad Award to the society level, and a proposal as such has been submitted to the Committee on Honors.

- **IDETC 2011:** The conference was held in Washington, D.C., August 28-31. Former TCVS member Nader Jalili was the General Conference Chair. The VIB Technical Program Co-Chairs were Olivier Bauchau and Epureanu. The Advisory Committee included George Flowers, H.S. Tzou, Hamidzadeh, Ahmed Shabana, and Subhash Sinha. A total of 1209 papers were presented at the entire IDETC. C. D. Mote and Noel Perkins were the keynote speakers for the VIB conference.

- **IMECE 2011:** TCVS had no formal participation as a committee. However, TCVS members, former members, and friends took on organizational roles. Bogdan Epureanu, Marco Amabili, and Dumitru Caruntu organized three symposia sponsored jointly with AMD (DCSS), and Ahmed Al-Jumaily, Albert Luo, Hamid Hamidzadeh, Liming Dai, Reza Jazar, and Weidong Zhu combined to organize four symposia. 105 papers were presented among these seven symposia. Luo, Dai, and Amabili organized the Dynamic Systems and Control track, and Al-Jumaily organized a bio track.
IDETC 2012: The conference will be held during August 12-15 in Chicago.

Rob Parker is the VIB Conference Chair. A total of 46 people have organized eleven symposia. 185 draft papers were submitted, and 164 papers and technical presentations are scheduled. It has been suggested that more papers could have been submitted if not for the rigidity of the deadline. Parker also lobbied for the papers to be submitted as extended abstracts, but the effort did not coalesce in time for the conference; discussion of this issue is ongoing. The conference also features a student paper competition, with the top three papers to be recognized. One keynote is arranged per day, and they are to be given by Kon-Well Wang, Steve Shaw, and Alex Vakakis.

The TCVS also co-sponsors the inaugural Dynamics for Design Conference, with Dane Quinn of TCVS as the co-Chair, and Harry Dankowicz of Multibody Systems and Nonlinear Dynamics Committee (MSNDC) as the other co-Chair. There are 40 papers on the DFD program. Keynote addresses are to be given by Siamak Ghofranian, Robert Bonneau, and Todd Rook.

IMECE 2012: Again, TCVS has no formal participation as a committee. However, TCVS members and former members, mostly the same as those of IMECE 2011, have taken on organizational roles. Bogdan Epureanu, Marco Amabili, and Dumitru Caruntu are organizing three symposia sponsored jointly with AMD (DCSS), and Ahmed Al-Jumaily, Albert Luo, Hamid Hamidzadeh, Liming Dai, and Weidong Zhu are organizing four symposia. 151 abstracts are submitted among these symposia. Luo, Dai, and Caruntu are organizing the Dynamics, Control, and Uncertainty track (20 symposia, 347 abstracts), while Al-Jumaily is organizing the Biomedical and Biotechnology track (17 symposia, 227 abstracts).

IDETC 2013: Dane Quinn and Harry Dankowicz are General co-Chairs. Quinn is the VIB Conference Chair. The advisory committee consists of Kurt Anderson, George Flowers, and Hamid Hamidzadeh, and Ahmed Shabana. The meeting will be held in Portland, Oregon, at the Oregon Convention Center and Doubletree Hotel, August 4-7.

IDETC 2014: TCVS member Micky Caruntu will be the VIB Conference Chair.

IDETC 2015: Jeff Rhoads and Walter Lacarbonara submitted to DED a proposal to co-chair the conference. The proposal has been approved. Rhoads is a member of TCVS and the Technical Committee for Micro and Nano Systems, and Lacarbonara is a member of MSNDC.

Journal of Vibration and Acoustics: Noel C. Perkins has been the Technical Editor since January, 2010. A special issue on the dynamics of phononic materials and structures is planned. Last October, Perkins started The Latest Vibe, a quarterly electronic newsletter, the first of its kind for an ASME journal. The Latest Vibe updates the readership on related ASME conferences and events, and provides table of contents and a list of highly cited articles.
JMD 2012 ANNUAL REPORT
TO DESIGN ENGINEERING DIVISION EXECUTIVE COMMITTEE
Prepared by Panos Y. Papalambros, Technical Editor

August 1, 2012

1. Overview
The journal has reached a steady-state operation emphasizing design synthesis across all TCs of
DED. As in previous years, I attended events, workshops, and panels individually or joining other
design editors, as well as several major universities internationally, making presentations about
JMD.

The JMD purpose and scope remains as follows:
The ASME Journal of Mechanical Design (JMD) serves the broad design community as the venue
for scholarly, archival research in all aspects of the design activity. JMD has traditionally served
the ASME Design Engineering Division and its technical committees, but it welcomes
contributions from all areas of design with emphasis on synthesis. Example topics include:
- Design automation, including design representation, virtual reality, geometric design,
design evaluation, design optimization, risk and reliability-based optimization, design
sensitivity analysis, system design integration, ergonomic and aesthetic considerations,
and design for market systems
- Design of direct contact systems, including cams, gears and power transmission systems
- Design education
- Design of energy, fluid, and power handing systems
- Design innovation and devices, including design of smart products and materials
- Design for manufacturing and the life cycle, including design for the environment, DFX,
and sustainable design
- Design of mechanisms and robotic systems, including design of macro-, micro- and nano-
scaled mechanical systems, machine component, and machine system design
- Design theory and methodology, including creativity in design, decision analysis, design
cognition, and design synthesis.

The connecting thread among these topics is the emphasis on design, rather than just analysis.
Design scholarship is based on careful analysis models, whether physical, computational, or
behavioral, and has design intent: creating something in the physical world we live in, rather than
just analyzing what is happening in it.

2. Journal Activity
For years 2011 and 2012 (July) Journal statistics are shown in Figures 1 and 2, respectively.
Cumulative data for earlier years previously reported in the Journal Tool (2002-2009) are shown
in Figure 3. Review process data are shown in Table 1.

<table>
<thead>
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<th>Year</th>
<th>Assigned to AE</th>
<th>TE Decision</th>
<th>TE Approval</th>
<th>Draft to TE Decision</th>
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<td>2012</td>
<td>4</td>
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</table>
The production schedule remains monthly with 1400 pages allocated and used. A special issue with 18 papers appeared in October 2011 on Complex Engineered Systems Design with Janet Allen, Shapour Azarm, and Timothy Simpson as guest editors. This area is becoming very important and the issue generated significant attention from government agencies funding design research and also attracted new authors. A special issue on Uncertainty in Design will appear in October 2012. This is an area of strength and branding for JMD.

Production backlog for Final Manuscripts as of July 31, 2012 is as follows.
Issue assignments for 2012 are following a steady state pattern of a mix of research papers and technical briefs, with issue pages evenly distributed. There continues to be a dearth of design innovation papers.

In August 2012 we will publish our first invited paper and a second one is planned for an upcoming 2012 issue. Invited papers follow standard peer review with special instructions to the reviewers.

### 3. Status of Associate Editors

List of AEs and their status is shown below. Several reappointments are in process this year.

#### Design Automation
D. GORSICH (2012)
M. KOKKOLARAS (2014)
Z. MOURELATOS (2012)
S. NISHIWAKI (2015)
C. PAREDIS (2014)
K. RAMANI (2014)
T. SIMPSON (2012)
B. YANNOU (2012)

#### Design Education
J. TERPENNY (2014)

#### Design Innovation and Devices
D. BREI (2012)
N. JOHNSON (2014)
Seven new associate editors have assumed duties and six reached term limits. I expect 4-5 new nominations for the remainder of 2012 so there will be a full complement for at least the first year of the new TE's term. Total number of AEs is targeted at 25, with continuing emphasis on international and some industry representation and in cross-disciplinary areas. The latter implies that there is no one-on-one correspondence between AEs and TCs. Recognition plaques are mailed to each ‘graduating’ AE.

4. Journal Quality

JMD has now pledged to cut the time for review completion to be less than THREE months and we met this goal this past year.

Impact factors are reported as:

<table>
<thead>
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<td>2010</td>
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<tr>
<td>2011</td>
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</tr>
</tbody>
</table>

I assumed my service in Jan. 2008, and the drop in the impact factor followed the migration of papers and key M&R authors to the new JMR that started that year. It has taken three years to establish the new JMD identity and rebrand it. This process will continue, but with our strong and dynamic editorial board I believe that my successor in January 2013 will have a good foundation to build upon.

Respectfully submitted,

Panos Y. Papalambros
The Journal of Vibration and Acoustics (JVA) is a major forum 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 publishes Technical Briefs, which are intended for the rapid communication of recent developments in an abridged form. Examples of topic areas covered include, but are not limited to, vibration of continuous and lumped parameter systems; linear and non-linear vibrations; random vibration; modal analysis; mechanical signature analysis; 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.

Four new initiatives/changes were launched for the Journal during 2011 and continuing into 2012. First, we created a newsletter for JVA titled The Latest Vibe which is now being emailed quarterly to over 5000 recipients. This newsletter provides 1) immediate access to the table of contents for the most recent issues of JVA, 2) a list of the 10 most cited papers in the prior two years, and 3) a summary of ASME-sponsored conferences/events related to our field. This newsletter was created in response to suggestions from TCVS members who offered ideas to increase the visibility of the Journal. The Latest Vibe represents the first electronic newsletter created by ASME and it is now being quickly adopted by other ASME journals. Second, due to increased submissions and publishing activity, the page count for JVA has been increased from 800 to 900 pages annually. Third, we have launched a new special issue project for JVA on the theme Dynamics of Phononic Materials and Structures. This special issue is being led by Mahmoud Hussein (Univ. Colorado – Boulder) and Massimo Ruzzene and Michael Leamy (Georgia Tech). Finally, Harry Dankowicz, who is the new Editor of ASME Applied Mechanics Reviews (AMR) initiated a collaboration between AMR and JVA, whereby we are organizing a special issue of AMR that features review articles and broader communications that should interest our readership. We are early in the planning process for that special issue of AMR.

During 2011, the following four AE’s completed their second (final) three-year term: Brian Feeny (Michigan State Univ.), Stephen Hambric (Penn State), Chris Rahn (Penn State), Steve Shen (Univ. Washington). We owe a debt of gratitude to each of these colleagues who all served our journal with distinction and each has received a plaque honoring their service. During 2011, we extended the appointments of two AE’s who are now starting their second (final) three-year term: Tom Royston (Univ. Illinois- Chicago), Jiong Tang (Univ. Connecticut). Starting in 2012, the following three AE’s were nominated, approved and appointed to their first three-year term: Marco Amabili (McGill Univ.), Philippe Velex (INSA – Lyon) and Theodore Farabee (Naval Surface Warfare Center) who also serves as a representative from NCAD.

Finally, JVA continues to sustain a high volume of submissions as reported in the following data. In particular, in each of the past three years the journal has received more than 300 submissions which represents substantial growth from a decade ago. However, for the current calendar year, we’re on track to reach approximately 400 submissions.
### Associate Editors and Areas of Expertise for 2012

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Term 1 End</th>
<th>Term 2 End</th>
<th>Area of Research</th>
</tr>
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<tbody>
<tr>
<td>Marco Amabili</td>
<td>McGill University</td>
<td>12/31/2014</td>
<td></td>
<td>Structural dynamics, fluid-structure interaction, nonlinear dynamics</td>
</tr>
<tr>
<td>Philip Bayly</td>
<td>Washington University – St. Louis</td>
<td>12/31/2012</td>
<td></td>
<td>Nonlinear dynamics, structural dynamics, machine dynamics</td>
</tr>
<tr>
<td>Michael Brennan</td>
<td>University of Southampton, UK</td>
<td>12/31/2009</td>
<td>12/31/2012</td>
<td>Vibration and noise control, smart structures</td>
</tr>
<tr>
<td>Liang-Wu Cai</td>
<td>Kansas State University</td>
<td>12/31/2012</td>
<td></td>
<td>Acoustics, wave propagation, structural dynamics</td>
</tr>
<tr>
<td>Chang-Po (Paul) Chao</td>
<td>National Chiao Tung University, Taiwan</td>
<td>12/31/2013</td>
<td></td>
<td>Vibration suppression/control, micro-sensors/actuators, nonlinear vibrations, balancers/balancing</td>
</tr>
<tr>
<td>Bogdan Epureanu</td>
<td>University of Michigan</td>
<td>12/31/2010</td>
<td>12/31/2013</td>
<td>Fluid structure interactions, nonlinear vibrations, structural health monitoring</td>
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<tr>
<td>Theodore Farabee</td>
<td>Naval Surface Warfare Center</td>
<td>12/31/2014</td>
<td></td>
<td>Structural acoustics, fluid acoustics, flow noise</td>
</tr>
<tr>
<td>Brian Feeny</td>
<td>Michigan State University</td>
<td>12/31/2008</td>
<td>12/31/2012</td>
<td>Structural vibration, system identification, and friction dynamics</td>
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<tr>
<td>Stephen Hambric</td>
<td>The Penn State University</td>
<td>6/15/2008</td>
<td>6/15/2012</td>
<td>Structural acoustics, computational methods</td>
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<tr>
<td>Yukio Ishida</td>
<td>Nagoya University</td>
<td>12/31/2012</td>
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<td>Rotor dynamics, nonlinear dynamics</td>
</tr>
<tr>
<td>Walter Lacarbonara</td>
<td>University of Rome La Sapienza</td>
<td>12/31/2013</td>
<td></td>
<td>Vibration suppression/control, micro-sensors/actuators, nonlinear vibrations, dynamics</td>
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<td>Wei-Hsin Liao</td>
<td>The Chinese University of Hong Kong</td>
<td>9/30/2012</td>
<td></td>
<td>Smart materials and structures, vibration control, energy harvesting, and mechatronics</td>
</tr>
<tr>
<td>Brian Mann</td>
<td>Duke University</td>
<td>12/31/2013</td>
<td></td>
<td>Nonlinear dynamics/vibrations, energy harvesting, delay systems</td>
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<tr>
<td>Ranjan Mukherjee</td>
<td>Michigan State University</td>
<td>12/31/2012</td>
<td></td>
<td>Vibration control, rigid and multi-body systems</td>
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<td>Alan Palazzolo</td>
<td>Texas A&amp;M University</td>
<td>12/31/2010</td>
<td>12/31/2013</td>
<td>Rotor dynamics, active bearings and rotor controls</td>
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<tr>
<td>Christopher Rahn</td>
<td>The Penn State University</td>
<td>12/31/2008</td>
<td>7/1/2012</td>
<td>Active vibration control, continuous structures, MEMS, mechatronics</td>
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<tr>
<td>Thomas J. Royston</td>
<td>University Illinois Chicago</td>
<td>8/31/2011</td>
<td>9/1/2014</td>
<td>Acoustic and vibration for biomedical applications</td>
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<tr>
<td>Massimo Ruzzene</td>
<td>Georgia Tech</td>
<td>12/31/2010</td>
<td>12/31/2013</td>
<td>Structural dynamics and mechanics, fluid-structure interactions</td>
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<tr>
<td>Steven W. Shaw</td>
<td>Michigan State University</td>
<td>12/31/2010</td>
<td>12/31/2013</td>
<td>Nonlinear vibration, MEMS dynamics</td>
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<td>I.Y. (Steve) Shen</td>
<td>University of Washington</td>
<td>6/15/2008</td>
<td>6/15/2012</td>
<td>Rotating systems, damping, MEMS, smart structures</td>
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<td>Cheng-Kuo Sung</td>
<td>National Tsing Hua University, Taiwan</td>
<td>11/30/2009</td>
<td>6/1/2012</td>
<td>Machine dynamics, smart structures, precision machine design</td>
</tr>
<tr>
<td>Jiong Tang</td>
<td>University of Connecticut</td>
<td>12/31/2011</td>
<td>12/31/2014</td>
<td>Structural and system dynamics, vibration analysis, control, sensing and monitoring, smart materials and mechatronics.</td>
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<tr>
<td>Lonny Thompson</td>
<td>Clemson University</td>
<td>12/31/2013</td>
<td></td>
<td>Structural and computational acoustics</td>
</tr>
<tr>
<td>Philippe Velex</td>
<td>Institut National des Sciences Appliquées (INSA) - Lyon</td>
<td>12/31/2014</td>
<td></td>
<td>Machine dynamics, power transmission systems, gear dynamics</td>
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<tr>
<td>Jeffrey Vipperman</td>
<td>University of Pittsburgh</td>
<td>11/30/2009</td>
<td>6/1/2012</td>
<td>Active noise and vibration control, smart materials and structures</td>
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<tr>
<td>Weidong Zhu</td>
<td>University of Maryland, Baltimore County</td>
<td>5/31/2010</td>
<td>12/1/2013</td>
<td>Structural dynamics and vibration, vibration based damage detection</td>
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<tr>
<td>Jean Zu</td>
<td>University of Toronto, Canada</td>
<td>12/31/2009</td>
<td>12/31/2012</td>
<td>Machine dynamics, nonlinear vibrations</td>
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### Summary of papers published during fiscal years (starting July 1 of year indicated)

<table>
<thead>
<tr>
<th>Fiscal Year Ending</th>
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<th>2006</th>
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<th>2011</th>
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<tbody>
<tr>
<td>Num. of Pages Published</td>
<td>584</td>
<td>607</td>
<td>802</td>
<td>807</td>
<td>800</td>
<td>800</td>
<td>820</td>
<td>718</td>
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<tr>
<td>Num. of Papers Published</td>
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<td>93</td>
<td>93</td>
<td>83</td>
<td>91</td>
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### Status of papers submitted during each calendar year*

<table>
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<th>Calendar Year</th>
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<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012 (June)</th>
</tr>
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<tbody>
<tr>
<td>Submitted Papers</td>
<td>193</td>
<td>215</td>
<td>264</td>
<td>241</td>
<td>237</td>
<td>312</td>
<td>306</td>
<td>306*</td>
<td>211</td>
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<tr>
<td>Accepted/Published Papers</td>
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<td>80</td>
<td>101</td>
<td>90</td>
<td>70</td>
<td>113</td>
<td>111</td>
<td>68*</td>
<td>9</td>
</tr>
<tr>
<td>Rejected Papers</td>
<td>76</td>
<td>95</td>
<td>112</td>
<td>99</td>
<td>119</td>
<td>141</td>
<td>144</td>
<td>149*</td>
<td>56</td>
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<tr>
<td>Withdrawn Papers</td>
<td>26</td>
<td>25</td>
<td>30</td>
<td>36</td>
<td>33</td>
<td>38</td>
<td>43</td>
<td>29*</td>
<td>23</td>
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<tr>
<td>Removed Papers</td>
<td>16</td>
<td>15</td>
<td>19</td>
<td>16</td>
<td>7</td>
<td>12</td>
<td>1</td>
<td>2*</td>
<td>3</td>
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</tbody>
</table>

* Note: These numbers are downloaded from the ASME web tool and they detail the status of papers submitted during the indicated calendar year. The final status of a paper (accepted, rejected, withdrawn and removed) is frequently unknown until the subsequent calendar year. Thus, the numbers reported above are updated with each report. For example, of the 306 papers submitted in 2011, 68/149/29 have already been accepted or published/rejected/withdrawn, and the eventual status of the remaining 60 papers is yet to be determined.
**Percentages of distributions of papers submitted each year**
*(January 1, 2004 – June 30, 2012)*

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Papers Accepted/Published</td>
<td>39%</td>
<td>37%</td>
<td>38%</td>
<td>37%</td>
<td>30%</td>
<td>36%</td>
<td>36%</td>
<td>22%</td>
<td>4%</td>
</tr>
<tr>
<td>% Papers Rejected</td>
<td>39%</td>
<td>44%</td>
<td>42%</td>
<td>41%</td>
<td>50%</td>
<td>45%</td>
<td>47%</td>
<td>49%</td>
<td>27%</td>
</tr>
<tr>
<td>% Papers Withdrawn</td>
<td>13%</td>
<td>12%</td>
<td>11%</td>
<td>15%</td>
<td>14%</td>
<td>12%</td>
<td>14%</td>
<td>10%</td>
<td>11%</td>
</tr>
</tbody>
</table>

**Note:** These percentages are calculated based on numbers in the previous table summarizing distributions of papers submitted each year.
Purpose and Scope: The purpose of the Journal of Computational and Nonlinear Dynamics (JCND) is to provide a medium for rapid dissemination of original research results in theoretical as well as applied computational and nonlinear dynamics. The journal serves as a forum for the exchange of new ideas and applications in computational, rigid and flexible multi-body system dynamics and all aspects (analytical, numerical, and experimental) of dynamics associated with nonlinear systems. The broad scope of the journal encompasses all computational and nonlinear problems occurring in aeronautical, biological, electrical, mechanical, physical, and structural systems.

Current Status: JCND was established in 2005 and is sponsored by the ASME Technical Committee on Multibody Systems and Nonlinear Dynamics (MSND). JCND is published quarterly in January, April, July and October. Number of pages allocated was increased from 550 to 7000 pages.

Impact Factor: JCND was included in the Journal Citation Reports (JCR) in 2009. The 2009 Impact Factor was 0.557, the 2010 Impact Factor is 0.571, the 2011 Impact factor is 0.827.

Competition:
1. Nonlinear Dynamics, Springer Publication
3. Communications in Nonlinear Science and Numerical Simulation, Elsevier Publication

Special Issues: Computational Multibody Dynamics, Edited by Dan Negrut & Olivier Bauchau, July 2010.
### Current Associate Editors and Area of Expertise

#### Current Associate Editors

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution/Company</th>
<th>Area</th>
<th>Period</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric A. Butcher</td>
<td>New Mexico State University</td>
<td>Nonlinear Dynamics</td>
<td>01 Jan 11 To 01 Jan 14</td>
<td>1</td>
</tr>
<tr>
<td>José L. Escalona</td>
<td>University of Seville</td>
<td>Multibody Dynamics</td>
<td>01 Jul 11 To 01 Jul 14</td>
<td>1</td>
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<tr>
<td>Henryk Flashner</td>
<td>University of Southern California</td>
<td>Nonlinear Dynamics</td>
<td>15 Jan 11 To 15 Jan 14</td>
<td>2</td>
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<tr>
<td>Javier Garcia de Jalon</td>
<td>Universidad Politecnica de Madrid</td>
<td>Multibody Dynamics</td>
<td>01 Jul 11 To 01 Jul 14</td>
<td>1</td>
</tr>
<tr>
<td>Jozsef Kovacsces</td>
<td>McGill Universit</td>
<td>Multibody Dynamics</td>
<td>01 Oct 11 To 01 Oct 14</td>
<td>1</td>
</tr>
<tr>
<td>Claude-Henri Lamarque</td>
<td>ENTPE, Lyon, France</td>
<td>Nonlinear Dynamics</td>
<td>01 Jul 09 To 01 Jul 12 (Extended to 01 Nov 12)</td>
<td>2</td>
</tr>
<tr>
<td>Stefano Lenci</td>
<td>Polytechnic University of Marche</td>
<td>Nonlinear Dynamics</td>
<td>01 Jan 11 To 01 Jan 14</td>
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<tr>
<td>Carmen M. Lilley</td>
<td>University of Illinois at Chicago</td>
<td>Vibration</td>
<td>01 Jul 11 To 01 Jul 14</td>
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<tr>
<td>J. A. Tenreiro Machado</td>
<td>Institute of Engineering of the Polytechnic Institute of Porto</td>
<td>Nonlinear Dynamics/Fractional Derivatives</td>
<td>01 Oct 11 To 01 Oct 14</td>
<td>2</td>
</tr>
<tr>
<td>Aki Mikkola</td>
<td>Lappeenranta University of Technology</td>
<td>Multibody Dynamics</td>
<td>01 Jul 09 To 01 Jul 12 (Extended to 01 Jul 13)</td>
<td>2</td>
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<tr>
<td>Dan Negrut</td>
<td>University of Wisconsin</td>
<td>Multibody Dynamics</td>
<td>01 Oct 11 To 01 Oct 14</td>
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<tr>
<td>Parviz Nikravesh</td>
<td>University of Arizona</td>
<td>Multibody Dynamics</td>
<td>01 Jul 11 To 01 Jul 14</td>
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<td>Tae-Won Park</td>
<td>Ajou University</td>
<td>Multibody Dynamics</td>
<td>01 Jul 11 To 01 Jul 14</td>
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<td>D. Dane Quinn</td>
<td>Department of Mechanical Engineering</td>
<td>Nonlinear Dynamics</td>
<td>01 Jan 11 To 01 Jan 14</td>
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<tr>
<td>Arend L. Schwab</td>
<td>Delft University of Technology</td>
<td>Nonlinear Dynamics/Multibody Dynamics</td>
<td>01 Jul 11 To 01 Jul 14</td>
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<tr>
<td>Yoshiaki Terumichi</td>
<td>Sophia University</td>
<td>Vehicle Dynamics</td>
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<tr>
<td>Hiroshi Yabuno</td>
<td>Keio University</td>
<td>Nonlinear Dynamics</td>
<td>01 Oct 11 To 01 Oct 14</td>
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<tr>
<td>Ahmet S. Yigit</td>
<td>Kuwait University</td>
<td>Vibration</td>
<td>01 Jan 11 To 01 Jan 14</td>
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<tr>
<td>Khaled E. Zaazaa</td>
<td>ENSCO, Inc.</td>
<td>Vehicle and Multibody Dynamics</td>
<td>01 Jul 11 To 01 Jul 14</td>
<td>1</td>
</tr>
</tbody>
</table>
Summary of Activities

Papers Submitted in 2011: 246
Acceptance Rate: 33%
Submission to Decision: 3.94 months
Submission to Publication: unavailable

Paper Submitted by Country in 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Number Of Submission</th>
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<td>Unknown</td>
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<td>Australia</td>
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<td>Austria</td>
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<td>Brazil</td>
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<td>Canada</td>
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<td>China</td>
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<td>Finland</td>
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<tr>
<td>France</td>
<td>1</td>
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<tr>
<td>France (Metro)</td>
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<tr>
<td>Germany</td>
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<tr>
<td>India</td>
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<td>Iran</td>
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<td>Italy</td>
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<td>Japan</td>
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<tr>
<td>Jordan</td>
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<tr>
<td>Korea (Republic)</td>
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<td>Mexico</td>
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<tr>
<td>Netherlands</td>
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<tr>
<td>Nigeria</td>
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<td>Pakistan</td>
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<td>Portugal</td>
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<td>Serbia</td>
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<td>United States</td>
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<td>Viet Nam</td>
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</tbody>
</table>

Report prepared by

Ahmed A. Shabana
Editor, ASME Journal of Computational and Nonlinear Dynamics
University of Illinois at Chicago
Journal of Computing and Information Science and Engineering (JCISE)

Report of Activities

August 2012

Journal Tool Migration

Migration of the web tool for JCISE to the ASME Journal Tool has been successfully completed and for more than six months all paper submissions and handling have been through the Journal Tool. Associate Editors have been excellent in accommodating this important transition.

Advisory Board

There has been no change in the JCISE’s advisor board since last year. The present members are:

- D. Lee & R. Rangan (Computers & Information in Engr. Division)
- S. Azarm & K. Anderson (Design Engr. Division)
- M. Benet (Manufacturing Division)
- Dave Auslander (Dynamics Systems Division)
- R. Riesenfeld (Member at Large CS)
- Paul Wright (Member at Large ME)

The membership includes two members each from the CIE and DED divisions respectively. I recommend that each division to review their respective policies and take appropriate actions to update appointments of their respective members.

Technical Areas and Associate Editors

The technical areas with Associate Editors assigned to them are as follows:

- Computer Aided Design/Solid Modeling
  1. Open (a candidate is identified and is being proposed)
  2. Open (needs new appointment)

- Computational Metrology/Reverse Engr.
  1. X. Qian (2012)
  2. A. Fisher (2013)

- Engr. Simulation and Optimization
  1. K. Saito (2012)
  2. Open (a candidate is identified and is being proposed)

- Computer Aided Manufacturing
  1. Open (needs new appointment)
  2. A. Joneja (2012)
- Engineering Informatics
  1. K. Law (2012)
  2. Open (needs new Appointment)
  3.
- AI/Knowledge Based Systems
  1. A. Goel (2012)
  2. Y. Kitamura (2012)
- Virtual Realty/Haptics
  1. Open (a candidate has been identified and is being proposed)
  2. C. Gieger (2012)
- Computational Geometry & Visualization
  1. S. McMains (2011) (needs new appointment)
  2. S. Gao (2012)
- Cyber-physical and Embedded Systems
  1. Open (a candidate has been identified from CIE and is being proposed)
  2. Open (a candidate has been identified from MESA and is being proposed)
- Computational Kinematics
  1. Open (needs new appointment)
- Semantic Modeling, Advanced Data Bases, and Cloud Computing
  1. Open (needs new appointment)
  2. Open (needs new appointment)
- Specialized Computer Architectures, GPU’s and Supercomputing
  1. Open (needs new appointment)
  2. Open (needs new appointment)

**New Area**

I have felt that in addition to some of the areas that we have added to the relevant areas of coverage by the Journal, I am also proposing adding the following area:

- Multi-scale Systems and System Engineering
  1. Open (needs new appointment)

**Quality and Health of the Journal**

JCISE has historically published papers of very high quality with acceptance rate of approximately less than 30%. It also has an impact factors in mid-range of all ASME Journals which, in my opinion, very good considering the fact that it started just a decade ago.

The statistics for paper submission and acceptance is given in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>No. Submitted</th>
<th>No. (%) Submitted</th>
<th>No. (%) Resolved</th>
<th>No. (%) Accepted</th>
<th>No. (%) Rejected</th>
<th>No. (%) Withdrawn</th>
<th>No. (%) Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>184</td>
<td>158 (85%)</td>
<td>30 (19%)</td>
<td>96 (61%)</td>
<td>10%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>129</td>
<td>90 (70%)</td>
<td>8 (9%)</td>
<td>68 (75%)</td>
<td>14 (11%)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
Concurrent Reviews for CIE Conference and JCISE
I like to work with the conference program review committee to establish ways that papers for CIE and MESA conferences can be considered concurrently both for conference as well as JCISE. This requires appointment of a sub-set of Associate Editors on the conference review committee each year. I can work out the details with the conference review committees.

Respectively Submitted;
Bahram Ravani
Technical Editor, JCISE
August 2011
REPORT
ASME Journal of Medical Devices
(data through July 29, 2012)

Submitted by Editors:

Arthur G. Erdman, Ph.D.
University of Minnesota
612.625.8580
agerdman@me.umn.edu

Gerald E. Miller, Ph.D.
Virginia Commonwealth University
804.828.7263
gemiller@vcu.edu

Special Projects
In order to stimulate authors to submit more papers to the journal, the 2012 Design of Medical Devices
Conference expanded to two poster sessions. 108 one page papers were accepted after a peer reviewed process led
by Just Herder. They were published in the March Issue of the journal. Also, free copies of the Journal were
handed out at the 2012 DMD conference. See http://www.dmd.umn.edu/

Current Status and Outlook
Twenty second issue nearly ready to be published.

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

PubMed Status
We are finalizing the transfer form ASME to PubMed and should be up and running within 4-6 weeks.(from email
on 5/16/12) from Colin McAteer, Manager of ASME Journals.

Associate Editors and Areas of Expertise
10 out of our 11 Associate Editors are completing their second term January 1, 2012. We will be taking the steps to
nominate and replace them.

* Extended 1 year to complete currently assigned papers.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Term 1 End Date</th>
<th>Term 2 End Date</th>
<th>Area of Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danny Bluestein</td>
<td>Stony Brook University</td>
<td>31 Dec 10</td>
<td>31 Dec 13</td>
<td>Biofluid devices including cardiovascular devices, stints and valves.</td>
</tr>
<tr>
<td>*Ted Conway</td>
<td>Virginia Commonwealth University</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Rehabilitation Engr</td>
</tr>
<tr>
<td>William Durfee</td>
<td>University of Minnesota</td>
<td>01 Jun 12</td>
<td>01 Jun 15</td>
<td>design of medical devices, rehabilitation engineering,</td>
</tr>
<tr>
<td>Name</td>
<td>Institution</td>
<td>Start Date</td>
<td>End Date</td>
<td>Research Areas</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------------------</td>
<td>------------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Vijay Goel</td>
<td>University of Toledo</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Spine mechanics, advanced orthotics, biomechanics and physiology of human muscle including electrical stimulation of muscle, product design and design</td>
</tr>
<tr>
<td>Just Herder</td>
<td>Delft University of Technology</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Mechanical design, mechanism synthesis, static balancing, dynamic balancing, compliant mechanisms, parallel mechanisms, kinematics, robotics, mechatronics, biomechanics, rehabilitation, prosthetics and orthotics, minimally invasive surgery, human-machine interaction</td>
</tr>
<tr>
<td>Paul A. Iaizzo</td>
<td>University of Minnesota</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Cardiovascular devices, Neurological devices, Minimally invasive devices, Human performance/force assessment, New medical sensors/actuators and Surgical Procedures</td>
</tr>
<tr>
<td>Hamid M. Lankarani</td>
<td>Wichita State University</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Crashworthiness, Occupant Protection of Transportation Systems, Biodynamics, Injury Biomechanics, Multibody Dynamics, Structures, Impact Dynamics</td>
</tr>
<tr>
<td>M.Y. Lee</td>
<td>Chang Gung University</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Technical aids and assistive devices for disabled; Barrier-free environmental adaptive systems; Computer aided surgical tools and navigation system; Computer-aided rehabilitation systems (diagnostic/assessment/training); Automatic caring facilities for hospital (such as automatic patient bed, patient transfer systems); Reverse engineering and rapid prototyping in medical applications (such as computer assisted implant design and manufacturing, design of new RP machine for medicine); Medical robots and medical mechatronics systems; Creative design for medical devices; e-learning and training on medical</td>
</tr>
<tr>
<td>Name</td>
<td>Institution</td>
<td>Start Date</td>
<td>End Date</td>
<td>Research Interests</td>
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<tr>
<td>-----------------------------</td>
<td>----------------------------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Keefe B. Manning</td>
<td>Penn State University</td>
<td>01 Feb 12</td>
<td>01 Feb 15</td>
<td>Biomedical Engineering, Bioengineering, Cardiovascular, Medical Imaging</td>
</tr>
<tr>
<td>*James Moore</td>
<td>Texas A &amp; M University</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>Biofluid mechanics</td>
</tr>
<tr>
<td>*Jahangir Rastegar</td>
<td>SUNSYB</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>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</td>
</tr>
<tr>
<td>*Erol Sancaktar</td>
<td>University of Akron</td>
<td>01 Jan 09</td>
<td>01 Jan 12</td>
<td>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</td>
</tr>
<tr>
<td>Foster B. Stulen</td>
<td>Ethicon Endo-Surgery</td>
<td>01 Jan 12</td>
<td>01 Jan 13</td>
<td>Ultrasonics, Medical instrumentation, Endoscopic/Laparoscopic devices, Medical device design processes, Medical device manufacturing, Human factors in medical devices</td>
</tr>
</tbody>
</table>

Pending Nominations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Start Date</th>
<th>End Date</th>
<th>Research Interests</th>
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</thead>
<tbody>
<tr>
<td>Rupak Banerjee</td>
<td>University of Cincinnati</td>
<td>TBD</td>
<td>TBD</td>
<td>Modeling, Simulation and Computer-aided Engineering; Thermal-Fluids and Power Engineering; and Bio-health, Biomechanics and Safety Engineering and in the areas of Biomedical Engineering and Ophthalmology</td>
</tr>
<tr>
<td>Venky Dubey</td>
<td>Bournemouth University, UK</td>
<td>TBD</td>
<td>TBD</td>
<td>Robotics, Tactile sensing, Mechanism and Medical Device Design, Biomedical Engineering, Rehabilitation</td>
</tr>
<tr>
<td>Rosaire Mongrain</td>
<td>McGill University</td>
<td>TBD</td>
<td>TBD</td>
<td>Biofluids, cardiovascular devices</td>
</tr>
<tr>
<td>Carl Nelson</td>
<td>University of Nebraska-Lincoln</td>
<td>TBD</td>
<td>TBD</td>
<td>Robotics, mechanical systems design and analysis, surgical and biomedical tools and instruments</td>
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## Summary of Activity

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<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012*</th>
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<td>79</td>
<td>67</td>
<td>117</td>
<td>104</td>
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<td>Accepted Papers</td>
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<td>24</td>
<td>26</td>
<td>36</td>
<td>46</td>
<td>7</td>
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<tr>
<td>Rejected Papers</td>
<td>15</td>
<td>21</td>
<td>24</td>
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<td>17</td>
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<td>19</td>
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<td>Withdrawn Papers</td>
<td>15</td>
<td>22</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>17</td>
<td>12</td>
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<td>Removed Papers</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
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<td>Open Papers</td>
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<td>15</td>
<td>16</td>
<td>49</td>
<td>10</td>
<td>43</td>
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<td>Published Papers</td>
<td>0</td>
<td>39</td>
<td>100±</td>
<td>141+</td>
<td>127⊕</td>
<td>126≠</td>
<td>135×</td>
</tr>
<tr>
<td>Num. of Pages</td>
<td>0</td>
<td>292</td>
<td>315±</td>
<td>401+</td>
<td>396⊕</td>
<td>380≠</td>
<td>192×</td>
</tr>
</tbody>
</table>

*Data through July 29, 2012

× Includes 1-page papers from the 2012 Design of Medical Devices Conference=108 total
≠ Includes Abstracts from the 2011 Design of Medical Devices Conference=82 total
⊕ Includes Abstracts from the 2010 Design of Medical Devices Conference=85 total
+ Includes Abstracts from the 2009 Design of Medical Devices Conference=101 total
± Includes Abstracts from the 2008 Design of Medical Devices Conference=63 total
### Percentages

<table>
<thead>
<tr>
<th>Year</th>
<th>% Papers Accepted</th>
<th>% Papers Rejected</th>
<th>% Papers Withdrawn</th>
<th>% of Papers Completed Review Process</th>
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<tbody>
<tr>
<td>2006</td>
<td>37%</td>
<td>21%</td>
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<td>2007</td>
<td>33%</td>
<td>24%</td>
<td>25%</td>
<td>44%</td>
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<td>2008</td>
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<td>12%</td>
<td>†46%</td>
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<td>2009</td>
<td>39%</td>
<td>18%</td>
<td>16%</td>
<td>†59%</td>
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<tr>
<td>2010</td>
<td>31%</td>
<td>14%</td>
<td>10%</td>
<td>†35%</td>
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<td>2011</td>
<td>44%</td>
<td>23%</td>
<td>16%</td>
<td>†42%</td>
</tr>
<tr>
<td>2012</td>
<td>8%</td>
<td>23%</td>
<td>15%</td>
<td>†33%</td>
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</tbody>
</table>

*Data through July 29, 2012
†Does not include DMD Conference Abstracts or Papers
Journal of Medical Devices Subscription Copies

Average Number of Subscribers

<table>
<thead>
<tr>
<th>Average Number of Subscribers FY 07</th>
<th>738</th>
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<tr>
<td>Average Number of Subscribers FY 08</td>
<td>1348</td>
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<tr>
<td>Average Number of Subscribers FY 09</td>
<td>1265</td>
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<tr>
<td>Average Number of Subscribers FY 10</td>
<td>1248</td>
</tr>
<tr>
<td>Average Number of Subscribers FY 11</td>
<td>pending request</td>
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</tbody>
</table>

![Bar chart showing average number of subscribers by fiscal year](chart.png)
Finite Element Analysis of the Implantation of a Self-Expanding Stent: Impact of Lesion Calcification
Shijia Zhao, Linxia Gu, and Stacey R. Froemming

Evaluation of Instrument Dexterity and Static Resistance of Laparoendoscopic Single-Site (LESS) Surgical Ports
Adam E. de Laveaga, Bernadette McCrory, Chad A. LaGrange, and M. Susan Hallbeck

Development of a Non-Invasive Dynamic Pulmonary Function Monitor
Michael D. Sokoloff, Larry Bortner, and Ralph J. Panos

Changes to the International Regulatory Environment
Martin McHugh, Fergal McCaffery, and Valentine Casey

Comparison of Two Control Methods for Minimally Invasive Surgical Instruments
Chunman Fan, Hélène Clogenson, Paul Breedveld, John J. van den Dobbelsteen, and Jenny Dankelman

An Instrumented Bioreactor for Mechanical Stimulation and Real-Time, Nondestructive Evaluation of Engineered Cartilage Tissue
Jenni R. Popp, Justine J. Roberts, Doug V. Gallagher, Kristi S. Anseth, Stephanie J. Bryant, and Timothy P. Quinn

Renal Cooling Device for Use in Minimally Invasive Surgery
Edward Summers, Thomas Cervantes, Rachel Batzer, Christie Simpson, Raymond Lewis, and Julia Stark

Kinematics of a Fully-Decoupled Remote Center-of-Motion Parallel Manipulator for Minimally Invasive Surgery
Chin-Hsing Kuo and Jian S. Dai

A Device for the Automated Loading and Detection of Brachytherapy Elements Using Nonmechanical Methods for use in Prostate Cancer Treatment
Jason A. Proffitt and Aaron K. Ball

Spinal Implant Development, Modeling, and Testing to Achieve Customizable and Nonlinear Stiffness
Eric Dodgen, Eric Stratton, Anton Bowden, and Larry Howell

Hemodialysis Graft Resistance Adjustment Device
Brandon J. Hopkins, Huaiyin Wu, William H. Marks, Qimin Quan, Samuel Kesner, C. Keith Ozaki, and Conor Walsh

Uniform Expansion of a Polymeric Helical Stent
Nasim Paryab, Duane Cronin, Pearl Lee-Sullivan, Xiong Ying, Freddy Y. C. Boey, and Subbu Venkatraman

Assessment of Infant Movement With a Compact Wireless Accelerometer System

Computational Simulations of Vertebral Body for Optimal Instrumentation Design
F. Casesnoves
Medical Device Innovators and the 510(k) Regulatory Pathway: Implications of a Survey-Based Assessment of Industry Experience
Jan B. Pietzsch, Marta G. Zanchi, and John H. Linehan

VOLUME 6 • ISSUE 1 • MARCH 2012
RESEARCH PAPERS
Initial Design and Evaluation of a Pediatric Intra-Cardiac Camera System for Ventricular Septal Defects
Mark E. Rentschler, Keir D. Hart, and Max B. Mitchell

A Novel Design for a Jaw-Thrust and Head Immobilization Device and its Successful Testing Using a Human Simulator
Girish Deshpande, Kalyani Nair, Nick Hand, Jesse Magnuson, Alexa Davis, and Martin Morris

Shape Optimization of a Self-deployable Anchor Designed for Percutaneous Mitral Valve Repair
Farhad Javid, Jorge Angeles, Damiano Pasini, and Renzo Cecere

Stiffness Compensation Mechanism for Body Powered Hand Prostheses with Cosmetic Covering
Nima Tolou, Gerwin Smit, Ali A. Nikooyan, Dick H. Plettenburg, and Just L. Herder

The Design and Initial Experimental Validation of an Active Myoelectric Transfemoral Prosthesis
Carl D. Hoover, George D. Fulk, and Kevin B. Fite

Prosthetic Ankle-Foot System That Adapts to Sloped Surfaces
Eric A. Nickel, Andrew H. Hansen, and Steven A. Gard

The Impact of Wire Stent Fabrication Technique on the Performance of Stent Placement
Shijia Zhao, Xiangyi (Cheryl) Liu, and Linxia Gu

TECHNICAL BRIEFS
Foldable Surgical Stereo Microendoscope With Continuously Adjustable Convergence
Matteo Zoppi, Paolo Trifiletti, and Rezia Molfino

A Microwave Surface Applicator for Tissue Coagulation: Technical Characteristics and Performances
Benjamin Lepers, Peter Clegg, Nigel Cronin, and Ines Wieland

A Device to Control Implant and Bone-Cement Temperatures in Cemented Arthroplasty
A. Completo, M. Coutinho, M. Schiller, A. Ramos, C. Relvas, and J. A. Simões

Design and Experimental Evaluation of a Vertical Lift Walker for Sit-to-Stand Transition Assistance
Thomas C. Bulea and Ronald J. Triolo

DESIGN INNOVATION
Thermochemical Ablation: A Device for a Novel Interventional Concept
Matthew G. Geeslin and Erik N. Cressman

2012 DESIGN OF MEDICAL DEVICES CONFERENCE PAPERS
Introduction
Arthur Erdman, William Durfee, Paul Iaizzo, Just Herder, John C. Bischof, Saurav Paul, and Dan Keefe
108 I-page Papers Published

VOLUME 5 • ISSUE 4 • DECEMBER 2011
RESEARCH PAPERS
Multifunctional Forceps for Use in Endoscopic Surgery—Initial Design, Prototype, and Testing
Andrew C. Rau, Mary Frecker, Abraham Mathew, and Eric Pauli

Compliance and Longitudinal Strain of Cardiovascular Stents: Influence of Cell Geometry
Determination of the Loads Applied on the Anatomy and Orthosis During Ambulation With a New Reciprocal Gait Orthosis
Mohammad Taghi Karimi

Development of a Force-Driven Distractor for Distraction Osteogenesis
Jinyong Wee, Robert E. Akins, William G. Mackenzie, Rahamim Seliktar, David G. Levine, Dean W. Richardson, George R. Dodge, and Tariq Rahman

Evaluating Design of Abdominal Aortic Aneurysm Endografts in a Patient-Specific Model Using Computational Fluid Dynamics
Polina A. Segalova, Guanglei Xiong, K. T. Venkateswara Rao, Christopher K. Zarins, and Charles A. Taylor

A Roadmap for the Design of Bioreactors in Mechanobiological Research and Engineering of Load-Bearing Tissues
Mathieu Viens, Guillaume Chauvette, and Ève Langelier

Assessment of Minimally Invasive Device That Provides Simultaneous Adjustable Cardiac Support and Active Synchronous Assist in an Acute Heart Failure Model
Michael R. Moreno, Saurabh Biswas, Lewis D. Harrison, Guillaume Pernelle, Matthew W. Miller, Theresa W. Fossum, David A. Nelson, and John C. Criscione

A New System to Improve Screw Fixation to Bones
A. Yánez, G. L. Garcés, J. A. Carta, and A. Cuadrado

Development of an Automatic Adjustable Colonoscope
Jonathan D. Litten, JungHun Choi, and David Drozek

Development of a Portable Tissue Micro Array Instrument

Characterization of Puncture Forces for Retinal Vein Cannulation
Olgaç Ergeneman, Juho Pokki, Vanda Počepcová, Heike Hall, Jake J. Abbott, and Bradley J. Nelson

Design of a Surgical Port for Minimally Invasive Beating-Heart Intracardial Procedures
Christopher M. DiBiasio, Keith V. Durand, Jonathan Hopkins, Zach Traina, Alexander H. Slocum, Nikolay V. Vasilyev, and Pedro J. del Nido

Assessment of Pedicle Bone Strength in the Lumbar Spine Using a “Smart” Ball Tip Probe
Kate D. Liddle, Michael A. Tufaga, Glenn Diekmann, Jenni M. Buckley, Viva Tai, Kathleen Mulligan, Christopher Ames, and R. Trigg McClellan

Design and Evaluation of a Computer-Controlled Pressure Algometer
Michael M. Zimkowski, Emily M. Lindley, Vikas V. Patel, and Mark E. Rentschler

Design and Control of a Pneumatic Artificial Muscle Actuated Above-Knee Prosthesis
Garrett Waycaster, Sai-Kit Wu, and Xiangrong Shen
Development of a New Method for Pulse Push/Pull Hemodialysis
Kyungsso Lee, Dong Wook Lee, Byoung Goo Min, Kyoung Kap Lee, and Young Min Yun

Development of a Colonoscope Sheath Device for Colonoscopy
JungHun Choi and David Drozek

A Cyclic Robot for Lower Limb Exercise
Brian P. DeJong, J. Edward Colgate, and Michael A. Peshkin

On Modeling Assumptions in Finite Element Analysis of Stents
Nuno Rebelo, Rob Radford, Achim Zipse, Martin Schlun, and Gael Dreher

Pump Design for a Portable Renal Replacement System
Jane Kang, Tamera Scholz, Jason D. Weaver, David N. Ku, and David W. Rosen

Design of a Multigrasp Transradial Prosthesis
Tuomas E. Wiste, Skyler A. Dalley, H. Atakan Varol, and Michael Goldfarb

Gait Phase-Based Control for a Rotary Series Elastic Actuator Assisting the Knee Joint
Joonbum Bae, Kyoungchul Kong, and Masayoshi Tomizuka

Gamma Irradiation Studies I. Dental Grafts
Selcan Türker, A. Yekta Özer, Burak Kutlu, Rahime Nohutcu, Hasan Bilgili, Didem Öztürk, Meral Özalp, and Arzu Sungur

Effects of Microneedle Design Parameters on Hydraulic Resistance
R. Lyle Hood, Mehmet A. Kosoglu, Matthew Parker, and Christopher G. Rylander

TECHNICAL BRIEFS
Method to Achieve High Frame Rates in a Scanning Fiber Endoscope
Matthew J. Kundrat, Per G. Reinhall, and Eric J. Seibel

Biomechanical Property of a Natural Microneedle: The Caterpillar Spine
G. J. Ma, L. T. Shi, and C. W. Wu

Steerable Mechanical Joint for High Load Transmission in Minimally Invasive Instruments
Tin Yan Nai, Just L. Herder, and Gabriëlle J. M. Tuijthof

DESIGN INNOVATION
Evolution of a Novel Intraductal Patent Ductus Arteriosus Occlusion Device
Megha Agrawal, Vaibhavi A. Sonetha, Smriti Sharma, Satyajeet Parakh, Bharat Dalvi, and Jayesh R. Bellare

ERRATUM
Karen May-Newman, Maria T. Matyska, and Martin N. Lee

VOLUME 5 • ISSUE 2 • JUNE 2011
RESEARCH PAPERS
Modified Elliptical Machine Motor-Drive Design for Assistive Gait Rehabilitation
Carl A. Nelson, Judith M. Burnfield, Yu Shu, Thad W. Buster, Adam P. Taylor, and Andrew Graham

3D Graphical Rendering of Localized Lumps and Arteries for Robotic Assisted MIS
Masoud Kalantari, Mohammadreza Ramezanifard, Javad Dargahi, and Jozsef Kövecses

Design and Preliminary Testing of a Novel Dual-Chambered Syringe
Karen May-Newman, Maria T. Matyska, and Martin N. Lee

TECHNICAL BRIEFS
A Low Power Wireless Data Acquisition Device to Monitor Gait Patterns for Children With Toe Walking During Daily Activities
Edmond H. M. Lou, Emma K. Brunton, Fraaz Kamal, Andreas Renggli, Kyle Kemp, Justin Lewicke, Dulai Sukhdeep, Joe M. Watt, and John Andersen

DESIGN INNOVATION
Conceptual Design for Condylar Guiding Features of a Total Knee Replacement
Shahram Amiri, T. Derek V. Cooke, and Urs P. Wyss

2011 DESIGN OF MEDICAL DEVICES CONFERENCE ABSTRACTS
82 Abstracts Published

VOLUME 5 • ISSUE 1 • MARCH 2011
RESEARCH PAPERS
Design of an Ankle Rehabilitation Device Using Compliant Mechanisms
Edward Sung, Alexander H. Slocum, Jr., Raymond Ma, Jonathan F. Bean, and Martin L. Culpepper

Gravity Balancing of a Human Leg Using an External Orthosis
Abbas Fattah, Khatereh Hajizadeh, and Sunil K. Agrawal

Fabrication and Characterization of Surface Texture for Bone Ingrowth by Sequential Laser Peening Biodegradable Orthopedic Magnesium-Calcium Implants
M. P. Sealy and Y. B. Guo

An Articulating Tool for Endoscopic Screw Delivery
Joseph E. Petzelka, Manas C. Menon, Clara J. Stefanov-Wagner, Suresh K. Agarwal, Dimitris Chatzigeorgiou, Michelle Lustrino, and Alexander H. Slocum

Mechanical Characterization of a Viscoelastic Disc for Lumbar Total Disc Replacement

TECHNICAL BRIEFS
A Scalable Model for Human Scala-Tympani Phantoms
James R. Clark, Frank M. Warren, and Jake J. Abbott

Low-Cost Kit of Plastic Modular Adaptors for External Transtibial Prostheses
Rafael R. Torrealba and Carmen M. Müller-Karger

DESIGN INNOVATION
Development and Performance of a Controllable Autoloading Needle-Free Jet Injector
Brian D. Hemond, Andrew Taberner, Cathy Hogan, Bryan Crane, and Ian W. Hunter

BOOK REVIEWS
The Role of Biofilms in Device-Related Infections,
M. Shirtliff, G. Leid, J. W. Costerton, and Tamilvanan Shunmugaperumal, Reviewer
Xiaoli Zhang and Carl A. Nelson

Modeling of Spatially Controlled Biomolecules in Three-Dimensional Porous Alginate Structures
Ibrahim T. Ozbolat and Bahattin Koc

Development of a Multifunction Isolator System for the Care of Medium-Sized Laboratory Animals Harboring Infectious Diseases
Xin Pan, Ming Long, Hao Liang, Xiao Chen, Han Li, Guang-bo Li, and Zi-ye Zhao

PneumoniaCheck: A Device for Sampling Lower Airway Aerosols
Tamera L. Scholz, Prem A. Midha, Larry J. Anderson, and David N. Ku

Micropatterned Treads for In Vivo Robotic Mobility
Levin J. Sliker, Xin Wang, Jonathan A. Schoen, and Mark E. Rentschler

Modeling of Deformation-Accelerated Breakdown of Polylactic Acid Biodegradable Stents
João S. Soares, James E. Moore, Jr., and Kumbakonam R. Rajagopal

Optimal Fiducial Configuration in Image-Guided Neurosurgery Using a Genetic Algorithm
Laura Gastaldi, Alessandro Battezzato, Claudio Bernucci, Marco Mannino, and Stefano Pastorelli

Microdialysis Technique to Quantify Drug Concentration in Human Intervertebral Disks
Hyun Kyu Han, Jenni Buckley, Kathy Kursa, Conor O'Neill, and Jeffrey Lotz

DESIGN INNOVATION

Polymer Rigidity Control for Endoscopic Shaft-Guide ’Plastolock’ — A Feasibility Study
Arjo J. Loeve, Johannes H. Bosma, Paul Breedveld, Dimitra Dodou, and Jenny Dankelman

A Process for Design, Verification, Validation, and Manufacture of Medical Devices Using Immersive VR Environments
Daniel F. Keefe, Fotis Sotiropoulos, Victoria Interrante, H. Birali Runesha, Dane Coffey, Molly Staker, Chi-Lun Lin, Yi Sun, Iman Borazjani, Trung Le, Nancy Rowe, and Arthur Erdman

Adult Male Circumcision Tool for Use in Traditional Ceremonies
Kyle A. Lemmermen, Tom F. Van Wingen, Craig M. Spencer, Phil J. Scott, and Kathleen H. Sienko

A Virtual Instrument for Automated Measurement of Arterial Compliance
Jayaraj Joseph and V. Jayashankar

An Implantable Battery System for a Continuous Automatic Distraction Device for Mandibular Distraction Osteogenesis
M. D. Chung, R. D. Rivera, S. E. Feinberg, and A. M. Sastry

VOLUME 4 • ISSUE 3 • SEPTEMBER 2010

RESEARCH PAPERS

Theoretical and Finite Element Modeling of Fine Kirschner Wires in Ilizarov External Fixator
A. R. Zamani and S. O. Oyadiji

Mechanical Evaluation of Polyvinyl Alcohol Cryogels for Covered Stents
Jason D. Weaver and David N. Ku

A Novel Translational Total Body Irradiation Technique
Derek W. Brown, Kurt Knibutat, Nathan Edmonds, Daniel Tom, Leo Moriarty, Peter Hanson, Mona Udowicz, Amjad Hussain, Jose Eduardo Villarreal-Barajas, and Alana Hudson

Using an Optical Proximity Sensor to Measure Foot Clearance During Gait: Agreement With Motion Analysis
Andy Kerr, Danny Rafferty, Philippa Dall, Philip Smit, and Peter Barrie

The Relation Between the Arterial Stress and Restenosis Rate After Coronary Stenting
Linxia Gu, Shijia Zhao, Aswini K. Muttyam, and James M. Hammel

Design of a Novel Mobility Interface for Infants on a Mobile Robot by Kicking
Xi Chen, Sherry Liang, Stephen Dolph, Christina B. Ragonesi, James C. Galloway, and Sunil K. Agrawal

Integrated Fuzzy-Based Modular Architecture for Medical Device Design and Development
Celestine C. Aguwa, Leslie Monplaisir, Prasanth Achuthamenon Sylajakumari, and Ram Kumar Muni

Performance Testing of Huber Needles for Coring of Port Septa

Preliminary Development and Engineering Evaluation of a Novel Cricothyrotomy Device
Jason P. Carey, Morgan Gwin, Andrew Kan, Roger Toogood, and Barry Finegan

DESIGN INNOVATION
Design of a Cooling Guide Catheter for Rapid Heart Cooling
Thomas L. Merrill, Denise R. Merrill, Todd J. Nilsen, and Jennifer E. Akers

Design Improvements and In Vitro Testing of an Implantable Muscle Energy Converter for Powering Pulsatile Cardiac Assist Devices
Dennis R. Trumble, Marshall Norris, and Alan Melvin

FlexDex™: A Minimally Invasive Surgical Tool With Enhanced Dexterity and Intuitive Control
Shorya Awtar, Tristan T. Trutna, Jens M. Nielsen, Rosa Abani, and James Geiger

VOLUME 4 • ISSUE 2 • JUNE 2010

RESEARCH PAPERS
Experimental Investigation and Neural Network Modeling for Force System of Retraction T-Spring for Orthodontic Treatment
Bahaa I. Kazem, Nidahal Hussain Ghaib, and Noor M. Hasan Grama

Design and Preliminary Evaluation of a Novel Brace for Boutonniere Deformity
Mark E. Rentschler and Scott A. Macdonald

Two-Dimensional Optimization of a Stent for an Aneurysm

A New Method in the Design of a Dynamic Pedorthosis for Children With Residual Clubfoot
Robert Rizza, XueCheng Liu, John Thometz, Roger Lyon, and Channing Tassone

TECHNICAL BRIEFS
Finite Element Modeling of Inverted (Inside Out) Soft Contact Lenses
Fabian Conrad, Klaus Ehrmann, Jennifer D. Choo, and Brien A. Holden

Visual Feedback Automation for ICSI With Rotationally Oscillating Drill (Ros-Drill®)
Jhon F. Diaz, Nejat Olgac, Mehdi Karzar-Jeddi, and Tai-Hsi Fan

DESIGN INNOVATION
Sleeve Gastrectomy Surgical Assistive Instrument for Accurate Remnant Stomach Volume
Imad H. Elhajj, Nancy Dib, Sally Antoun, and Georges Al-Hajj
Design of a Novel Device to Provide Assured Seating of Bone Implanted Fiducial Markers
Jason Mitchell, Robert F. Labadie, and J. Michael Fitzpatrick

2010 DESIGN OF MEDICAL DEVICES CONFERENCE ABSTRACTS
85 Abstracts Published

VOLUME 4 • ISSUE 1 • MARCH 2010
RESEARCH PAPERS
Two-Dimensional FSI Simulation of Closing Dynamics of a Tilting Disk Mechanical Heart Valve
V. Govindarajan, H. S. Udaykumar, L. H. Herbertson, S. Deutsch, K. B. Manning, and K. B. Chandran

Measurement and Optimization of Minimally Invasive Intervention Device Design Fitness Using a Multiobjective Weighted Isotropy Index
Frank L. Hammond, III, Kenji Shimada, and Marco A. Zenati

An Active Foot-Ankle Prosthesis With Biomechanical Energy Regeneration
Joseph K. Hitt, Thomas G. Sugar, Matthew Holgate, and Ryan Bellman

An Advanced Patient Lift and Transfer Device for the Home
Roger Bostelman, Ji-Chul Ryu, Tommy Chang, Joshua Johnson, and Sunil K. Agrawal

TECHNICAL BRIEFS
Ultrafast Laser Micromachining of Latex for Balloon Angioplasty
Diwakar Ramanathan and Pal Molian

A Modified Footplate for the Kerrison Rongeur
Alim P. Mitha, Mohamed S. Ahmad, Sarah J. Cohen, Janet S. Lieberman, Martin R. Udengaard, Alexander H. Slocum, and Jean-Valery C. E. Coumans

Enabling Technology for Microvascular Stenting in Ophthalmic Surgery
Wei Wei, Claire Popplewell, Stanley Chang, Howard F. Fine, and Nabil Simaan

DESIGN INNOVATION
RFID Pharmaceutical Tracking: From Manufacturer Through In Vivo Drug Delivery
Erick Jones, Marcia Henry, David Cochran, and Tara Frailey

Design and Construction of a Portable Transcranial Magnetic Stimulation (TMS) Apparatus for Migraine Treatment
Renaud Charlet de Sauvage, Anne Beuter, Isabelle Lagroye, and Bernard Veyret

A Novel In Vivo Joint Loading System to Investigate the Effect of Daily Mechanical Load on a Healing Anterior Cruciate Ligament Reconstruction
Mark Stasiak M. Eng, Carl Imhauser, Jonathan Packer, Asheesh Bedi, Robert Brophy, David Kovacevic, Kent Jackson, Xiang-Hua Deng, Scott Rodeo, and Peter Torzilli

VOLUME 3 • ISSUE 2 • DECEMBER 2009
RESEARCH PAPERS
A Wireless System for Evaluating Postural Position
Amy R. Sipp and Blair A. Rowley

A Sensorized Instrument for Skills Assessment and Training in Minimally Invasive Surgery

Design and Usability of a Home Telerehabilitation System to Train Hand Recovery Following Stroke
William K. Durfee, Samantha A. Weinstein, Ela Bhatt, Ashima Nagpal, and James R. Carey
Characterization of Plastic Hypodermic Needles
Eric Busillo and Jonathan S. Colton

Numerical Investigation of Coil Configurations That Provide Ultrahigh Packing Density of Saccular Aneurysms
Chander Sadasivan and Baruch B. Lieber

Bahaa I. Kazem

Novel Stapling Method and Device for Nasal Surgery
Ryan K. Bueselter, David B. Hom, and Arthur G. Erdman

A Haptic Simulator for Training the Application of Range of Motion Exercise to Premature Infants
Kareem N. Adnan, Irfan Ahmad, Maria Coussens, Alon Eliakim, Susan Gallitto, Donna Grochow, Robin Koeppel, Dan Nemet, Julia Rich, Feizal Waffarn, Dan M. Cooper, and David J. Reinkensmeyer

Freebal: Design of a Dedicated Weight-Support System for Upper-Extremity Rehabilitation
Arno H. A. Stienen, Edsko E. G. Hekman, Gerdienke B. Prange, Michiel J. A. Jannink, Frans C. T. van der Helm, and Herman van der Kooij

TECHNICAL BRIEFS
Indirect Measurement of the Inertia Properties of a Knee Prosthesis Through a Simple Frequency-Domain Technique
Emiliano Mucchi, Giuliamarta Bottoni, and Raffaele Di Gregorio

DESIGN INNOVATION
A Hybrid Coil/Polymer Device for Occlusion of Cerebral Aneurysms

ERRATA
K. M. Al-Ashmouny, C. Boldt, J. E. Ferguson, A. G. Erdman, A. D. Redish, and E. Yoon

VOLUME 3 • ISSUE 2 • SEPTEMBER 2009
RESEARCH PAPERS
An Inexpensive Weight Bearing Indicator With Load Range Capability for Rehabilitation of Patients With Lower Extremity Injuries
Daniel F. Walczyk and William T. Ziomek

Validation of a Feedback-Controlled Elbow Simulator Design: Elbow Muscle Moment Arm Measurement
Laurel Kuxhaus, Patrick J. Schimoler, Jeffrey S. Vipperman, and Mark Carl Miller

Dampace: Design of an Exoskeleton for Force-Coordination Training in Upper-Extremity Rehabilitation
Arno H. A. Stienen, Edsko E. G. Hekman, Gerdienke B. Prange, Michiel J. A. Jannink, Arthur M. M. Aalsma, Frans C. T. van der Helm, and Herman van der Kooij

Design and Optimization of a Cable Driven Upper Arm Exoskeleton
Sunil K. Agrawal, Venketesh N. Dubey, John J. Gangloff, Jr., Elizabeth Brackbill, Ying Mao, and Vivek Sangwan

An MRI-Compatible Needle Manipulator Concept Based on Elastically Averaged Dielectric Elastomer Actuators for Prostate Cancer Treatment: An Accuracy and MR-Compatibility Evaluation in Phantoms
Jean-Sébastien Plante, Kenjiro Tadakuma, Lauren M. DeVita, Daniel F. Kacher, Joseph R. Roebuck, Simon P. DiMaio, Ferenc A. Jolesz, and Steven Dubowsky

An Ultraminiature MEMS Pressure Sensor With High Sensitivity for Measurement of Intramuscular Pressure (IMP) in Patients With Neuromuscular Diseases

Computer Aided Biomodeling and Analysis of Patient Specific Porous Titanium Mandibular Implants
Jayanthi Parthasarathy, Binil Starly, and Shivakumar Raman

TECHNICAL BRIEFS
Coordinated Planar Mechanisms to Approximate the Three Dimensional Motion of the Knee
Daniel Nielsen, Loren Blocker, and Nick Pardo

An Automated Drug Delivery Tracking Device Utilizing RFID Technology
Julie A. Petro, Dianne T. V. Pawluk, David S. Burch, and Justin M. Owen

Formation of Uniform Microspheres Using a Perforated Silicon Membrane: A Preliminary Study
K.-Y. Song, M. Chiao, B. Stoeber, U. Häfeli, M. M. Gupta, and W. J. Zhang

A Magnetic Resonance-Compatible Loading Device for Dynamically Imaging Shortening and Lengthening Muscle Contraction Mechanics
Amy Silder, Christopher J. Westphal, and Darryl G. Thelen

DESIGN INNOVATION
Measurement of Soft Tissue Deformation to Improve the Accuracy of a Body-Mounted Motion Sensor
Tao Liu, Yoshio Inoue, and Kyoko Shibata

VOLUME 3 • ISSUE 2 • JUNE 2009

RESEARCH PAPERS
Physical Simulation Environment for Arthroscopic Joint Irrigation
Gabriëlle J. M. Tuijthof, Paul M. Heeman, C. Niek Van Dijk, and Leendert Blankevoort

Performance Evaluation of a Planar 3DOF Robotic Exoskeleton for Motor Assessment
Stephen J. Ball, Ian E. Brown, and Stephen H. Scott

Arthroscopic Sheath Design and Technical Evaluation
Gabriëlle J. M. Tuijthof, Leendert Blankevoort, Just L. Herder, and C. Niek van Dijk

TECHNICAL BRIEFS
A New System for Monitoring Gait Training in Infants With Down Syndrome
Sigal Portnoy, Amit Gefen, Assaf Ohana, and Ziva Yizhar

Policy-Induced Constraints in the Design and Commercialization of Monitoring Devices: An Assessment of Three Technologies' Reimbursement Models
Sunil K. Rao and Jan B. Pietzsch

DESIGN INNOVATION
Design of a Catheter-Based Device for Performing Percutaneous Chordal-Cutting Procedures
Alexander H. Slocum, Jr., William R. Bosworth, Anirban Mazumdar, Miguel A. Saez, Martin L. Culpepper, and Robert A. Levine

2009 DESIGN OF MEDICAL DEVICES CONFERENCE ABSTRACTS
101 Abstracts Published
Optimal Path Planning for Robotic Insertion of Steerable Electrode Arrays in Cochlear Implant Surgery
Jian Zhang, J. Thomas Roland, Jr., Spiros Manolidis, and Nabil Simaan

Hydrodynamic Evaluation of a Minimally Invasive Heart Valve in an Isolated Aortic Root Using a Modified In Vitro Model
Qiang Wang, Fernando Jaramillo, Yasushi Kato, Leonard Pinchuk, and Richard T. Schoephoerster

Improving Maneuverability and Tactile Feedback in Medical Catheters by Optimizing the Valve Toward Minimal Friction
S. K. Ravensbergen, P. C. J. N. Rosielle, and M. Steinbuch

Development of an Automated Steering Mechanism for Bladder Urothelium Surveillance
W. Jong Yoon, Sangtae Park, Per G. Reinhall, and Eric J. Seibel

Optimization of Plasma Treatment, Manipulative Variables and Coating Composition for the Controlled Filling and Coating of a Microstructured Reservoir Stent
Mustapha Mekki, Stéphane Durual, Susanne S. Scherrer, Johannes Lammers, and H. W. Anselm Wiskott

A Scaling Parameter for Predicting Pressure Wave Reflection in Stented Arteries
John J. Charonko, Saad A. Ragab, and Pavlos P. Vlachos

Design of an Underactuated Compliant Gripper for Surgery Using Nitinol
Mario Doria and Lionel Birglen

The Momodemameter: An Affordable Pre-Eclampsia Detector for Low Resource Environments
Dianne Pawluk, David Burch, Jerome F. Strauss, III, Thomas Peng, and Ashley Woodward

Automating Skeletal Expansion: An Implant for Distraction Osteogenesis of the Mandible
John C. Magill, Marten F. Byl, Batya Goldwaser, Maria Papadaki, Roger Kromann, Brent Yates, Joseph R. Morency, Leonard B. Kaban, and Maria J. Troulis

Miniaturization of a Chest Compressor for Cardiopulmonary Resuscitation
Carlos Castillo, Joe Bisera, Giuseppe Ristagno, Wanchun Tang, and Max Harry Weil
A Portable and Automated Postural Perturbation System for Balance Assessment, Training, and Neuromuscular System Identification
Albert H. Vette, Egor Sanin, Abdulkadir Bulsen, Alan Morris, Kei Masani, and Milos R. Popovic

TECHNICAL BRIEFS
A New Device for Measuring Knee Rotational Kinematics Using Magnetic Resonance Imaging
R. Dana Carpenter, Sandra J. Shefelbine, Jesus Lozano, Julio Carballido-Gamio, Sharmila Majumdar, and C. Benjamin Ma

DESIGN INNOVATION
Vision Aid for Power Wheelchair Users
Kyle C. Smith, Carlos A. C. Kemeny, Raymond Cipra, and Bradley S. Duerstock

VOLUME 2 • ISSUE 3 • SEPTEMBER 2008
RESEARCH PAPERS
A Compact and Modular Laparoscopic Grasper With Tridirectional Force Measurement Capability
Gregory Tholey and Jaydev P. Desai

Novel Mechanical Actuation of a Modular Laparoscopic Surgical Tool
David J. Miller and Carl A. Nelson

An Infant Surgical Table for Laser Photocoagulation: Design and Development
Kimberly Ryland, Carl A. Nelson, and Thomas Hejkal

Synthesis of a Pattern Generation Mechanism for Gait Rehabilitation
Zhiming Ji and Yazan Manna

A Noninvasive System for Biomechanical Properties Measurement of Soft Tissue
James Mayrose

Mixing Efficiency of Red Blood Cells With Magnetic Microspheres for a Hybrid Separation System
Yousef Haik and Sridhar Kanuri

An Inexpensive, Highly Portable Optical to Haptic Graphical Display
David Burch, Justin Owen, and Dianne Pawluk

DESIGN INNOVATION
A Handheld Computer as Part of a Portable In Vivo Knee Joint Load-Monitoring System
J. A. Szivek, V. S. Nandakumar, C. P. Geffre, and C. P. Townsend

Assessment of Current Continuous Hemofiltration Systems and Development of a Novel Accurate Fluid Management System for Use in Extracorporeal Membrane Oxygenation
Philippe Sucosky, Lakshmi P. Dasi, Matthew L. Paden, James D. Fortenberry, and Ajit P. Yoganathan

VOLUME 2 • ISSUE 2 • JUNE 2008
RESEARCH PAPERS
Pressure Waves as a Noninvasive Tool for Artery Stiffness Estimation
E. El-Aklouk, A. M. Al- Jumaily, and A. Lowe

An Ultrasound Probe Holder for Image-Guided Surgery
Basem Fayez Yousef, Rajni V. Patel, and Mehrdad Moallem

Kinematic Analysis and Optimization of a Novel Robot for Surgical Tool Manipulation
Xiaoli Zhang and Carl A. Nelson
Mechanical Performance of Generic and Proprietary Enema Bottles
Donna L. Walsh, R. Jason Schroeder, and Sandy F.C. Stewart

Design of a Compliant Endoscopic Suturing Instrument
James A. Cronin IV, Mary I. Frecker, and Abraham Mathew

Testing of a Noninvasive Probe for Measurement of Blood Perfusion
Paul S. Robinson, Elaine P. Scott, and Thomas E. Diller

Control of a Passive Mobility Assist Robot
Ji-Chui Ryu, Kaustubh Pathak, and Sunil K. Agrawal

Determining the Fatigue Life of Dental Implants
Horea T. Ilies, Dennis Flanagan, Paul T. McCullough, and Scott McQuoid

Studies on Design Optimization of Coronary Stents
K. Srinivas, T. Nakayama, M. Ohta, S. Obayashi, and T. Yamaguchi

The Diabetic Foot Load Monitor: A Portable Device for Real-Time Subject-Specific Measurements of Deep Plantar Tissue Stresses During Gait
Eran Atlas, Ziva Yizhar, and Amit Gefen

A Calibration Procedure for a Bone Loading System
Syivana Garcia-Rodriguez, Everett L Smith, and Heidi-Lynn Ploeg

A Patient-Mounted, Telerobotic Tool for CT-Guided Percutaneous Interventions
Conor J. Walsh, Nevan C. Hanumara, Alexander H. Slocum, Jo-Anne Shepard, and Rajiv Gupta

Measuring Luxation of Dental Implants In Vitro
Horea T. Ilies, Dennis Flanagan, Matthew Raby, and Richard Stevenson

Novel Synthetic Total Sick Model for Mechanical Testing of Nucleus Replacement Devices
David Spenciner, Jared W. Walkenhorst, Dennis Y. Lee, and David Paller

Design Innovation Size and Shape Optimization of a 1.0mm Multifunctional Forceps-Scissors Surgical Instrument
Milton E. Aguirre and Mary Frecker

Design of and Endoscopic Dukk-Thickness Lesion Removal Device
S. McEuen, D. Tzeranis, B. Hemond, M. Dirckx, L. Lee, and A. Slocum

Compatibility of Segmenting Fluids in Continuous-Flow Microfluidic PCR
E. J. Walsh, C. King, R. Grimes, A. Gonzalez, and D. Ciobanu

An Apparatus and Protocol to Measure Shoulder Girdle Strength
Brian A Garner, Jaeho Shim, and Scott Wilson
A Coupled Fluid-Structure Model of a Therapeutic Ultrasound Angioplasty Wire Waveguide
Graham P. Gavin, Finbar Dolan, M. S. J. Hashmi, and Garrett B. McGuinness

New Modality for Maximizing Cryosurgical Killing Scope While Minimizing Mechanical Incision Trauma Using Combines Freezing-Heating System
Jing-Fu Yan, Zhong-Shan Deng, Jing Liu, and Yi-Xin Zhou

A New Medical Parallel Robot and Its Static Balancing Optimization
Simon Lessard, Pascal Bigras, and Ilian A. Bonev

TECHNICAL BRIEF
Isometric Finger Device for Assessment and Training of Force Coordination Using Virtual Reality
Gregorij Kurillo, Matjaž Mihelj, Marko Munih, and Tadej Bajd

TECHNOLOGY REVIEW
Review of US Medical Device Regulation
Jan B. Pietzsch, Lauren M. Aquino, Paul G. Yock, M. Elisabeth Paté-Cornell, and John H. Lienhan

DESIGN INNOVATION PAPER
Self-Cooling Cavity Burs for Surgical Drills
Calvin C. Silverstein

MEMORIAM
In Memoriam: Calvin C. Silverstein
Arthur G. Erdman

VOLUME 1 • ISSUE 3 • SEPTEMBER 2007

RESEARCH PAPERS

In Vitro Quantification of Guidewire Flow-Obstruction Effect in Model Coronary Stenoses for interventional Diagnostic Procedure
Koustubh D Ahtekar, Lloyd H. Beck, Saeb F Khoury, and Rupak K. Banerjee

Device for Measurement of Human Tissue Properties In Vitro
Robert L. Williams, II, Wei Ji, John N. Howell, and Robert R. Conatser, Jr.

Miniaturized Cutting Tool With Triaxial Force Sensing Capabilities for Minimally Invasive Surgery
Pietro Valdastri, Keith Houston, Arianna Menciassi, Paolo Dario, Arne Sieber, Masaru Yanagihara, and Masakatsu Fujie

Synthetic Lumbar Intervertebral Disk for Medical Education
Nicolas V. Jumard, Robert C. Richards, Susan M. Stagg-Williams, and Elizabeth A. Friis

Graphical Rendering of Localized Lumps for MIS Applications
Saeed Sokhanvar, Mohammadreza Ramezanifard, Javad Dargahi, and Muthukumaran Packirisamy

DESIGN INNOVATION PAPERS

Design of a Calibration Phantom for Measuring the Temporal Resolution of a Tomographic Imaging Device
Alexander H. Slocum, Jr., Stephen E. Jones, and Rajiv Gupta

TECHNICAL BRIEFS

Lithography Technique for Topographical Micropatterning of Collagen-Glycosaminoglycan Membranes for Tissue Engineering Applications
Vijayakumar Janakiraman, Biran L. Kienitz, and Harihara Baskaran
Flexible Prosthetic Vein Valve
Rahul D. Sathe and David N. Ku

Renal Artery Stent Bending Fatigue Analysis
H. M. Hsiao, S. Prabhu, A. Nikanorov, and M. Razavi

Measurement of Impact Loads Applied to an Implanted Drug Pump Connector in a Porcine Cadaver Specimen
Thomas C. Bischoff, Marty D. Martens, Matthew H. Adams, William J. Gallagher, and Paul A. Iaizzo

Modeling and Control Considerations for Powered Lower-Limb Orthoses: A Design Study for Assisted STS
Wesley R. Eby and Eric Kubica

General Uncertainty Analysis for Manual Wheelchair Propulsion Dynamics and Development of an Instrumented Wheel
M. Mallakzadeh and F. Sassani

Gravity-Balanced Arm Support With Energy-Free Adjustment
Wouter D. van Dorsser, Rogier Barents, Boudewijn M. Wisse, and Just L. Herder

Development of a Strain Transferring Sensor Housing for a Lumbar Spinal Fusion Detection System

A Theoretical and Experimental Investigation of Lateral Deformations in a Unilateral External Fixator
Kerem Ün, İbrahim D. Akçalı, and Mahir Gülşen

A New Methodology to Determine the Anatomical Center and Radius of Curved Joint Surfaces
Dominik C. Meyer, Norman Espinosa, Urs Lang, and Peter P. Koch

Application of the Finite Element Technique in the Design and Evaluation of the Artificial Facets for the Lumbar Spine
Miranda N. Shaw, Vijay K. Goel, Koichi Sairyo, Jayant Jangra, Ashok Biyani, and Nabil Ebraheim

Combined Statistical and Multiscale View on Ultrasonic Liver Images for Characterization
K. Mala, V. Sadasivam, and S. Alagappan
I. Overview
   A. Paper Review Process:
      i. January 1, 2011 to December 31, 2011: 134 papers submitted (33% accepted) Time from submission to Editor decision 6 months
      ii. January 2012, to August 1, 2012: 112 papers submitted (192 projected)

II. Impact Factor
   A. JMR has an impact factor of 1.06 and is ranked sixth among 20 in ASME journals (top 30%)

B. JMR is ranked 37 out of 121 Mechanical Engineering journals (top 30%)
C. JMR’s primary competition is Mechanism and Machine Theory, which is ranked 27 with an impact factor of 1.36.

II. Production
   A. Production schedule
      ii. Currently there is a six month backlog. Papers accepted today will appear in February 2013.
      iii. The backlog is being addressed by the addition of 100 pages for February 2013 and May 2013. And a new allocation of 800 pages is planned for 2013-2014.

   B. Themed collections of papers
      i. A number of themed collections of papers have been identified to support various Mechanism and Robotics communities, however, guest editors have been slow to volunteer.

III. Status of Associate Editors
   A. AE’s ending their terms in 2012
      i. Federico Thomas, September
      ii. Delun Wang, September
      Recognition plaques are mailed to each former AE.

   B. AE’s ending their terms in 2013
      i. Jian Dai, January
      ii. Yuefa Fang, September
      iii. Jeff Ge, September
      iv. Kazem Kazerounian, December
      v. Sundar Krishnamurty, April
      vi. Vijay Kumar, January
      vii. Jon Selig, August
      viii. Phillippe Wenger, (Mechanisms and Robotics)
      ix. Feng Gao, August (Mechanisms and Robotics)

   C. AE’s ending their terms in 2014
      i. Carl Crane, March
      ii. Andrew Murray, December

IV. The Future
   i. The nominee for the next JMR Editor has been selected. The interview with the Publications Committee is being scheduled. The appointment cannot occur until after this interview.
   ii. On-line access to JMR and other journal papers must be expanded.
   iii. ASME Journals must review their management of on-line content to expand the services to authors.

Sincerely,

J. Michael McCarthy
Professor, University of California, Irvine
Structural and Drug Diffusion Models of Conventional and Auxetic Drug-Eluting Stents
William Jacob S. Dolla, Brian A. Fricke, and Bryan R. Becker

A Removable Precision Device for In-Vivo Mechanical Compression of Rat Tail Intervertebral Discs
Justin M. Stinnett-Donnelly, Jeffrey J. MacLean, and James C. Iatridis

Design of an Endoscopic Biopsy Needle With Flexural Members
Stacy L. Figueredo, William R. Brugge, and Alexander H. Slocum

A Fluid Actuator for Thin-Film Electrodes
Benjamin Arcand, Sudeep Shyamsunder, and Craig Friedrich

Nanoporous Alumina Membranes for Enhancing Hemodialysis
Zhongping Huang, Weiming Zhang, Jianping Yu, and Dayong Gao

TECHNICAL BRIEFS
Mechanical Properties of a Biodegradable Balloon-expandable Stent From Poly-L-lactide... for Peripheral Vascular Applications
Niels Grabow, Carsten M. Bünger, Katrin Sternberg, Steffen Mews, Kathleen Schmohl, and Klaus-Peter Schmitz

A First-Order Mechanical Device to Model Traumatized Craniovascular Biodynamics
Sean S. Kohles, Ryan W. Mangan, Edward Stan, and James McNames

Design, Build, and Test of a Bobsled Simulator for Olympic Athletes
Mark Wacker, Arthur Erdman, Troy Nickel, and Marie Guion Johnson
DED Treasurer Report
August 3, 2012

Vijay Kumar
Chair and Outgoing Treasurer

Wein Chen
Vice Chair and Incoming Treasurer

1. Summary of Accounts

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Committee Accounts

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Award Accounts

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*Incomplete information  ^ Accounts with no balance in earlier years that are recently established

74
2. IDETC Historical Perspective

Papers

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Under 2012 data, the number in parentheses ( ) stand for the number of full papers including technical presentations.

Revenues  (We are still waiting for the 2011 revenue information from ASME.)

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<th>2008</th>
<th>2009</th>
<th>2010</th>
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<td>$195,253</td>
<td>$82,985</td>
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### 3. DED Transactions and Transfers

**DED Transactions and Transfers from July 2011 to June 2012**

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<th>Remarks</th>
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**Total Cost Including $20,143.34 investment loss**

**Net Change**

### 4. Committee Transactions and Transfers

**Committee Transactions and Transfers from July 2011 to June 2012**

<table>
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<th>Amount</th>
<th>Committee</th>
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<th>Payee</th>
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76
<table>
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<td>9/30/11</td>
<td>$122.98</td>
<td>DFMLC 4-0077</td>
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<td>10/10/11</td>
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**Committee Awards Account Transactions and Transfers from July 2011 to June 2012**

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>Account</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
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<td>MNS Award 4-0074</td>
<td>Certificates</td>
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*Transactions listed in this table do not include investment gains and losses to committee accounts.
5. Unresolved Questions

Up to now, ASME has not distributed the revenue to the DED custodial and individual committees’ accounts. Per the email communication on July 20th with Mary Jakubowski at ASME, Erin Dolan will try to get it done within two weeks.

6. Discussion

1. In early of July 2012, the “Broadening Participation” committee requested new funds for the workshop event in IDETC 2012. It was determined by the executive committee that the best way to handle this in the future would be to have an annual proposal or agenda item to ask the Executive Committee to replenish funds in the Broadening Participation account at the spring Executive Committee meeting. For this year, the request will be discussed and approved in the Fall meeting during 2012 IDETC.

2. Information about the accounts is hard to obtain. Usually it is not current. It is unclear why the distribution of 2011 IDETC revenue got delayed so long. Can ASME agree on a timeline by which the distribution of revenue is done within certain months after the conference?

3. As the custodial account grows, how should we invest in DED? Suppose we want to spend $100k this year, what is the most important issue that we should address? On behalf of DED, Vijay Kumar recently submitted a plan to the ASME System and Design Group for using the DED Custodial Account funds. The concern is that "the size of the division's custodial funds makes it a significant target for those in ASME who would see the unused funds as a potential source of income to be taxed and taken away." These funds are designed for: "Keeping reserves to underwrite future conferences, funding scholarships, and having authorized expenses related to leadership development are some of the examples of using custodial funds. Any idle Division Custodial Funds may be at risk as the ASME faces a budget crunch".
1. Schedule for the Upcoming IDETC

2012: Michael Stanisic (General Chair) and James Schmiedeler (Technical Program Chair)
Place: Chicago, Illinois

2013: Harry Dankowicz and D. Dane Quinn (General Chairs) and Prof. Ed Berger and Prof. Walter Lacarbonara (Technical Program Co-Chairs)
Place: Portland, Oregon
Dates: Aug 4-7, 2013
Status: EPAT Approved

2014: Venkat Krovi (General Chair) and Thomas Sugar (Technical Program Chair)
Place: Niagra Falls, Ontario, Canada (most likely!)
Dates: TBD, 2014
Status: EPAT being submitted for approval

2015: General Conference Chairs: Profs. Jeff Rhoads and Walter Lacarbonara, Prof. Brian Mann and Dr. Tamás Kalmár-Nagy (Technical Program Chairs)
Place: TBD
Dates: TBD, 2015
Status: EPAT to be worked on

2. Brief reports from the IDETC 2012, 2013, and 2014 are attached.

3. Questions raised by IDETC conference organizers:

   Availability of web conferencing tool
   Availability of web based repositories
The 2012 ASME IDETC & CIE Conferences are taking place in Chicago, Illinois, August 12-15, 2012. The venue for the Conferences is the [Hyatt Regency McCormick Place](#) which is in the South Loop of the city. The heart of downtown is a 10 minute bus ride north. Meeting rooms are centrally located on two levels open to each other by a sunlight atrium. The upper and lower levels have complete views of each other. The meeting rooms are accessible from the conference hotel by a sky bridge. Fifteen rooms have a capacity about 120 people and four meeting rooms have a capacity of 60 people. The room rate is $165 per night with complimentary Internet access in sleeping rooms. The conferences being represented are,

- 24th Conference on Mechanical Vibration and Noise (VIB)
- 1st Biennial International Conference on Dynamics for Design (DFD)
- 32nd Computers and Information in Engineering Conference (CIE)
- 38th Design Automation Conference (DAC)
- 36th Mechanisms and Robotics Conference (MR)
- 6th International Conference on Micro- and Nanosystems (MNS)
- 9th International Conference on Design Education (DEC)
- 24th International Conference on Design Theory and Methodology (DTM)
- 17th Design for Manufacturing and the Life Cycle Conference (DFMLC)
- 14th International Conference on Advanced Vehicle Technologies (AVT).

The conference saw 1156 submitted abstracts, 1069 submitted draft papers, of which 885 were accepted for publication and 184 were rejected for a 17.2% rejection rate. One draft paper which was submitted late due to miscommunication between DARPA and the author was accepted. All other late papers were declined. They numbered less than 50.
SPECIAL EVENTS

A Technical Tour of the [Chicago Rehabilitation Institute] will occur on Sunday, August 12, 2012. The Conference Reception will take place Monday, August 13th at 6:30 pm. The location will be [Navy Pier]. The theme will be “Taste of Chicago” where characteristic Chicago style food will be served. Navy Pier offers a terrific view of the skyline as well as Lake Michigan. Participants will be bused the short distance from the Conference venue to Navy Pier. In the event of rain, there is an indoor banquet room.

FINANCIALS

As of early July we had over 800 registered participants. The conference should be able to meet or exceed expected revenue generation.

SCHEDULING

[DED and CIE Division Level Meetings and Technical Committee Meetings] are scheduled for Sunday, Monday and Tuesday and have been posted on the Conference Website. Technical sessions will follow the traditional schedule. The IDETC Luncheon will be on Tuesday, August 14. All registered participants can attend. Conference level awards will be distributed at the various TC Meetings or Keynote sessions of each Conference. The DED Awards Reception is Tuesday at 5:30 p.m. and CIE Awards Reception is Tuesday at 7 p.m.

ORGANIZING COMMITTEE

GENERAL CONFERENCE CHAIR
Michael Stanisic

LOCAL ORGANIZING CHAIR
Craig Goehler

TECHNICAL PROGRAM CHAIR
James Schmiedeler

INTERNATIONAL PARTICIPANTS CHAIR
Andres Tovar

TUTORIAL AND WORKSHOP CHAIR
Philip Voglewede

STUDENT ACTIVITIES CHAIR
Matthew Parkinson

INDUSTRY RELATIONS CHAIR
Justin Seipel
The 2013 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference

Organization Status Report

Prepared by:

Harry Dankowicz
University of Illinois at Urbana-Champaign
Mechanical Engineering Building
Urbana, IL 61801-2906

D. Dane Quinn
The University of Akron
Auburn Science and Engineering Center
Akron, OH 44325-3903

EXECUTIVE SUMMARY

The 2013 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, IDETC/CIE, will be held from August 4-7, 2013 in Portland, Oregon. The technical sessions will be held at the Oregon Convention Center and preferred lodging will be provided at the Doubletree by Hilton Hotel Portland, a five-minute walk from the Convention Center. Additional lodging will be provided at the Hilton Portland & Executive Tower, located in the downtown business and entertainment district. Harry Dankowicz and D. Dane Quinn will serve as the General Conference Co-chairs, while Ed Berger and Walter Lacarbonara will be the Technical Program Co-chairs.

CONFERENCE INFORMATION

The International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE) are sponsored by the Design Engineering and Computers in Engineering Divisions of the American Society of Mechanical Engineers. In 2013 the IDETC/CIE is expected to host the following sub-conferences.

- 25th Biennial Conference on Mechanical Vibration and Noise (VIB)
- 33rd Computers and Information in Engineering Conference (CIE)
- 2013 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA2013)
- 9th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC)
- 39th Design Automation Conference (DAC)
- 12th ASME Power Transmission and Gearing Conference (PTG)
- 22nd Reliability, Stress Analysis, and Failure Prevention Conference (RSAFP)
- 37th Mechanisms and Robotics Conference (MECH)
- 7th International Conference on Micro- and Nanosystems (MNS)
- 10th Symposium on International Design and Design Education (DEC)
- 25th International Conference on Design Theory and Methodology (DTM)
• 18th Design for Manufacturing and the Life Cycle Conference (DFMLC)
• 15th International Conference on Advanced Vehicle and Tire Technologies (AVTT)

The expected attendance is 1300, with 1200 expected total papers, which will be delivered on DVD-ROM to registered conference attendees. The conference website is currently under development and is expected to be active on August 10, 2013, at: http://www.asmeconferences.org/IDETC2013

The publication schedule for the 2013 IDETC is
• Submission of Abstract for Review: January 7, 2013
• Submission of Draft Paper for Review: January 21, 2013
• Draft Paper Reviews Completed: March 4, 2013
• Notification of Paper Acceptance / Revision Requirements: March 18, 2013
• Electronic Copyright Form Submission Process Opens: March 18, 2013
• Submission of Revised Paper for Review: April 1, 2013
• Author Notification of Acceptance of Revised Paper: April 8, 2013
• Submission of Copyright Form: April 19, 2013
• Submission of Final, Accepted Paper: April 22, 2013

CONFERENCE COMMITTEES

Two conference-specific committees, the Organizing Committee and the Advisory Committee, have been partially formed.

The 2013 IDETC/CIE organizing committee consists of a core of four members in addition to the conference chairs and program chairs of the sub-conferences of the IDETC/CIE as well as co-chairs responsible for specific conference activities, such as workshops and tutorials and student activities. The core of the organizing committee consists of two General Conference Co-Chairs and two Technical Program Co-Chairs.

The General Conference Co-Chairs are Prof. Harry Dankowicz (University of Illinois at Urbana-Champaign) and Prof. Dane Quinn (The University of Akron). The Technical Program Co-Chairs are Prof. Ed Berger (The University of Virginia) and Prof. Walter Lacarbonara (Sapienza, University of Rome). It is noted that Harry Dankowicz and Dane Quinn served together as Technical Program Co-Chairs for the 2009 IDETC/CIE held in San Diego, CA. Harry Dankowicz also serves in this capacity for the 2011 IDETC/CIE held in Washington, D.C.

The Advisory Committee consists of four members, all having served as conference chairs of past ASME IDETC/CIE Conferences. Its members are Prof. Kurt Anderson (Rensselaer Polytechnic Institute), Prof. George Flowers (Auburn University), Prof. Hamid Hamidzadeh (Tennessee State University), and Prof. Ahmed Shabana (University of Illinois at Chicago).

CONFERENCE LOCATION

Technical sessions will be held at the Oregon Convention Center (www.oregoncc.org), which has two grand ballrooms, 50 meeting rooms, and 255,000 square feet of contiguous exhibit space. Preferred lodging will be provided at the Doubletree by Hilton Hotel Portland (www.doubletreeegreen.com), a five-

About Portland

In Portland, you’re always just a short walk or ride from limitless recreation, fabulous dining and flourishing culture. And, oh yes — the nation’s largest variety of local microbrews! With no sales tax, Portland is a haven for shoppers. You’ll find retailers large and small, international and indie, within easy reach of downtown hotels. The nearby Pearl District is home to galleries, boutiques, chic restaurants and the legendary Powell’s City of Books. An award-winning airport, efficient light rail system, and pedestrian-friendly city blocks, make getting around town a real pleasure.

**EVENT ORGANIZATION**

Ms. Mary Jakubowski of ASME will coordinate the event organization, replacing Ms. Erin Dolan who initiated the process. The organizers have received approval for the business plan and budget from the ASME Events Committee through the ASME Event Planning & Approval Tool (EPAT), and have obtained an estimate for the ASME publishing services and projected costs through Ms. Angeline Mendez. Copies of these documents are included below.
NOTE: The approval process requires the submission of a business plan for every event. The business plan is intended to capture important details the ASME Events Committee will use to ensure the event is compliant with Society Policy P-12.1. It also provides guidance on important items to consider for developing a successful event. If you need assistance in developing the business plan, please contact the ASME Staff Manager assigned to your event.

The business plan contains multiple sections. To move between sections, click on the section menu name.

Event Background & Vision
Please provide a brief overview of the nature of this event, including:
• Rationale for holding the event, as well as its history (if held before)
• Its focus (the industry or research/topical areas it addresses)
• Target market/intended audience

The International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE) is a yearly event sponsored by the Design Engineering and Computers in Engineering Divisions of the ASME. The IDETC/CIE consists of several subconferences associated with technical committees within the two divisions, as well as one cooperatively organized with IEEE, and serves as the principal venue for professional networking and broadly defined disciplinary dissemination within the corresponding technical communities. Participants are primarily from academia, with a smaller percentage from national laboratories and industrial research and development groups.

In 2009, the IDETC/CIE was held in San Diego, CA, and hosted the following subconferences:


The 2009 conference included 1,220 technical papers, as well as 7 conference keynote lectures and 3 award lectures as well as 3 tutorials and 5 workshops sponsored.

In 2011, the IDETC/CIE was held in Washington, D.C., and included the following subconferences:

• 23rd Biennial Conference on Mechanical Vibration and Noise (VIB) • 31st Computers and Information in Engineering Conference (CIE) • 2011 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA11) • 8th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC) • 37th Design Automation Conference (DAC) • 11th ASME Power Transmission and Gearing Conference (PTG) • 21st
Reliability, Stress Analysis, and Failure Prevention Conference (RSAFP) • 35th Mechanisms and Robotics Conference (MECH) • 5th International Conference on Micro- and Nanosystems (MNS) • 8th Symposium on International Design and Design Education (DEC) • 23rd International Conference on Design Theory and Methodology (DTM) • 16th Design for Manufacturing and the Life Cycle Conference (DFMLC) • 13th International Conference on Advanced Vehicle and Tire Technologies (AVTT)

The 2011 conference included 1204 technical papers, 15 conference-specific and 4 symposium-specific keynote lectures, 13 conference-specific panel sessions, and 10 workshops sponsored by various technical committees and conferences.

**Opportunity for ASME**

Describe how the proposed event furthers the mission of your Unit and ASME. This should include, but not be limited to:

- If the event helps meet ASME’s overall objectives including energy, workforce development and globalization.
- How this event may provide additional technical content and/or products/services for other departments within ASME or your Unit, such as papers recommended to ASME Journals, or other business opportunities that may be an outcome, such as short courses, books, codes & standards, etc.

The IDETC/CIE serves as a unique event bringing together researchers from a wide variety of disciplines, enabling collaboration between ASME members and wide dissemination of research results. Also, several of the ASME Technical Committees use the IDETC/CIE as one of their yearly member meetings. In addition to the participation of established researchers, the IDETC/CIE also encourages the participation of student members. For many, this is their first exposure to the technical activities of the ASME community.

Many of the technical publications accepted to the conference find their way into the archival ASME journals. There is strong overlap between the symposium and topic organizers and ASME journal editorial boards. ASME objectives are also widely promoted through the technical program activities. As an example, the 2011 IDETC/CIE will include a Q&A session with Design Engineering Division Journal Editors-in-Chief.

Technical content is also often organized by societal needs or grand challenges. For example, the 2009 IDETC/CIE included tracks on biosystems, energy, and sustainability. There is also significant emphasis on international participation, both at the level of symposium organization and among the accepted oral presentations.

The 2013 IDETC/CIE will rely on a similar model in meeting the needs of the Design Engineering and Computers in Engineering communities.

**Market Assessment & Competitive Landscape**
A. Market Assessment
Provide details on research and industry trends, potential R&D funding available in this field, national laboratories and industry R&D arms working in this area, and what the industry drivers are. Describe how this event will capitalize on these drivers to help meet the needs of the target audience.

The research areas covered by the IDETC/CIE serves as the cornerstone of the activities within the Design Engineering Division and include both fundamental aspects, such as reliability or nonlinear dynamics, as well as advanced applications, such as micro- and nano-scale engineering. As such, the research areas are actively supported by almost all funding sources, including the National Science Foundation, the Defense Agencies (e.g., ONR, ARO, AFOSR, DARPA), government labs (e.g., Sandia National Laboratories), and industry. As one of the premier conferences in this area, the IDETC/CIE serves to bring together researchers working in these diverse fields.

Target activities are usually organized at the conference to allow for direct interactions between the research and funding communities, including panel sessions, a keynote lectures. The 2011 IDETC/CIE will include a panel session on funding opportunities for research with participation from several federal funding sources and research labs. Industry participation is also highly promoted. Individual conferences reach out to practitioners and commercial enterprises within their disciplinary scope to attract technical contributions as well as panel representation.

At the 2013 IDETC/CIE, we anticipate presenting a coordinated effort that leverages the contacts and network of the individual subconferences to bring relevant industry applications, funding opportunities, and research needs across the overall conference theme to the attendees.

B. Competitive Landscape
List events (including ASME events) that this event may be competing with, indicating the dates/venue, rates and size, as well as the sponsoring organizations, and how this event would differentiate itself from those events.

Given the long history of the IDETC/CIE, it has been established as one of the premier technical conferences within the general engineering community associated with the activities of the Design Engineering and Computers in Engineering Divisions. There are few other conferences within these disciplines that can match its size or scope. The IDETC/CIE has traditionally been scheduled for the month of August (or early September) thereby avoiding conflicts with all other major events in this area.

A related conference that in no way competes with the IDETC/CIE is the ASME IMECE meeting. This includes symposia and topics that, in some instances, overlap with the content, source of contributions, and organization of the IDETC/CIE symposia.

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Potential Strategic Partners
Identify outside organizations (if applicable) that will participate in the technical planning of the event. List organizations that we might target as partners for resources or assets (e.g., lists), and identify what we would need from them and what we might exchange. Consider trade magazines, corporate, industry, research grants, etc.

The organization will be undertaken solely within ASME. Given its established presence, no
additional outside organizations are expected to be required to publicize the event.

**Key Issues, Tactics & Actions**

**A. Location & Venue Selection**
This section should include an explanation on the location and venue selection strategy for the event (i.e., first or second tier cities, hotel vs. university conference center, good family vacation destination, local transportation, etc.). Consideration should also be given to facility/space requirements, proximity of local industry relevant to the event focus, past success of the event (if applicable), time of year event is held to maximize attendance, length of conference, cost to attendee, etc.

NOTE: Contact your ASME Staff Manager with respect to your Hotel Selection plans. ASME Staff is the only entity eligible to sign all contracts. Volunteer organizers and/or outside vendors are NOT legally permitted to sign and/or negotiate hotel contracts on behalf of ASME events.

Five candidate cities were originally identified for the conference location, Seattle, WA, Portland, OR, Denver, CO, Kansas City, MO, and Memphis, TN. These potential locations were determined upon evaluation of their ability to host a large conference (meeting space and hotel rooms), availability of national and international air travel, as well as potential recreational activities. Ultimately the venue selection is also constrained by the traditional event date (late August to early September). The group is interested in finalizing a contract with Portland, OR. The event will be held at the Portland Convention Center (rental fees are subsidized by the City of Portland and Hotel rebates). The group will hold a block of sleeping rooms at the Doubletree Portland with a very small block of rooms at the Hilton Portland.

**B. Program Organization**
Describe how the program will be organized (e.g., tracks, symposia, etc, sessions, etc.)

The overall IDETC/CIE is broken down into subconferences addressing specific technical areas/disciplines, and each subconference has a separate organizing team. Within these, the technical program is split into symposia/topics and individual sessions. The majority of these sessions consists only of oral technical presentations, but poster technical presentations and panel discussions are typically offered as well.

Provide details on presentation types, as well as an estimated number of presentations, paper submissions and sessions.

Presentation types will include technical papers (typically 20 minutes oral presentations), student paper competitions papers (typically 20 minutes oral presentations), symposium keynotes (typically 40 minutes oral presentations), and conference keynotes (typically 60 minutes oral presentations). In addition, panel sessions will typically consist of 4-5 panelists, each of whom gives a 10 minute oral presentation followed by a general Q&A session.

We anticipate similar number of technical papers and other presentations types as in 2009 and 2011 (the most recent years with the same number of subconferences as anticipated in 2013). In 2011, 1465 draft papers were originally submitted to the conference. 1209 of these were selected for inclusion in the conference proceedings. There will be a total of 287 session slots at the 2011 IDETC/CIE, with at most 26 parallel sessions at any one time.
Describe plans for value-add program features, such as keynote/plenary addresses, short courses/workshops/tutorials, social/networking activities, technical tours, etc.

Keynote and plenary addresses are an integral part of the conference offering. Each subconference determines the appropriate number of such presentations and the speakers within the capacity constraints of the conference venue. In 2013, following the 2009 and 2011 model, keynotes and panel sessions will all be scheduled in a time slot when there are as few competing technical sessions slots as possible. This will likely be scheduled for the slot immediately before lunch to maximize the attendance at these value-added program features.

Short courses/workshops/tutorials are typically held on the opening day of the conference and are solicited from experts in the discipline. These constitute a successful feature of the past several meetings and we intend to capitalize on this record as well as to provide more up-front coordination at the overall conference level to further raise the visibility of this program feature.

Finally, several social/networking activities will be planned, including a general conference reception. An important networking activity organized at the past several IDETC/CIE meetings is the Student Networking Reception. We intend to highlight the value of such networking sessions by linking these to opportunities for access to funding agencies, job opportunities, or publishing venues. Local tours may be offered as available.

C. Event Promotion
Describe the various ways the event will be promoted. For example, an event website, newsletter articles, online, direct mail and/or print advertisements, email marketing, press releases, social media, etc.

The primary means for event promotion will be through the event website and direct (email) communication from conference and symposium organizers. In addition, print advertisements will be placed in ASME journals.

D. Event Management
NOTE: It is strongly recommended that the Event Organizers utilize the services of ASME's Event Management Department to ensure compliance with all ASME requirements.

Contact your ASME Staff Manager for a Request for Proposal (RFP) for Events Management services. It is ASME Policy that all events MUST adhere to a fair and competitive bidding process by obtaining 3 or more professional bid/estimates for Event Management Services. ASME has the right to bid on all RFPs.

D-1. Event Management Services
Describe here how Events Management will be handled; i.e., by volunteers, ASME Events Management department staff, co-sponsor organization, or an outside/paid vendor, as well as the business case for this decision. Events Management duties will include all logistical arrangements including, but not limited to, selection of event facilities, providing event support staff, securing and arranging meals, security and securing hotel accommodations for all participants.
Event management will rely on the services of ASME's Event Management Department. See attached proposal

D-2. Organizing Committees
Please list members and any applicable event planning experience that they may have. Note for cases of ASME Co-Sponsorship or Participation, please indicate who is a member of both ASME and the other organization.

The overall organizational committee of the conference is composed of
General Conference Co-chairs Harry Dankowicz Department of Mechanical Science and Engineering University of Illinois at Urbana-Champaign Urbana, IL 61801 danko@illinois.edu
Dane Quinn Department of Mechanical Engineering The University of Akron Akron, OH 44325-3903 quinn@uakron.edu

Technical Program Co-chairs Ed Berger Department of Mechanical Engineering University of Virginia Charlottesville, VA 22904 berger@virginia.edu
Walter Lacarbonara Structural and Geotechnical Engineering Sapienza, Universita di Roma 00184 Roma Italy walter.lacarbonara@uniroma1.it

Each member of the organizing team is a member of ASME and has extensive experience within ASME. In particular, the General Conference Co-chairs, Profs. Dankowicz and Quinn, served as the Technical Program Co-chairs for the 2009 IDETC held in San Diego, CA. Each individual subconference will have its own organizing committee.

D-3. Staff & Volunteer Responsibilities
List major staff and volunteer responsibilities

Primary responsibilities for the volunteer Organizing Committee involve the development and scheduling of the event program. These include the local activities (conference reception), general keynote speakers, printed program, as well as the organization of the technical program (session assignment and scheduling).
Staff (Erin Dolan) responsibilities include: hotel contract negotiations, vendor management (audio visual services, registration management, local temporary services contracting, food & beverage management, any/all contract negotiations and processing, any/all invoice processing and payment initiations. Staff (Angeline Mendez) responsibilities include: Webtool Management, CD/DVD Production, Website Management.

D-4. Exhibits (if applicable)
List potential exhibitors and if exhibitor logistics will be handled by staff/volunteers or by an outside vendor

Previous exhibitors will be contacted to determine interest in exhibiting. Conference website will offer exhibit and sponsor opportunities.
D-5. Sponsors
List potential sponsors (outside companies/entities) that would be willing to help pay for/support the event.

No specific outside sponsors are expected for this event. Conference website will offer exhibit and sponsor opportunities.

E. Intellectual Property Capture
NOTE: It is strongly recommended that the Event Organizers utilize the services of ASME's Technical Publishing Department to ensure compliance with all ASME requirements. Contact your ASME staff representative for a Request for Proposal (RFP) for use of the ASME Conference Toolbox.

Copyright release forms will be required of all published material. If the event is in partnership with another organization, the terms of intellectual property must be specified in a co-sponsorship agreement.

E-1. Call for Papers & Paper Review
Describe plans for the handling of the Call for Papers, paper review, and other steps to assure high technical quality of materials presented/published.

The Calls for Papers are primarily distributed by those involved in the administration and organization of the technical program, including the members of the organizing committees for both the general conference and the individual subconferences. Further calls for papers are made by the organizers of individual symposia within each subconference. Once papers are submitted to the ASME webtool, the review process is overseen by the individual subconference committees and/or the symposia organizers. All submitted papers are reviewed and the final decision of acceptance is made by the review coordinators.

E-2. Publishing Services & Format
Include details on the format (CD-ROM, printed proceedings, etc.) that the Intellectual Property (conference papers/extended abstracts, presentations, etc.) will be published and by whom i.e., by ASME Technical Publications Department staff, co-sponsor organization, or another vendor, as well as the business case for these decisions. Publishing duties include all logistical arrangements for producing the conference proceedings, handling of copyrights, and post-event distribution of the proceedings.

The publishing duties of the conference will be handled by ASME Technical Publications Department staff. As in past events, the expected presentations will be included on a DVD distributed to the conference attendees on site. The official conference proceedings will be published after the conference when the 'no-show' authors/papers are removed from the publication.

Financial Projections & Liabilities
A. Revenue & Expenses.
Please provide a brief financial summary of revenue and expenses for this event, including assumptions. In addition, please explain the registration fee policy for this event, and indicate whether invited speakers and guests, those attending special functions, or those attending committee meetings only will be charged a registration fee or be exempt from payment. These registration categories must also be reflected in the budget.

As a reminder, events are required to budget for a 15% surplus.

The 2013 conference is estimated to receive $517k in revenue. Most of that will be achieved via registration fees. The total expenses are estimated at $439k which includes a 3% contingency ($12K). Overall the conference is budgeting for a 15% surplus.

The registration fee structure is based on varying levels of attendee participation: * Author * ASMe Member or Cooperating Society Member * Non member * Student Member * Student Non Member * ASME Life Member * One Day Member * One Day Non Member

The budget includes and allows for 50 Complimentary Registrations. Complimentary registration are allocated to the different conferences within the IDETC/CIE and is proportionate to the number of papers accepted by each individual conference. The conference chairs have the authority to distribute the complimentary registrations to speakers or organizers as they wish.

B. Surplus/Loss Distribution
Please explain how the distribution of any surplus/loss for this event will be handled among all parties involved.

The IDETC/CIE will include approximately 13 sub conferences. Each sub conference represents a committee within the Design and CIE Divisions (ie 12 Committees from DED and 1 from CIE). The total surplus is divided based on the number of final papers submitted to each committee/conference. The CIE Division receives 100% of the surplus allocated to it's conference. The Desin Division receives 50% of the surplus from each of it's sub-committees/conferences.

C. Other Potential Liabilities
Please describe all additional liabilities or risks that may be unaccounted for in the Event budget.

The conference budget is based on the tentative 'actual figures' from the 2011 conference. Due to the projected location of the 2013 Conference (Portland, OR), the budget is very conservative. Potential risks would be associated with hotel and convention center requirements. In the case of natural disasters and uncontrolable situations, the organization is covered by legal clauses within the contractual agreements. Should the organizers or ASME decide to cancel the event for other reasons. Cancellation fees would be charged.

Explain here the total value of the Hotel and/or Venue Contract. To realize this data, please consider the cost and/or penalties you would owe should your event be canceled OR your group does not meet the required sleeping room usage and food and beverage minimum.

The potential value of the hotel agreement(s) is: $154,960. This equals 80% of the sleeping room block.
D. Available Reserves
Please explain the total funding available from the sponsoring Unit(s) to cover any financial losses that may result from this Event. To realize this data, please consider the total fund balance available from the sponsoring Unit(s), less all total anticipated Unit operating expenses.

As of February 2012, the Design Division Custodial Account has fund balance of $1.6 million. Likewise the Computers and Information in Engineering Division has a fund balance of $142k.

Success Measures
Describe here the event performance metrics/goals and the steps that will be used to ensure the success. For existing events, include here historical information on these parameters from two prior events. Success measures/goals could include, but not be limited to:
• Financial performance targets
• Attendance targets
• Ratio of authors to non-authors
• Percentage of participants from industry
• Average session attendance
• Customer satisfaction targets (ASME Staff can assist with surveys, etc.)

Given the biennial format of the IDETC, the success will be measured again previous odd-year offerings. The 2009 conference included 1,220 technical papers, as well as 7 conference keynote lectures and 3 award lectures as well as 3 tutorials and 5 workshops sponsored. In addition, the conference generated a net surplus of $147,345.00. The 2011 conference will include 1204 technical papers, 15 conference-specific and 4 symposium-specific keynote lectures, 13 conference-specific panel sessions, and 10 workshops sponsored by various technical committees and conferences. Continued strong attendance and a net financial surplus will be used as metrics for the conference success.

Risks to the Plan
This section should include the risks associated with any of the sections identified in this business plan, and the mitigating steps to consider. For example, in the Financial Projections section, should market/economy fluctuations result in less than expected advance registration, is there a scalable budget model that can be adjusted for the shortfall?

Possible risks could include: weather, civil or political disturbances. However, the conference outline and budget allow for conservative projections, therefore mitigating any risk that may arise due to any unexpected disruption.
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<td>Student Member</td>
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<td>Honorary Member, Attendee</td>
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**Total Advanced Workshops/Tutorials:** $0.00

**Total Late/On-Site Workshops/Tutorials:** $0.00
### Total Late/On-Site
Workshops/Tutorials

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<tr>
<th>Prior Year Stated Attendance (YEAR)</th>
<th>Prior Year Stated Registration Fees (YEAR)</th>
<th>Expected Registration Fees</th>
<th>Expected Attendance</th>
<th>Budget Revenue</th>
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### Special Events ($9,000.00)

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<th>Prior Year Stated Registration Fees (YEAR)</th>
<th>Expected Registration Fees</th>
<th>Expected Attendance</th>
<th>Budget Revenue</th>
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<td>Tours</td>
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<td>$0.00</td>
<td>$0.00</td>
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<td>$0.00</td>
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### Sponsorship and Exhibits ($10,000.00)

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<th>Account Description</th>
<th>Prior Year Stated (YEAR)</th>
<th>Budget</th>
</tr>
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<tbody>
<tr>
<td>3608</td>
<td>Misc. Revenue (Expositions/Exhibits)</td>
<td>$0.00</td>
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<tr>
<td>4715</td>
<td>Corporate / Organizational Sponsorship</td>
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<td>4739</td>
<td>Expositions/Exhibit Revenue</td>
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<td>4751</td>
<td>Event Directory Advertising</td>
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<td>4732</td>
<td>Expositions/Exhibit Refunds</td>
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### Other ($0.00)

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<thead>
<tr>
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<th>Account Description</th>
<th>Prior Year Stated (YEAR)</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>4750</td>
<td>Misc. Revenue (Event)</td>
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<tr>
<td>4752</td>
<td>Banners - Revenue</td>
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<td>4753</td>
<td>List Revenue</td>
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<td>4755</td>
<td>Electronic Media Revenue</td>
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<td>4756</td>
<td>Commissions</td>
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<td>4758</td>
<td>Refunds - Other</td>
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### Revenue Summary ($517,175.00)

<table>
<thead>
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<th>Account Description</th>
<th>Prior Year Stated (YEAR)</th>
<th>Budget</th>
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</thead>
<tbody>
<tr>
<td>4710</td>
<td>Conference Attendance Revenue</td>
<td>$0.00</td>
<td>$498,175.00</td>
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<tr>
<td>4712</td>
<td>Conference Refunds</td>
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</tbody>
</table>

| Total Registration Revenue | $0.00 | $498,175.00 |
| Total Special Events Revenue | $0.00 | $9,000.00 |
## Expenses

### Total Exposition/Exhibits
- Prior Year: $0.00
- Stated (YEAR): $10,000.00

### Total Other Revenue
- Prior Year: $0.00
- Stated (YEAR): $0.00

### Total Revenue
- Prior Year: $0.00
- Stated (YEAR): $517,175.00

#### Travel and Sustenance ($2,500.00)

<table>
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<tr>
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<th>Account Description</th>
<th>Prior Year Stated (YEAR)</th>
<th>Budget</th>
</tr>
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<tbody>
<tr>
<td>5701</td>
<td>Conf. Travel - Staff</td>
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<tr>
<td>5702</td>
<td>Conf. Travel - Volunteer</td>
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<td>5703</td>
<td>Conf. Meals - Staff</td>
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<td>5704</td>
<td>Conf. Meals - Volunteers</td>
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<tr>
<td>5705</td>
<td>Conf. Travel - Instructors</td>
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<tr>
<td>5706</td>
<td>Conf. Meals - Instructors</td>
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<td>5710</td>
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<td>5711</td>
<td>Site Visit Meals - Staff</td>
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<td></td>
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#### Promotions ($12,500.00)

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<tr>
<td>5901</td>
<td>Advertising</td>
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<td>5903</td>
<td>Publicity / Public Relations</td>
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<td>5905</td>
<td>Outside Telemarketing</td>
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<td>5908</td>
<td>Receptions Pre-conference</td>
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<td>5915</td>
<td>Mailing Lists</td>
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<td>Pre Press and Binding</td>
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<td>Call for Papers</td>
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<tr>
<td></td>
<td>Printing Cost</td>
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<td>Postage</td>
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<td>Advance Flyer / Postcard - Printing and Mailing</td>
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<tr>
<td></td>
<td>Printing Cost</td>
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<td>Advance Program - Printing and Mailing</td>
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<tr>
<td></td>
<td>Printing Cost</td>
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### Planning Expenses ($1,750.00)

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<td>6002</td>
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<td>Domestic Postage</td>
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<td>6105</td>
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<tr>
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### Registration Services ($35,850.00)

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### On Site Event Expenses ($277,870.00)

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<th>Service &amp; Tax</th>
<th>Gross Base Cost</th>
<th>Number of Events</th>
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<th>Budget</th>
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<td>9830 On-site</td>
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<td>9831 Telephone/Telecomm</td>
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<td>9866 Signage - Conferences</td>
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<td></td>
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<tr>
<td>9868 Special Projects - Conferences</td>
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<td></td>
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<td>Furniture and Fixtures</td>
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<tr>
<td>9901 Rental (chairs, easels, tables etc…)</td>
<td>$0.00</td>
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<tr>
<td>Total On Site - Event Expenses</td>
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</table>
### Exhibit Expenses ($12,000.00)

<table>
<thead>
<tr>
<th>Account Number</th>
<th>Account Description</th>
<th>Prior Year Stated (YEAR)</th>
<th>Budget</th>
</tr>
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<tbody>
<tr>
<td>9846</td>
<td>Exhibit Contractors</td>
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<tr>
<td>9849</td>
<td>Exhibit Supplies</td>
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<tr>
<td>9855</td>
<td>Drayage (Exhibits)</td>
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<td>9856</td>
<td>General Contractor Package (Exhibits)</td>
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<td>$0.00</td>
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<td>9858</td>
<td>Exhibit Catering</td>
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<td>9863</td>
<td>Exhibit Give-A-Ways</td>
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<tr>
<td>9867</td>
<td>Sales Booth</td>
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<td>9869</td>
<td>Signage - Exhibits</td>
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</tr>
<tr>
<td>9870</td>
<td>Special Projects – Exhibits</td>
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<td></td>
<td>Total Exhibit Expenses</td>
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### Event/Other Fees ($0.00)

<table>
<thead>
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<th>Budget</th>
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<tbody>
<tr>
<td>5501</td>
<td>Consulting Services</td>
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<tr>
<td>7901</td>
<td>Sponsor Fees</td>
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<tr>
<td>7902</td>
<td>Partner Fees</td>
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</tr>
<tr>
<td>7903</td>
<td>Other Fees</td>
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<td>$0.00</td>
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<tr>
<td>9914</td>
<td>Outside Services</td>
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<td>$0.00</td>
</tr>
<tr>
<td>9934</td>
<td>Taxes (ie VAT)</td>
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<td></td>
<td>Total Event / Other Fees</td>
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### ASME Support Services ($83,800.00)

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<thead>
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<tbody>
<tr>
<td>5475</td>
<td>Salaries Transfer</td>
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<tr>
<td>8621</td>
<td>Order Processing</td>
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<tr>
<td>8635</td>
<td>Central Reproduction</td>
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<tr>
<td>8646</td>
<td>Marketing</td>
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<td>8656</td>
<td>Creative Services</td>
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<tr>
<td>8671</td>
<td>Systems &amp; Programming</td>
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<tr>
<td>8678</td>
<td>Database Administration (mass emails, etc.)</td>
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<td>ASME Professional Meeting Services</td>
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<td>8012</td>
<td>ASME K&amp;C Staff Services</td>
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<td>8013</td>
<td>Webtool Management</td>
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<tr>
<td>8014</td>
<td>CD Production / Shipping</td>
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<tr>
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### Miscellaneous Expenses ($500.00)

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<tbody>
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<td>5407</td>
<td>Temp Staff Services (in Office)</td>
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</tr>
<tr>
<td>Account Number</td>
<td>Account Description</td>
<td>Prior Year Stated (YEAR)</td>
<td>Percentage</td>
</tr>
<tr>
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</tr>
<tr>
<td>9991</td>
<td>Contingency</td>
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<tr>
<td>5801</td>
<td>Legal Fees (trademarks)</td>
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<td>7403</td>
<td>Medals/Plaques</td>
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<tr>
<td>9923</td>
<td>Awards (as allowed by P-12.1)</td>
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<tr>
<td>9924</td>
<td>Honorariums (as allowed by P-12.1)</td>
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<td>9999</td>
<td>Other Miscellaneous</td>
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### Expenses Summary ($439,573.10)

### Financial Summary

### Expense Summary ($439,573.10)

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<th>Account Description</th>
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<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Travel and Sustenance</td>
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<td>Total Promotions</td>
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<td>Total Planning Expenses</td>
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<td>Total Event/Other Expenses</td>
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<td>$0.00</td>
</tr>
<tr>
<td></td>
<td>Total ASME Support Services</td>
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<tr>
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<td>Total Miscellaneous Expenses</td>
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<td>Contingency</td>
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### Revenue Summary ($517,175.00)

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<td></td>
<td>Total Expositions/Exhibits</td>
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### Event Surplus/Loss ($77,601.90)

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<td>Event Surplus/Loss</td>
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### Surplus Percentage ($0.00)
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<td>Surplus Percentage Total</td>
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**Revenue Split**

**Financial Organizers ($0.00)**

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<tr>
<th>Organizer Name</th>
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</thead>
<tbody>
<tr>
<td>ASME</td>
<td>100.00%</td>
<td>$77,601.90</td>
</tr>
</tbody>
</table>
ASME 2013 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference
IDETC/CIE2013
August 4-7, 2013
Portland, Oregon, USA

Description of ASME Publishing Services & Projected Costs

Prepared by
Angeline Mendez
Coordinator
Webtool and Electronic Proceedings
ASME Publishing
mendeza@asme.org

November 8, 2011
revised July 30, 2012
GENERAL INFORMATION

I. CRITERIA

- Conference is not collocated with another conference
- Expected attendance: 1300
- Number of total papers: 1200
- Product Delivery: Conference Papers on DVD-ROM
- Authors submit final files for publication as PDF
- Sponsoring Divisions: ASME Design Engineering Division (DED) & ASME Computers and Information in Engineering Division (CIE)
- Sponsoring Organizations: N/A

II. PROPOSED PUBLICATION/PRODUCTION SCHEDULE

- Submission of Abstract for Review: January 7, 2013
- Draft Paper Reviews Completed: March 4, 2013
- Notification of Paper Acceptance / Revision Requirements: March 18, 2013
- Electronic Copyright Form Submission Process Opens: March 18, 2013
- Submission of Revised Paper for Review: April 1, 2013
- Author Notification of Acceptance of Revised Paper: April 8, 2013
- Submission of Copyright Form: April 19, 2013
- Submission of Final, Accepted Paper: April 22, 2013

NOTE: No additional papers or electronic copyright forms will be accepted past this date to ensure at-conference delivery of CD.

Internal Deadlines

- Author Pre-Registration Deadline (if applicable): April 29, 2013
- Assign All Sessions to a Schedule via the Webtool: May 13, 2013
- Technical Program Output for the Printed Program: June 3, 2013
  NOTE: Conference/Technical Chair must assign all sessions to a schedule prior to the program output from the Webtool.

Items due to ASME

- CD Front Matter/Introduction Materials Due: June 7, 2013
- List of No-Show Presenters/Paper Numbers Due: August 28, 2013

III. INVOICES AND CHARGES

The conference will be invoiced for the following costs:

- ASME Conference ToolBox: includes set-up fee, basic support and additional support fee (if applicable)
- CD production: those costs incurred by ASME from production work executed by third party vendor(s)
- Production preparation: those costs incurred by ASME staff in the management and facilitation of production

Additional information about what services are provided can be found under each detailed section (below).
**ASME CONFERENCE TOOLBOX**

Set-Up Fee, Existing User: $890 ($445 x 2 days)
- Site setup to coincide with previous year’s meeting (or 1 year prior to meeting). Projected date for live site 10 working days after receipt of all start-up materials and completion of required internal ASME form.

Basic Support Fee: $8,900 ($445 x 20 days)
- Ongoing maintenance of site content until conference date, and continued site presence post-conference
- Ongoing user support for authors and conference administrators (session organizers, technical program chairs, etc.) (provided via e-mail) including:
  - Technical difficulties
  - Customized reports
  - Conversion of Word files to PDF
- Export of requested data for use in program creation
  
  NOTE: This is based on the existing program template. Should this not suffice, data exports can be provided. Should upgrades be made to the existing template or additional templates created, the conference may utilize these if timing of such upgrades coincides with the conference schedule. No guarantees are made that such upgrades will be available at this point in the conference schedule.
- Export of requested data for pre-registration requirements (if applicable)
- E-mail communication with conference organizers at key points in conference schedule regarding publication matters only
- Participation in ongoing project management team (ASME staff and/or contracted conference reps)
- Instruction/training in tool use for conference administrators (on as-requested basis) (ToolBox has complete Help and FAQs for all functionality.)

NOTES:
1. E-mail communication may involve large mailings that can only be accommodated through our Lyris e-mail server. Charges related to such mass e-mails will be included in the invoice for services as a separate line item.
2. Use of the web tool implies use of current functionality and features. Pricing relates to processing of content through current version; pricing does not imply any upgrades or changes to existing functionality.

Additional Support Fee: $1,335 ($445 x 3 day)
By using the full functionality offered by the Conference ToolBox, every aspect of conference planning can be executed by the respective parties: authors, reviewers, session leaders, technical program leaders, conference chairs, etc. (See Appendix 1 for a list of roles and responsibilities.)

If all functions available to authors and conference organizers are executed by the respective parties, the Additional Support fee will not be applied. If tasks are completed by staff, the fee will be charged. These include:
- Submission of late abstracts after site is closed.
- Accepting abstracts on behalf of organizers.
- Assigning abstracts to sessions on behalf of organizers.
- Submission of late draft papers after site is closed.
- Completing a review on behalf of reviewers.
- Accepting draft papers on behalf of organizers.
- Submission of late final papers after site is closed.
- Adding co-authors when corresponding author fails to do so.
- Assigning session schedule on behalf of organizers.
- Adding organizers to a technical area.
- Adding presentations to a technical area.
- Adding sessions.
- Updating descriptions of technical areas.

**CD Production Preparation**

**Copyright Management:** $8,010 ($445 X 18 days)

- Receipt and recording of copyright transfer forms for all papers
- Verification of conformance of all copyright transfer forms with ASME policy
- Special handling for license agreements and alternate requests
- Necessary follow-up with authors of incomplete or missing copyright transfer forms

**Preparation for Production:** $17,800 ($445 x 40 days)

- Quality check of all author-supplied PDFs and verification with supplied data file from ASME
- Additional corrections (incorrect paper number, missing info, consistent conference header, etc.)
- Development of production database for conference
- Individual paper verification includes checking of title, authors, paper number

**NOTE:** *This does not include any changes to paper, e.g., author styling or formatting (fonts, size, etc.) or corrections to other typographical errors within the body of the paper. Typographic errors in paper titles will be corrected.*

- Preparation of all front matter for CD
- Preparation of data for index for search function and TOC prep
- Preparation CD art
- Proofing of all TOCs
- Quality check of pre-master
- Preparation of material for CD manufacturer instructions, communications, etc.) and ongoing work with vendor until project completion

**CD Production, Manufacturing, and Packaging**

**Production and manufacturing of CD; Clamshell packaging**

<table>
<thead>
<tr>
<th>No. Papers</th>
<th>No. Attendees (DVDs)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
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</tr>
<tr>
<td>Shipment</td>
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<td>$115.00</td>
</tr>
</tbody>
</table>

- Any additional scanning of material not provided digitally
- Threading, linking, bookmarking
- Indexing for search function
- Output of all TOCs (by track/topic)
- Inclusion of splash, all TOCs, and front matter
- Quality check of pre-master
- Provision of pre-master for ASME review

The information contained in this document is confidential and should not be shared with third parties without the explicit permission of the document creators.
- Replication of master disc
- Printing of disc
- Insertion of disc in packaging
- Coordination with shipper/customs broker to deliver product on-site

NOTES:

1. The CD interface is Adobe Acrobat within an HTML framework. The search function of ASME CDs allows searching across paper numbers, titles, authors, subjects, and keywords. In addition, the Adobe Acrobat search function is active within individual papers.
2. Estimate is based on the number of full papers and CDs sited above. There can be no distribution of the CDs beyond the conference. All undistributed CDs must be returned to Conference Publications. Should you need CDs for any paid registrants who were not able to attend, please provide ASME with their names, addresses, etc., and we will handle the mailing of the CDs from here.
3. Designated representative or conference chairs prior to replication must confirm replication quantity. Historical data must be taken into consideration in the determination of this quantity.
4. Charges to the conference are computed as follows:
   - Direct expenses incurred in CD manufacturing (as outlined above) and shipping and customs brokering are applied to the total number of CDs distributed to attendees at conference.
   - Additional direct expenses related to replication only will be applied to the balance of CDs replicated and sent to the conference (based on replicated quantity provided to publishing the designated representative or conference chairs).

<table>
<thead>
<tr>
<th></th>
<th>Without Additional Support Fee</th>
<th>With Additional Support Fee</th>
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**TOTAL**

| Conference ToolBox and CD Publication | $37,802.50 | $39,004.00 |
| 1200 papers, 1300 attendees |

*Note: Discount is applied for use of ASME Publishing Services in full, i.e., Conference ToolBox, Production Preparation, and CD Manufacturing. Discount is applied to the ToolBox and Production Preparation portion of the invoice.*
APPENDIX 1
CONFERENCE TOOLBOX ROLES AND RESPONSIBILITIES

NOTE: For purposes of this documentation, the most common titles for each role have been used; other naming conventions are listed. Other titles may fulfill the same or a similar function. Also, responsibilities may vary with a particular role depending on the specific conference organization and/or procedures.

Technical Program Chair
- Assume overall responsibility for the technical program of the conference.
- Coordinate with staff and other conference organizers to follow up on deadlines for paper submissions, review, and conference program assembly.
- Coordinate with conference organizers on session organization.
- Determine conference schedule and assign sessions to time slots and rooms with Events Staff or designated conference manager.
- Has ability to perform tasks of users (Track, Topic and Session Organizers) beneath them.

Other naming conventions include: Technical Chair, General Conference Chair, Program Chair

Track Leader
- Oversee the technical content of specific technical area and its organization.
- Serve as primary liaison between conference organizers in the roles directly above and directly below.
- Determine acceptance of abstracts submitted to your technical area.
- Re-assign abstracts to another technical area, if necessary.
- Create and assemble sessions.
- Assign sessions to topic areas, if necessary.
- Assign personnel to organize topics (if applicable) and to organize and moderate sessions.
- Create accounts for topic and session personnel and assign all applicable rights and access to the tool.
- Monitor the paper review process.
- Assist in reviewing papers, if necessary.
- Monitor the activity of the topic and session personnel and assist them as needed.
- Ensure the on-site success of the sessions in your technical area.

Other naming conventions include: Program Representative, Track Manager, Program Chair, Symposium Coordinator, Committee Chair, Point Contact, Vanguard Chair

Topic Organizer (for a three-level structure only)
- Oversee the technical content of your technical area and its organization.
- Serve as primary liaison between conference organizers in the roles directly above and directly below.
- Determine acceptance of abstracts submitted to your technical area.
- Re-assign abstracts to another technical area, if necessary.
- Create and assemble sessions.
- Assign session personnel to organize and moderate sessions.
- Create accounts for session personnel and assign all applicable rights and access to the tool.
- Monitor the paper review process.
- Assist in reviewing papers, if necessary.
• Monitor the activity of the session personnel and assist them as needed.
• Ensure the on-site success of the sessions in your area.

*Other naming conventions include: Symposium Organizer, Program Review Chair, Review Coordinator, Topic Chair*

**Session Organizer**

• Create accounts for each reviewer in your session.
• Assign reviewers to each paper in your session.
• Ensure your reviewers can access the PDF files of the papers assigned to them.
• Ensure your reviewers follow the ASME Guidelines for Review and use the tool functionality to complete their review.
• Ensure timely review.
• Compile the reviews and comments.
• Accept or reject each paper and notify the author.
• Re-review a paper if substantive revision requires.
• Track the authors in your session prior to the conference.
• Ensure that all authors in your session have submitted a completed copyright form by the copyright deadline.
• Keep the organizer directly above informed of the progress of your session.
• Ensure the technical quality of your session.

*Other naming conventions include: Session Chair and Session Developer*

**Reviewer**

• Review the papers assigned.
• Follow the ASME Guidelines for Review and use the on-line Review Form to collect your comments and overall evaluation.
• Complete the review using the tool functionality.
• Ensure timely review.
• Keep the organizer who assigned the review informed of your progress.

**Authors**

• Submit 400-word, text only abstract by submission deadline.
• Ensure that all co-authors who will be listed on final paper are added to the website.
• Submission of draft paper by submission deadline.
• Submission of revised draft paper by submission deadline.
• Submission of final paper (even if draft paper is accepted as is) by submission deadline.
• Ensure that a completed electronic copyright form, with all author signatures is submitted by deadline.
Plan to attend...

The 2013 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference

August 4–7, 2013 Portland, Oregon

For more information and to register for the conference, visit http://www.asmeconferences.org/IDETC2013

2013 Publication Schedule
Submission of Abstract for Review: January 7, 2013
Submission of Final, Accepted Paper: April 22, 2013
About Portland

In Portland, you’re always just a short walk or ride from limitless recreation, fabulous dining and flourishing culture. And, oh yes — the nation’s largest variety of local microbrews!

With no sales tax, Portland is a haven for shoppers. You’ll find retailers large and small, international and indie, within easy reach of downtown hotels. The nearby Pearl District is home to galleries, boutiques, chic restaurants and the legendary Powell’s City of Books.

An award-winning airport, efficient light rail system, and pedestrian-friendly city blocks, make getting around town a real pleasure.

See for yourself, and come early or stay late to enjoy all that Portland has to offer.

http://www.asmeconferences.org/IDETC2013

The flagship international meeting for design engineering...

The ASME 2013 International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE)
1 Conference Planning

A) The basic conference information has been entered into the EPAT Website:  
http://www.asme.org/events/conferences/event-planning-and-approval-tool

B) I have received a copy of the budget for IDETC/CIE 2012 and a copy of the Business Plan for IDECT2013 and will be using it to develop the business plan for IDETC 2014.

C) I have had several informal discussions with Erin Dolan and Mary Jacubowski (ASME Staff) about the potential for organizing the conference at Niagara Falls and/or Buffalo.

D) Niagara Falls, ON, Canada remains the most preferred option.

Scotiabank Convention Center (overlooking the Falls)

  a. Website: http://www.fallsconventions.com/

The Scotiabank Convention Centre, in Niagara Falls, Canada (SCCN), is situated within walking distance from the fashionable Fallsview Tourist District; providing Centre visitors and clients quick and easy access to more than 5,000 hotel rooms/suites. Major hoteliers such as the Marriott, Hilton, Sheraton, Embassy, Radisson, Holiday Inn, and Doubletree offer an extensive range of lodging product offerings. (Alternately, there is enough meeting space for the conference to be split across two adjacent hotels.)
E) Buffalo Niagara Convention Center  
Website: http://www.buffaloconvention.com/

F) Erin visited both Niagara Falls and Buffalo over the course of the summer to look at various prospective locations

On Mon, Jul 16, 2012 at 10:10 AM, Erin Dolan <DolanE@asme.org> wrote:

Hello Venkat,

Yes we can speak on Thursday or Friday. Let me know your preference. I did go to Buffalo and Niagara Falls to look at the prospective properties. Here are my thoughts:

Niagara Falls
Plus: The city is fabulous. I LOVED it. It reminds me of a mini-Vegas
Minus: The conference would need to be held in 2 different hotels. The hotels are about 1 block away from each other. I think when you present your report to the DED you need to make sure they are ok with this...

Buffalo
Plus: The entire meeting (except for food functions) can be held at the convention center. Lunches etc... would need to be held at the hotel.
Minus: There isn’t much to do in Buffalo, especially in walking distance of the hotel/Convention center. I’m worried that our international attendees would not be interested in this city.

Erin
2 Conference Logistics

From a technology support perspective, currently I have implemented the base framework for exchange of emails and archival of the discussions pertaining to the IDETC 2014 conference via the following means:

A) A new GMAIL account for the IDETC 2014 General Chair has been setup as
   idetc2014.conferencechair@gmail.com

B) A Wiki site for sharing information between the Executive Team has been setup at:
   https://sites.google.com/site/idetc2014wiki/

C) A Mailing List for IDETC 2014 Executive Committee members has been setup as
   IDETC2014_exec@googlegroups.com. The mailist-list archive is available on the web at:
   https://groups.google.com/forum/?fromgroups#!forum/idetc2014_exec
3 Questions for the ASME Executive:

A) Is there any corporate-level access to web-conferencing software (or is there a budget for subscription to one of the publicly available web-conferencing software)?

B) Is there access to a common web-based collaboration repository (such as Sharepoint)?
IDETC/CIE 2015:  
The 2015 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference

August 2012 Update

To Whom it May Concern:

A proposal to organize IDETC/CIE 2015: The 2015 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference in August of 2015 was approved by the Design Engineering Division’s Executive Committee on May 9, 2012.

The Conference Organizing Committee consists of the General Conference Chairs: Profs. Jeffrey F. (Jeff) Rhoads, Purdue University, and Walter Lacarbonara, Sapienza University of Rome; Technical Program Chairs: Prof. Brian Mann, Duke University, and Dr. Tamás Kalmár-Nagy, and the Conference and Program Chairs of the IDETC/CIE constituent conferences. An additional Advisory Committee with a base membership consisting of Prof.s Harry Dankowicz and D. Dane Quinn, as well as two additional past General Chairs, will also be instituted.

Potential host cities include: Rome, Italy; Vancouver, British Columbia, Canada; Minneapolis, Minnesota, USA; New York, New York, USA; and San Francisco, California, USA. The exact location will be determined in the coming year with the assistance of ASME staff. This selection will be based on cost, capacity, and appeal.

An initial meeting with ASME staff (Mary Jakubowski and Erin Dolan) will take place at IDETC 2012. Formal organization will commence at that point.

Jeff Rhoads and Walter Lacarbonara  
IDETC/CIE 2015 General Conference Chairs
Honors & Awards Committee
Yan Jin, Chair
Design Engineering Division -ASME

Report for meeting of August 12, 2012
Chicago, Illinois

1. This year, the committees that judged the awards are:
   Machine Design award (and DED general H&A committee)
   Michael McCarthy, Alex Slocum, Bahram Ravani, Panos Papalambros, Al Ferri and Yan Jin.
   There were no nominations for the Machine Design Award.
   Panos Papalambros’ term expired and agreed to serve for another term.
   Barnett Uzgiris Product Safety Award
   Joe Davidson, Crispin Hales, , Dan Segalman, Gordon Kirk, Jeffrey Ge
   There was one nomination and one award was made.
   The current committee members are: Joe Davidson, Crispin Hales, , Dan Segalman Raffaele
   Di Gregorioz, Ren-jye Yang, Yan Jin
   Ruth & Joel Spira Outstanding Educator Award
   Mike Keefe, Ken Wallace, Gary Kinzel, Gul Kremer, Judy Vance, Yan Jin.
   There were two nominations. One was selected for the award.
   The current committee members are: Mike Keefe, Jeffrey Mountain, Ken Wallace, Gary
   Kinzel, Gul Kremer, and Yan Jin
   Leonardo DaVinci Award
   The current committee is: Steven Velinsky, Joe Beaman, Farrokh Mistree, Itzhak Green,
   George Flowers and Yan Jin
   There was no nomination for this award this year.

2. The job of the H&A Committee is to select qualified candidates. This year there were
   nominations for:
   Barnett Uzgiris Award – Selection is: Henry Petroski
   Ruth & Joel Spira Outstanding Educator Award – Selection is: David Wallace

3. New awards and awards elevations: DTM Award (TC award) has been established. The
   elevation of both Lyapunov Award and D’Alembert Award to ASME level was postponed by
   ASME.

4. We need more qualified nominations for all the awards, so we are hereby soliciting
   nominations – These are due February 1 every year. Nomination packets are carried over
   automatically for 3 years and then removed from consideration, unless renewed by the
   nominator.
5. Lack of nominations has been a major issue for the past several years. One solution is to form nominations committees for non-TC-controlled awards. A proposal has been made. Further discussion and action is needed.

Yan Jin, Chair
DED Honors & Awards Committee
August 11, 2012
Broadening Participation Committee Report 2011-2012
Janis Terpenny, co-chair
Iowa State University
Kate Fu, co-chair
MIT/SUTD

We are pleased to report that the committee is strong and active. The members include:
- Janet Allen, University of Oklahoma
- Susan Finger, Carnegie Mellon University
- Kate Fu, MIT/SUTD, Committee Co-chair
- Kathy Jacobson, Lockheed Martin
- Kazem Kazerounian, University of Connecticut
- Tahira Reid, Purdue University, Workshop Chair
- Janis Terpenny, Iowa State University, Committee Co-chair
- Deborah Thurston, University of Illinois Urbana Champaign
- Judy Vance, Iowa State University
- Gloria Wiens, University of Florida

Kate Fu and Janis Terpenny have served as co-chairs during the 2011-2012 year. Tahira Reid has served as the Workshop chair during the 2011-2012 year. Over the course of 2011-2012, the committee has focused on organizing a fourth annual workshop for new and existing members of the broadening participation community, the development of a wiki site to support the community, outreach to K-12 education, and research/publications related to our objectives.

2011 Workshop

At the 2011 IDETC in Washington, D.C., the committee hosted a half-day workshop on Navigating and Leading Change. The DED supported this workshop with funds remaining from the prior year’s budget. This funding covered the costs of the expert workshop leader hired as well as materials and refreshments for the workshop. In addition to these DED funds, the committee used remaining funds from the NSF grant to support travel grants for graduate students to attend the workshop.

The leader for the 2011 workshop was Cindy Zook, of Cindy Zook Associates. Cindy received her B.A. in economics from George Mason University, and her M.A. in Economics from George Washington University. In addition she completed a Certificate Program in Human Resource Development. The workshop introduced participants to the Life Cycle Model of change which consists of five elements representing the ideal, full, "healthy" life cycle of an individual, team, project or organization. These elements include Start-up, Growth, Maturity, Productivity, and Ending. The participants were presented with various scenarios as an interactive way to understand more fully the scope of each element. The dynamics of the model operate at multiple levels simultaneously - on the personal, relational, team, project, organization, and even societal levels. Participants identified their own style or tendency and begin to understand how they, as leaders, can work to manage change.

Of the 28 participants, 9 were male and 19 were female. There were 20 graduate students, 1 postdoc, 6 faculty and 1 from government. The lower than usual participation was due to the hurricane that interrupted travel on the East Coast that weekend. 48 participants had registered before the storm. A post workshop survey was conducted to determine the effectiveness of the workshop topics and exercises. There was a very positive response to the workshop as shown in the post workshop survey (measured responses and open ended questions). The participants were asked to rate how useful each topic was to them. A 5 point Likert scale was provided which defined the extreme ratings as 1 = Very Helpful and 5 = Not Very Helpful. The averaged results are as follows, and can also be found in raw form in the attached survey results summary in Appendix A:

- Systems Model: Understanding the Life Cycle Elements: 1.3
- Mapping Individual Leadership Styles: 1.52
In addition, the workshop appeared to have a very positive impact on the feelings of inclusion, connectedness, and professional development among the participants, as exhibited in the responses to the multipart question 3 in the attached survey results summary in Appendix A. Twenty-three of the 28 participants completed the post-workshop survey.

Needs Assessment
Based on the results of this survey and follow-on meetings, the committee put some focus on developing tools to facilitate continued communication within the community that extended beyond the IDETC.

A Facebook page was created as well as a Wiki. The Facebook page is “ASME IDETC Broadening Participation Community”. This is a closed Facebook group with 27 members at this time. The Wiki page can be found at http://www.bpart-asme.org/. It is ready for launch and will be announced at the 2012 workshop. It will be a resource page for women and minority students, faculty and industry personnel who are a part of the Broadening Participation community of ASME.

2012 Workshop
For the fourth year in a row, the committee is sponsoring a ½ day workshop at the 2012 IDETC. The 2012 workshop is entitled: Communicating Technical Ideas: a hands-on workshop for creating clear, concise, compelling communications. The ability to communicate the value and relevance of one’s work to a variety of audiences is crucial. This interactive workshop will provide participants with specific strategies and tools to help researchers and engineers become more confident and effective communicators. Participants have been encouraged to bring a sample of their technical work/research that they would like to use for personal practice.

Dan Agan will organize and lead the workshop. Dan Agan is president and lead consultant of Panthera Group, LLC, a consulting firm that provides a variety of services to help individuals and organizations become better communicators. Dan has spent more than 30 years impacting the thinking and behaviors of clients through a “rare combination of strategic thinking, creative execution, and communications proficiency”. He has developed winning communication programs and has trained hundreds of professionals to communicate more confidently and effectively.

As of mid-July, 48 participants have been accepted to attend the workshop. The participants include 31 graduate students, 8 faculty, 3 postdocs, 5 from industry and 1 from government. There will be 31 female participants and 17 male participants.

The description of the workshop, including brief bio-sketches of the presenter from the IDETC 2012 website is attached. Once again, an NSF grant has been received to support travel expenses for women and underrepresented graduate students and post docs.

Outreach to K-12
Three BPART committee members presented at the “Attracting Future Engineers – Best Practices and Lessons Learned” panel discussion at the 2011 IDETC Conference along with the Lockheed Martin Corporate Engineering STEM lead. Their presentations were well received and provided for excellent audience discussions. The speakers’ involvement in this panel was directly related to contacts made through the BPART group. The Agenda and speaker list is shown in attachment C.

Future Plans
The committee is still focused on our mission to develop, implement and oversee new and existing activities aimed at broadening the participation of women and underrepresented minorities in the activities of DED. As part of our pledge to develop strategies to encourage women and minorities to get more involved in the DED through the technical committees, we will be hosting a “Speed Learning” session at the 2012 workshop. This hour long activity will hopefully involve chairs of ASME DED technical committees who have generously
volunteered their time. Participants will meet with committee chairs in small groups to learn how each
committee operates, how people can become involved and to get answers to any other questions about the
committee structure of the DED. Finally, one half hour has been allocated for social interaction and networking
with committee chairs, and others at the conclusion of the workshop.

In addition, we continue to make progress on the ASME Broadening Participation Wiki. The Wiki has great
potential to be a resource for information on ASME, DED, and professional development. We continue to work
on research/assessment and potential conference and journal publications related to our activities. Because of
the success of our workshops, we plan on continuing the professional development workshops to be held at the
IDETC in the future.

Respectfully submitted,
Janis Terpenny (co-chair)
Kate Fu (co-chair)
August 1, 2012
Workshop Program Outcomes
1) Describe two specific things you consider to be personally important outcomes of this workshop

- Me doing efficient work
- Recognizing my flaws & doing something about them
- Eastern approach to cycle, inevitably of evolution through cycles
- Using the 5-element model to move projects I'm in forward
- Demonstrating how to bring things to a healthy ending
- Reflecting on my own natural state, as well as recognizing where I am in my current projects/circumstances
- Having a sense of how to evaluate an organization for where it is in the change life cycle
- Learning about my own personal leadership style and when this style is appropriate
- Understanding the circular nature of projects
- The cycle and the realization of where I am in my life.
- Connecting with the ASME committee
- Connections to community
- Self reflection
- Learning the life cycle model
- Understanding my "group"
- Knowing myself more
- It caused me to reflect on myself + skills
- Taught me a new way of thinking about leadership
- Understanding how people progress throughout a project
- The idea of natural energy & how that helps or hurts our approach
- Provide us with profession tools to leading changes
- The discussions of the model
- Importance of "ending phase" for moving forward
- Determination and combination of every phase
- Method of evaluation self
- Method of pushing through when stuck
- Understanding why I struggle with some activities, i.e. identifying my our predispositions/energy.
- Strategies to add to toolbox for leadership & change
- Life cycle diagram
- Identification of what areas of cycle I prefer
- Identifying …. To get "unstuck" in a project
- For my personal concerns, I can identify the current stage, and therefore to try planning for next stages more preparedly!
- I learnt new things and was so interesting to know about this life cycle model and which part I belong to
- New model to play with
- Tell superficial change from ?? Change
- Self-identification
2) Please rate the following workshop activities in terms of how useful you found them:

a) Systems Model: Understanding the Life Cycle Elements

- 1=Very Helpful
- 2=Somewhat Helpful
- 3=Somewhat Unhelpful
- 4=Not Very Helpful
- 5=Not Very Helpful

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Average= 1.3

b) Mapping Individual Leadership Styles

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Average= 1.52

c) Strategies for Navigating and Leading Change

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Average= 1.87

3) Please rate each of the following workshop outcomes:

**Based on my experience at the workshop:**

a) I feel more of a connection to other women and minorities attending the IDETC

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Average= 1.7

b) I feel I am part of an emerging community within ASME

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Average= 1.78

c) I feel connections to an international network of supportive researchers

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Average= 2.13

d) I have gained useful professional skills

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Average= 1.43

e) I have gained useful personal skills

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Average= 1.48

f) I feel the skills I have learned will enhance my professional success

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Average= 1.52
g) I feel the skills I have learned will enhance my leadership ability

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<tr>
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Average=1.48

h) I would support holding additional similar workshops

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<tr>
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Average=1.17

i) I would encourage others to attend similar workshops

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<tr>
<td>5=Strongly disagree</td>
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Average=1.26

More questions on the reverse side.....

4) What aspect of the workshop did you find most helpful?

- the separation of people in their personality groups and making sure that they are standing in the right place :)  
- engaging speaker  
- How to end a task healthily  
- Talking through our own preferred life cycle states and reflecting on our own circumstances  
- The discussion of the five "spheres" of the continuum in-depth. Seeing how each are related ….into each other was truly enlightening.  
- Networking  
- The life cycle model  
- The interaction with speaker  
- The description of life cycle; Knowing myself more; The interactive fashion of the workshop  
- Discussion  
- It was very introspective. I gained a better understanding of my abilities & the lifecycle of projects.  
- The dynamics of the model, participants involving in the discussion  
- Well organized model to determine current situation  
- Assessing ourselves, and our energies  
- Identifying own energy, playing w/particular scenarios  
- Interactive but to identify individual characteristics  
- The point that things can be structured into such stages and learning that each one has its own importance was very helpful to me & now I know that after investing & going through that winter, there will be Spring, Summer, …. and I shall respect Fall and resulting values.  
- Model & role play  
- Learning a new technique; Meeting an engineering community w/nice goals  
- Life cycle model  
- When we were able to be active.
5) What aspect of the workshop did you find least helpful?

- It took a while to go through all the states - shorter lead in, more examples!
- The exercise where we used a notecard to place two projects in our lives into their appropriate "spheres: went undiscussed, and I think it would have been really helpful to talk about our projects amongst our tables and discuss why we thought they fit into the spheres we chose.
- Nothing, everything was helpful
- Nothing!
- More "case studies"
- Need more time for activity
- I didn't learn a lot about others. How do I work with others & understand why we aren't jiving.
- N/A
- Determination of phases is quite personal, and needs mentoring for their activities performed in the workshop
- I wish methods of getting unstuck had more time. I feel I missed out on that part.
- It felt like too much time on description on each color, and could have been more time on playing w/the concepts.
- The metaphors
- Unfortunately, I'm a hybrid in terms of my personal energy, personality, preferences, and everything else! So, I don't know how could I organize such a combined personality better! (the problem is with me actually :))
- Mostly metaphor, more concrete would be better
- I think she talked a little too much

6) Do you have topic or activity suggestions for future workshops?

- Following up with participants of workshop in future :)
- Need something more specific to academic issues.
- Grant writings/communication; Interviewing; Mentoring Skills; Giving feedback (I'm < 12 months from graduation/academic jobs, so most "transition from grad school to faculty" topics are of immediate relevancy).
- Professional Development, Asserting Female Needs on a Male Faculty; Navigating Academia; Building Support Networks; Momentum - Keeping it in your research
- N/A
- 1) Communicating Science -- See: "Unscientific America" book 2) How to work with unmotivated people & mesh better, i.e. sometimes I end up being overloaded or too controlling b/c someone else doesn’t' care or is lazy. Also, how to avoid "too many cooks in the kitchen"
- research collaboration, career development
- Networking skills
- Effective design and/or professional communication.
- Small presentation ( 2 min) on a specific example from multiple people, taking them through a decision process.
- How to become an independent researcher, not waiting for guidelines, and "do"/"not do" sentences from supervisor during PhD. Thank You.
- None
- More emphasis on institutional examples of a certain 'color' person getting into another 'color' institution.
- Mixer before the workshop?
- More active participation
W5: Communicating Technical Ideas: a hands-on workshop for creating clear, concise, compelling communications

Presenter: Dan Agan, President, Panthera Group, LLC.
Email: agand@pantheragroupllc.com, Phone: (703) 755-0628
Date: Sunday, August 12th, 2012
Time: 1:00pm - 5:00pm
Meeting Room: TBD
Cost: Workshops are complimentary. However only those registered for IDETC/CIE are eligible to attend a workshop.

** Note: Registration for this workshop is being handled separately from the main conference registration. If you are interested in attending this workshop, please complete the workshop survey via the following link http://www.surveymonkey.com/s/Registration_for_Communications_Workshop.

Funds are available for participating in the workshop on “Communicating Technical Ideas: a hands-on workshop for creating clear, concise, compelling communications” with the ASME-IDETC members/participants list. Up to $300 in conference expenses are eligible for reimbursement for graduate students and post docs attending U.S. institutions (primarily from underrepresented groups) who attend the ASME IDETC 2012 workshop described below. We hope you will consider joining us and also encouraging your post docs, graduate students and colleagues to take advantage of this professional development opportunity.

Workshop Overview
Communication skills are paramount to the success of all professionals especially researchers and engineers. With the popularity of programs like TED.com (Ideas Worth Spreading) and others, complex technical topics are increasingly being presented to the general public. As faculty, students and engineers, we can be called upon to participate in K-12 outreach activities, community presentations and perhaps discussions with policy makers where we need to explain our profession and/or technical topics. The ability to communicate the value and relevance of one’s work to a variety of audiences is crucial. This interactive workshop provides participants with specific strategies and tools to help researchers and engineers become more confident and effective communicators. Participants are encouraged to bring a sample of their technical work/research that they would like to use for personal practice.

Presenter(s) Biographical Sketch:
Dan Agan is president and lead consultant of Panthera Group, LLC, a consulting firm that provides a variety of services to help individuals and organizations become better communicators. Formerly, he served as senior vice president of Programming and Marketing for the PBS television network, principal and senior marketing executive for PBS Enterprises, and Chief Marketing Officer for publicly-traded software companies Excalibur Technologies and Convera Corporation. Early in his career, he was a broadcast journalist and television producer/director, and continues to consult on, produce and direct programs for organizations, television and the web. Dan has spent more than 30 years impacting the thinking and behaviors of clients through a “rare combination of strategic thinking, creative execution, and communications proficiency”. He has developed winning communication programs and has trained hundreds of professionals to communicate more confidently and effectively.

His clients include the National Science Foundation (NSF), NBC Learn, Encyclopedia Britannica, and many others. Some noteworthy collaborations with the NSF include developing the curriculum and content for their
acclaimed *Science: Becoming the Messenger* workshop and “The Science of...” video series (part of NBC Learns) which uses familiar topics, such as sports, to help demystify science.

Dan has coached over 1,200 scientists, engineers, and corporate executives in media relations and communications and in close to 30 states and in Puerto Rico. He is currently launching the *Science Messenger Institute*, a professional development and services organization that will ready post-graduate scientists and engineers to communicate more effectively with the press and mission-critical publics.

**Expected Background of Participants:**
There are no required or expected areas of experience or expertise. Participants will likely be a diverse group of individuals at all points in their careers, from many different specialties.

**Expected Audience:**
This workshop is aimed at attracting faculty, postdocs, PhD students, MS students, administrators as well as engineers from industry. The selection process will strive to select a diverse set of participants from underrepresented groups, as well as others.

**Need for the Workshop:**
This workshop will continue the efforts of the Broadening Participation Committee of the ASME to provide professional development opportunities to members from underrepresented groups who attend the ASME IDETC. In addition to skill development, this workshop will support the development of a network of people within this community from underrepresented groups. The merit of this project lies in providing a learning opportunity at a technical design conference for members of under-represented groups that imparts new knowledge about non-technical skills necessary for success in the engineering design community. The workshop will provide attendees with knowledge about themselves and their own characteristics so they can be successful in their careers.

**Impact:**
This conference attracts up to 1100 attendees from all over the world. The proportion of majority-to-minority and male-to-female attendees at the conference reflects the overall low representation of women and minorities in the mechanical engineering profession. The primary broader impact of the efforts of the Broadening Participation Committee is an expected increase in the number of under-represented members within the engineering design community. Workshop attendees will develop crucial career skills. As attendees have the opportunity to become better connected within the design community earlier in their careers, they will have opportunities to support each other in new and exciting ways. As a result of this increased networking and skill attainment, retention will improve, and these individuals will make a diverse set of contributions to the field of engineering design.

**Format and Agenda:**
The workshop will consist of presentation and active participation. There will be a total of an hour of working session(s) built into the agenda. All workshop participants will receive a free download of the companion guide on creating PowerPoint presentations, and the Panthera proprietary communications tools: the Communications Planning Worksheet, the Message Triangle, and the Storyboard Worksheet (for planning PowerPoint visuals).

1:00 – 4:00 Effective Technical Communication
   Introductions and Expectations
   Communicating Technical Ideas: Part I
   The Power of Communications
   Communicating Science and Signaling Value
   Why Communications Fail
   Understanding Audiences
   The Communications Model
Communicating Technical Ideas: Part II
Framing
The Message Triangle
Sound Bites
Bridging
Handling Q&A

Reflections/Closing Remarks

4:00 – 5:00 Introduction to ASME Design Division & social

4:00 – 4:05 Introduction
Describe BPart mission / objective
Introduce each ASME DED technical & other committee chairs & chair of Design Division.
Explanation of speed learning

4:05 – 4:30 Speed Learning
Participants move from table to table or committee chairs move
Handout descriptions of committees & background of committee chairs & when the committees will be meeting (1-2 pages max)
Tech committee chairs separate to different tables with their sign/table tent for their committee.

4:30 – 5:00 Social / Interact with Technical Committees (with refreshments)

5:00 – 5:30 Social / continue discussions for those that can stay

ASME Division of Engineering Design (DED) Committee on Broadening Participation: Janet Allen, Susan Finger, Kate Fu (Committee Co-chair), Kathy Jacobson, Kazem Kazerounian, Tahira Reid (Workshop Chair), Janis Terpenny (Committee Co-chair), Deborah Thurston, Judy Vance, and Gloria Wiens

Point of Contact – Workshop Chair
Tahira Reid
Assistant Professor, School of Mechanical Engineering
Purdue University
Email: tahira@purdue.edu
Phone: (765) 494-7209

Attachment C:
ASME IDETC Panel - “Attracting Future Engineers – Best Practices and Lessons Learned”

August 28 – 31, 2011 Washington DC, Hyatt Regency on Capitol Hill

Description

Increasing the number of engineering and science graduates is a challenging task. It has realized that attracting students in engineering and science during early education is an essential. If students are attracted to the engineering early, they can be better prepared with appropriate science and mathematics skills suitable for engineering. Institutions, engineers, instructors and teachers have used design and other engineering activities to attract students to pursue education in engineering. The panel will address best practices and lessons learned from activities and events to attract future engineering students.

Audience is comprised primarily of engineering professors & grad students with some industry participants. Most are focused on design related fields

Agenda

10:40 am – 12:00 noon

5 min. – Welcome / Introductions (Kathy Jacobson)

Introduce speakers

Goal of day – interchange of ideas with Panelists and audience – significant focus on discussion

Challenge to Audience –

• Each participant takes away at least one idea that they can implement back in their community.

10-15 min. – Meagan Campion –(Lockheed Martin Corporate Engineering & Technology), Industry needs, things LM & Meagan has been doing, other STEM best practices & lessons learned (LM)

5-10 min. – Susan Finger – NSF STEM (NSF) [BPART committee]

5-10 min. – Janis Terpenney (NSF / Iowa State) [BPART committee]

5 min. – Kathy – Middle School Science Olympiad/GS (LM) [BPART committee]

30 – 45 min. – Discussion with Audience

Exchange/share best practices and lessons learned

5 min – wrap-up (Kathy)

Susan Finger
Professor
Susan Finger is on the faculties of Civil & Environmental Engineering and Architecture. She is also affiliated with the Robotics Institute and the Department of Mechanical Engineering and is the head of the Engineering Design Research Lab in the Institute for Complex Engineered Systems. She is the co-editor in chief of the journal Research in Engineering Design. Her research interests include representation languages for design, integration of design and manufacturing concerns, computer-supported cooperative learning.

(She is currently at the National Science Foundation on a 1-2 year assignment)

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Kathy Jacobson
Lockheed Martin
kathy.j.jacobson@lmco.com

Kathy Jacobson has 30 years of industrial experience specializing in applying Design for Manufacturing and Affordability in the early product design phases. She has held positions with General Electric and Lockheed Martin in manufacturing engineering, systems engineering, finance, and conceptual design. Kathy’s ASME involvement includes chairing the Design Engineering Division Special Committee on K-12 Awareness of Design Engineering and past chair of the Design for Manufacturing Technical Committee. Her active involvement in outreach to K-12 students has provided engineering and STEM opportunities for thousands of youth through Girl Scout and Science Olympiad programs. Kathy earned her BS engineering from UCLA and is an ASME Fellow.

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Janis Terpenny

Chair and Joseph Walkup Professor
Janis Terpenny is the Chair and Joseph Walkup Professor of Industrial and Manufacturing Systems Engineering at Iowa State University (ISU). This past year, she served as a Program Director at the National Science Foundation (NSF) in the Division of Undergraduate Education. Before joining ISU, she held a joint appointment as professor of Mechanical Engineering and Engineering Education, and affiliate faculty of Industrial and Systems Engineering at Virginia Tech. Prior to this, she was an assistant professor of Mechanical and Industrial Engineering at the University of Massachusetts Amherst. Janis was one of the co-founders and served as Director of the NSF Center for e-Design for several years. Her research focus is engineering design (process and methods of early design; knowledge and information in design; product families and platforms; obsolescence in products and systems; and complexity of products and systems) and design education (multidisciplinary teams; impacts of project choice and context; and the retention and success of underrepresented students). She has 9 years of industry work experience with the General Electric Company (GE). She is a Fellow of IIE, a member of ASME, ASEE, and INCOSE and serves as an associate editor for the *Journal of Mechanical Design* and for the *Engineering Economist*.

**DEC-3 Panel - “Attracting Future Engineers – Best Practices and Lessons Learned”**

*Review Coordinator: Kathy Jacobson, Lockheed Martin*

**DEC-3-1 Attracting Future Engineers – Best Practices and Lessons Learned** *(Panel Session)*

*Session Schedule: Tuesday, August 30, 2011 10:40 AM-12:00 PM*

*Session Sponsors:*
Session Chair: Kathy J. Jacobson
The DED’s highly rated journals continue to offer important insights into original scientific developments in all aspects of Design Engineering. These journals are:

- *Journal of Computational and Nonlinear Dynamics*
- *Journal of Mechanical Design*
- *Journal of Mechanisms and Robotics*
- *Journal of Medical Devices* (co-sponsored with Bioengineering Division)
- *Journal of Vibration & Acoustics*
- *Journal of Computing and Information Science in Engineering* (co-sponsored with CIE Division),

Pending Journal Editor-In-Chief changes:

*Journal Mechanical Design*
On 12/31/2012 the EIC term of Panos Papalambros will expire. Professor Papalambros provided the CVs of three outstanding candidates. These candidates were discussed and voted on with one candidate receiving a near unanimous vote. Then The outcome of this vote and the DED Executive Committee’s endorsement this candidate was forwarded to the ASME Technical Committee on Publications and Communications (TCPC), for their approval. The TCPC meeting will be held at the 2012 IMECE and they will interview the nominee at that time.

*Journal of Mechanisms and Robotics*
On 12/31/2012 the term of Professor J. Michael McCarthy will expire as EIC for the Journal of Mechanisms and Robotics. Professor McCarthy has identified a top candidate who is willing to serve. Professor McCarthy has been asked to provided two additional nominees, and to comment on the relative strengths of each candidate. This he has agreed to do. However, one candidate is a member of the DED Executive committee. If this individual should be selected, then to remove any appearance of a conflict of interest with the nominated and DED Executive Committee, it suggested that Professor McCarthy be permitted to serve as and interim EIC until the nominee’s term in the executive committee has ended (6/30/2013). This aspect warrants further discussion by the DED Executive committee.

*Report Submitted by Kurt S. Anderson*
*Chair DED Publications Committee*
DED Publicity & Newsletter Report to 2012 DED Exec Committee

For this year some things are changing and some things are staying the same. 2011 was the first year in which we published the annual DED Newsletter as an 8-page special insert in ME Magazine. We are going to continue with that format in 2012, but are going to push the publication date back until after the annual IDETC conference in the fall. This time shift will provide the newsletter with more up-to-date content on the conference where previously the newsletter would report on a conference that was nearly a year old. In addition to this, the newsletter being published after the IDETC conference will serve as a reminder of the upcoming year’s conference and the due date for submitting publications. This will enable the newsletter to serve not only as a point of information but also as a reminder of future DED events.

Over the next year it is our intention to create an online presence for the content of the DED newsletter in addition to the annual print publication. This will be housed within the new DED web domain and will provide a place where DED members can easily find news updates. Since this is my third and final year as committee chair, I will assist the incoming chair with transitional duties and as needed in whatever capacity is most helpful to the DED.

Seth Orsborn
Chair of Publicity and Newsletter Committee
In January, Matt Parkinson transitioned from the Student Affairs and Early Career Professionals Committee. During his tenure as chair, he has instituted many successful programs – particularly at IDETC. Hundreds of students have participated in scavenger hunts that required attending technical committee meetings, interacting with faculty, asking questions after presentations, and exploring the host city. Students also participated in a special student reception that allowed them to receive great prizes, interact with faculty, and socialize with other students.

In March, Scott Ferguson became acting chair of the Student Affairs and Early Career Professionals Committee. As part of this role, he is hosting a workshop for students at the 2012 IDETC. This workshop (The student researcher: best practices and common pitfalls) is designed for students, and will provide a forum for discussing effective research strategies while identifying common traps that reduce effectiveness. Registration for this workshop is free. Four major panel sessions will occur:

Panel topic 1:
- Finding relevant research papers / effectively reading the papers
- Developing your research questions / building a research plan
- Judging if your work has made a significant contribution

Panel topic 2:
- Writing conference and journal papers
- Building a conference presentation
- Writing a thesis and/or dissertation

Panel topic 3:
- Interacting with your advisor
- Working with lab-mates
- Building a research network

Panel topic 4:
- Effective time management
- Translating your skills toward an academic or industrial career

Each panel consists of three or four members of the IDETC community. This year, the following members volunteered to serve at this workshop:

- Dr. Andrew Olewnik
- Dr. Erich Devendorf
- Dr. Richard Malak
- Dr. Robert Nagel
- Dr. Gregory Mocko
- Dr. Bernard Yannou
- Mr. Joseph Donndelinger

The members on these panels represent the diverse backgrounds of the design community when considering years of experience, industry vs. government vs. academia, and Ph.D. advisor. This should give us a broad perspective so that the students can learn the maximum amount possible.
If successful, this workshop will hopefully become a permanent fixture at the IDETC. This year, the workshop will be about 2 ½ hours. In the future, the length of this workshop could be extended and a funding source for beverages and snacks will need to be identified. Additionally, Dr. Ferguson plans on continuing the efforts of Dr. Parkinson at IDETC by continuing the scavenger hunt and student social event.

This committee will also explore how to better maintain communication with former students who have attended DETC. We would like to generate a database and communication portal for these members. Activities in this forum can include job opportunity postings for current IDETC students, the ability to discover possible career paths, and the ability to network. We hope that this forum also provides a way for former DETC participants to remain active in the design community.
The Design Society is an international non-governmental, non-profit organisation focused on design research, design practice, and design education. The 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 organizes an array of meetings and conferences each year on topics related to design. Thousands of designers and design scholars attend these meetings each year. The largest of the Design Society conferences is the International Conference on Engineering Design. The third week in August of 2011, ICED, was held in Copenhagen, Denmark. More than 650 design researchers and industrial participants from 44 countries attended the conference. More than 400 papers were presented. Just over 20% of the participants were from industry with the rest primarily coming from universities. In September, the Society held the 14th Engineering and Product Design Education Conference in London. More than 150 design faculty from 25 countries, representing both engineering design and industrial design, attended. The 2012 DESIGN Conference took place in May at a beautiful seaside setting in Cavtat, Croatia. Other events this year included

- The 23rd Symposium on Design for X in January in Bamberg, Germany
- The 4th International Conference on Research into Design in January in Madras, Chennai, India
- The 9th Workshop on Integrated Product Development in February in Magdeburg, Germany
- The International Conference on Design Creativity in July in Glasgow, Scotland

Upcoming events include the Second International Conference on Modelling and Management of Engineering Processes that will be held in Cambridge, England, in
November and the 2013 ICED Conference to be held in Seoul, South Korea in August.

The Design Society has organized a set of Special Interest Groups (SIGs) that meet regularly throughout the world. The areas of interest for these groups include:

- Computational Design Synthesis
- Decision Making
- Design Creativity
- Design Education
- Design Theory
- Development of Mechatronic Products and Systems
- EcoDesign
- Emotional Engineering
- Human Behavior in Design
- Managing Structural Complexity
- Modeling and Management of Engineering Processes
- Risk Management Processes and Methods in Design

Each SIG has a management team who are members of the Design Society. Attendance at the meetings is open to anyone interested in design. Announcements of the meetings and of all Design Society conferences can be found on the Design Society Website.

The Design Society holds regular events to benefit graduate students working in the area of design. The 14th Design Summer School was held during the summer of 2012. Graduate students from around the world met for several weeks in the Netherlands and in Luxembourg to exchange ideas about their research and to study best research practices under the guidance of senior members of the Design Society.

The Design Society seeks opportunities to collaborate with other organizations with a focus on design and product development. The Society is particularly active in the International Association of Societies of Design Research (the IASDR). Opportunities to collaborate with the ASME in organizing conferences or workshops would be welcomed.

A problem that both the Design Society and the ASME face is that their largest design conferences, ICED and IDETC, have in recent years been held during adjacent or nearly adjacent weeks. That will be the case next year as well. Many faculty and their students are consequently forced to choose between the conferences. If the meetings could be even a month apart, faculty would be less likely to have to make this choice. The ICED Conference has been held the third week in August of odd years for decades. The IDETC meeting times have varied between late August and early October. In recent years, the IDETC has consistently been scheduled in August in years when there is also an ICED Conference in August. The Design Society Board of Management would appreciate the opportunity to work with the organizers of the IDETC to find a way to spare our constituents this difficult choice.

Submitted by Warren Seering
Head of the Design Society Board of Advisors
Fellow of the ASME
August, 2012
ASME Design Division K-12 Awareness of Design Committee Report
August 16, 2012
Kathy Jacobson - Chair
Kathy.J.Jacobson@LMCO.com
PKJacobson@earthlink.net

2011-2012 program involvement:

- Sponsored and chaired the Design Education panel discussion on “Attracting Future Engineers – Best Practices and Lessons Learned”. Panelists include the Lockheed Martin Corporate Engineering STEM manager Meagan Campion, Janis Terpenny, Susan Finger (NSF), and Kathy Jacobson. The Bpart committee provided outstanding connections for speakers and audience participants for this session.

- The Design Education Committee is sponsoring the “Linking Engineering Design with K-12 and STEM” session at the 2012 IDETC.

- Organized a Science Olympiad student-coach workshop for middle schools from the state of Georgia

- Sponsored 2 Engineers Week Girl Scout Badge Workshops at Lockheed Martin for over 200 girls and leaders.

- Contact the committee for additional ideas for participating in K-12 STEM education activities.

Resources:

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

ASME Pre-College Education
http://www.asme.org/groups/educational-resources

http://www.asme.org/groups/outreach-programs/pre-college-(k-12)-stem-mission

http://www.asme.org/groups/educational-resources/engineering-resources

Engineers Week
www.eweek.org

Science Olympiad
www.SOINC.org

Girl Scout Engineering / STEM
http://www.girlscouts.org/program/gs_central/science/