



Mechanics Division

NEWSLETTER

Fall 2010

Chair: Anna Dollár
Secretary: Christopher Papadopoulos

Visit the Mechanics Division Website: <http://comp.uark.edu/~jjrencis/aseemechanics>

Message from the Chair

Greetings from Miami University in Oxford, OH:

I am honored to serve as this year's chair for the Mechanics Division. The Division, founded in 1929, is one of the oldest within The American Society for Engineering Education, and has a long history of serving the engineering mechanics community.

The 2010 Annual Conference in Louisville, KY, was a successful one for the Division and, I hope, enjoyable for all of you who attended it. The Mechanics Division sessions were all well attended, including our recently established session devoted to simple classroom demonstrations for engineering mechanics. I want to thank everyone who reviewed papers and abstracts, presented papers, moderated the sessions, showed classroom demos, and attended the talks and poster presentations!

Our business and Executive Committee meetings were also well attended. Thanks to those who attended these meetings, as they are important to the functioning of the Division. For those that have not attended a business meeting, please do so next year as you be welcomed and offered the opportunity to contribute! The minutes of the business meeting are included on p.4 later in the newsletter. On p. 6 you can find the list of this year's Mechanics Division officers and Standing Committees.

At our annual Mechanics Awards Banquet, which for the third time took place on a river boat, we presented the Division's awards to the very deserving slate of awardees. A complete list of the award winners is included on p.3. Congratulations!

Next year's ASEE Annual Conference & Exposition will be held in Vancouver, BC, Canada on June 26 - 29, 2011. More information on the conference is available at <http://www.asee.org/conferences-and-events/conferences/annual-conference/2011>. Make plans now to join us in Vancouver!

- Submit an abstract and encourage others to do so as well. **The abstract submission deadline is October 8th**. All abstracts and papers are to be submitted online. The call for papers is available at <http://www.asee.org/conferences-and-events/conferences/annual-conference/2011/program-schedule/call-for-papers/2011-Call-For-Papers.pdf>
- Prepare to bring along your favorite mechanics classroom demonstrations for sharing with your colleagues and showing in a session devoted to "Simple Engineering Mechanics Classroom Demonstrations".

- If you are willing to volunteer your time and serve as a reviewer of abstract and papers, send an email to the 2011 Mechanics Division Program Chair, Jon-Michael Hardin at hardinj@vmi.edu
- Please nominate deserving colleagues for the 2010-11 Mechanics Division Awards (due by January 31, 2011) - the call for nominations is included in the newspaper on p.7.
- Please recommend the Mechanics Division to your colleagues, and pass the information and form included on p.8 to interested individuals.

Last, but not least, I'd like to thank Gary L. Gray, last year's Mechanics Division chair, for the leadership he provided to the division, and Jon-Michael Hardin, last year program chair elect for organizing the Award Banquet / fantastic river cruise.

If you have any comments, questions, or suggestions about the Mechanics Division, please do not hesitate to let me know. Have a great semester.

Best regards,
 Anna Dollár dollara@muohio.edu
 Miami University, Oxford, OH
 2010-2011 Mechanics Division Chair

Mechanics Division Announcements

- **Collection of Archival Materials:** If you have any materials from past decades, such as monographs, photographs, results from the Mechanics Readiness Test, or any other interesting mechanics education materials, please contact Archivist Ralph Flori at (573) 341-7583, reflori@mst.edu and/or Secretary Chris Papadopoulos, (787) 832-4040 x3336, christopher.papadopoulos@upr.edu .
- **Bylaws Update:** The Division Bylaws were last updated in 2007. The Executive Committee will distribute proposed modifications to the Bylaws later this year, to be voted on at the 2011 Annual Business Meeting in Vancouver. Please stay alert to receive and review this information.

2009-10 Mechanics Division Awards

Archie Higdon Distinguished Educator Award

James R. Barber, University of Michigan

Ferdinand P. Beer and E. Russell Johnston, Jr. Outstanding New Mechanics Educator Award

Purohit Prashant, University of Pennsylvania
Major Nicholas O. Melin, U.S. Military Academy

Best Paper Award

Using a Digital Dashboard for Learning to Blend Interactive, Web-based Courseware into an Instructor-led Statics Course

Anna Dollár, Miami University, and Paul Steif, Carnegie Mellon University:

Dynamics Buzzword Bingo: Active/Collaborative/Inductive Learning, Model Eliciting Activities, and Conceptual Understanding

Brian Self, California Polytechnic State University, and James Widmann, California Polytechnic State University

Best Paper Presentation Awards

Session 1468 – Simple Classroom Demonstrations for Engineering Mechanics

Real Life Examples in a Solid Mechanics Course

Scott Kiefer, Michigan State University

Session 1568 – Teaching Mechanics of Materials and General Mechanics Education

M-model: An Online Tool for Promoting Student Problem Solving Utilizing Mental Models

Edward Anderson, Texas Tech University, and Roman Taraban, Texas Tech University

Session 2268 – Teaching Dynamics

Dynamics Buzzword Bingo: Active/Collaborative/Inductive Learning, Model Eliciting Activities, and Conceptual Understanding

Brian Self, California Polytechnic State University, and James Widmann, California Polytechnic State University

Session 2468 – Teaching Statics

Emporium Based Redesign of Statics: An Innovative Approach to Enhance Learning and Reduce Costs

Masoud Rais-Rohani, Mississippi State University, Andrew Walters, Mississippi State University, and Anthony Vizzini, Western Michigan University

Overall Best Paper Presentations in the Mechanics Division

Dynamics Buzzword Bingo: Active/Collaborative/Inductive Learning, Model Eliciting Activities, and Conceptual Understanding

Brian Self, California Polytechnic State University and James Widmann, California Polytechnic State University

Meriam Service Award not awarded this year

Congratulations Everyone!

2010 Annual Business Meeting Minutes

Date, Time & Location: Wednesday, June 23, 2010, 12:30 PM, Kentucky International Convention Center

Attendees: Eric Bell, Lia Brillhart, Anna Dollár, Gary L. Gray, Jon-Michael Hardin, Ed Howard, Ing-Chang Jong, Jen Kadlowec, Scott Kiefer, Rungun Nathan, Shanam Navaee, Chris Papadopoulos, Andrew Pytel, Laura Ruhala, Brian Self, Jeigh Shelley

1. Welcome/Introductions (Gray)
2. Approval of 2008 Business Meeting Minutes (Gray, Hardin)
3. Report from Divisions Officers
 - a. Chair (Gray)
 - i. Laura Ruhala will chair the Membership Committee, with Rungun Nathan and Rich Ruhala as members.
 - ii. Rungun Nathan will chair the Awards Committee, with Brian Self and Ing-Chang Jong as members.
 - b. Program Chair (Dollár)
 - i. Good turnout (24 papers in 4 sessions). We will propose 5 sessions for next year; Jennifer Kadlowec suggested reserving a room for posters for 'overflow'.
 - ii. The Operating Manual is now being updated to correct several items from the old version that were no longer correct and to streamline format.
 - iii. It was proposed that to be eligible for "best presentation" there must be an associated paper; decision then is then made by the Awards Committee.
 - iv. It was clarified that "best paper" is initially judged by the results from the paper reviews. The program Chair can then forward the top five to the Awards Committee for its final decision.
 - v. The Awards Committee was asked to prepare a new set of guidelines to reflect its current practices. These will distributed by early August. The Executive Committee will review and approve these guidelines via email.
 - c. Program Chair-Elect (Hardin)
 - i. Reminder: Get Session Evaluation forms & head counts turned in ASAP
 - ii. Banquet had 31 tickets sold (30 in attendance); a net loss of \$174.
 - iii. Chris Papadopoulos suggested an increase in dues to subsidize the banquet. Lia Brillhart recalled that dues were originally for the purpose of printing the monographs. Anna Dollár suggested that we could use dues to publish the descriptions of the Demonstrations in the Demonstrations Session. Laura Ruhala had proposed that we videotape the demos and circulate to members only (she had proposed this last year as well); she volunteered to be the Demonstrations Session Chair. Rungun Nathan suggested contacting Pasco or another vendor to sponsor the session. Lia asked what we know about attendance at the meeting of Members.
 - d. Secretary (Papadopoulos)
 - i. Chris Papadopoulos will prepare proposed changes to the Bylaws by November.
 - e. Treasurer (Ruhala)
 - i. BASS \$8767, Operating \$565. Laura will place quarterly treasury reports on the Division Wiki.
 - f. Awards Committee (Nathan)
 - i. Summarized the previously discussed items regarding awards.
 - ii. Award winners are listed in the banquet program.

- g. Membership committee (Nathan)
 - i. Membership remained stable, with ~ 420 members
 - ii. Can we each try to attract one additional member?
 - iii. Laura Ruhala explained that ASEE will move to develop an “opt-out” system that will automatically re-enroll each Division Member each year unless he or she explicitly withdraws.
 - iv. Gary reminded that ASEE will count membership bi-annually and adjust contributions in proportion to membership.
- h. Archivist (Dollár)
 - i. Ralph Flori reported (via Anna) that his box of archives is missing. He will email people with institutional memory to search for old documents.
 - ii. Ing-Chang Jong mentioned that all of his historical contributions have been scanned and uploaded to the website.
- i. Webmaster (Dollár)
 - i. Joe Rencis could not attend.
 - ii. A new Wiki has been created for the Executive Committee.
- 4. Announcements and Appointments
 - a. Program Chair-Elect (Gray)
 - i. The Program Chair-Elect for 2010-2011 is Eric Bell. Jon Michael-Hardin is the new Program Chair.
 - b. Executive Committee Elections (Tongue)
 - i. Chris Papadopoulos and Laura Ruhala to Directorships for 2010-11 through 2013-14. Christine Masters was elected to fill a vacant Directorship for 2010-11 through 2011-12.
- 5. PIC III Report (Gray)
 - a. ASEE is developing a new website called Monolith to replace SmoothPaper.
 - b. The ASEE Conference is not a money-maker; cost-cutting decisions were made for 2010, including reducing the number of days for the exposition.
 - c. A national search is underway to replace Executive Director Frank Huband.
 - d. ASEE in the process of clarifying guidelines to accept submit papers, particularly for legal reasons.
 - e. The terms for the PIC Chairs will be extended from two to three years.
- 6. Old Business
 - a. The discussion of increased dues will take place during the next few weeks
- 7. New Business
 - a. Laura Ruhala asked if cancellations of presentation is or has been a problem in the Division. Gary Gray answered that it has not been a problem.
- 8. Other Business: None
- 9. Passing of the Banner (Gray)
- 10. Adjournment 2:00 PM (Gray)

2010-11 Mechanics Division Officers and Standing Committees

Chair: Anna Dollár, Miami University
(513) 529-1875, dollara@muohio.edu

Past Chair: Gary L. Gray, Penn State University
(814) 863-1778, gray@enr.psu.edu

Program Chair: Jon-Michael Hardin, Virginia Military Institute
(540) 464-7308, hardinj@vmi.edu

Program Chair Elect: Eric Bell, Triton College
(708) 456-0300 (x3349), ebell@triton.edu

Executive Committee Rungun Nathan, Penn State Berks (2007-11)

Directors: (610) 396-6170, rungun.nathan@psu.edu

Christine Masters, Penn State University (2010-12)
(814) 865.6674, cbm100@enr.psu.edu

Tom Nordenholz, California Maritime Academy (2008-12)
(707) 654-1114, tnordenholz@csum.edu

Luciana Barroso, Texas A&M University (2009-13)
(979) 845-0290, lbarroso@civil.tamu.edu

Christopher Papadopoulos, University of Puerto Rico, Mayagüez (2010-14)
(787) 832-4040 x3336, christopher.papadopoulos@upr.edu

Laura Ruhala, Southern Polytechnic State University (2010-14)
(678) 915-7315, lruhala@spsu.edu

Secretary: Christopher Papadopoulos, University of Puerto Rico, Mayagüez
(787) 832-4040 x3336, christopher.papadopoulos@upr.edu

Treasurer: Laura Ruhala, Southern Polytechnic State University
(678) 915-7315, lruhala@spsu.edu

Webmaster: Joseph Rencis, University of Arkansas
(479) 575-3386, jjrencis@uark.edu

Archivist: Ralph Flori, University of Missouri – Rolla
(573) 341-7583, reflori@mst.edu

Nominating Committee: Gary L. Gray (chair), Benson Tongue, Timothy Philpot

Membership Committee: Laura Ruhala (chair), Rungun Nathan, Rich Ruhala

Awards Committee: Rungun Nathan (chair), Brian Self, Ing-Chang Jong

Notes: Two Directors are elected at each annual Business Meeting for terms of four years. Directors who have served for at least one year are eligible to be elected as Program Chair Elect (and to serve consecutively as Program Chair and Chair). Secretary and Treasurer are ex-officio (non-voting) elected at each annual Business Meeting for terms of one year. Webmaster and Archivist are ex-officio (non-voting) and are elected for terms of one year. The Nominating Committee is specified to consist of the three most recent Past Chairs. The Membership and Awards Committee are appointed to serve for terms of one year.

Call for Award Nominations (Due by January 31, 2011)

Archie Higdon Distinguished Educator Award

The Archie Higdon Distinguished Educator Award is given annually by the Mechanics Division for distinguished and outstanding contributions to engineering mechanics education. The nomination package should include the following:

1. A letter of nomination and no more than four accompanying letters of support which delineate the nominee's contribution to mechanics education,
2. Nominee's curriculum vitae.

The award consists of a plaque to be given at the annual Mechanics Division Banquet and early registration for the ASEE Annual Conference along with registration for the Mechanics Division Banquet.

Ferdinand P. Beer and E. Russell Johnston, Jr., Outstanding New Mechanics Educator Award

The Ferdinand P. Beer and E. Russell Johnston, Jr., Outstanding New Mechanics Educator Award is given annually to up to two individuals (contingent to availability of funds) who have shown a strong commitment to mechanics education. The winners are selected on the basis of their exceptional contributions to mechanics education. Individuals who have no more than five years of academic experience past their first regular academic appointment are eligible. The nomination package should include the following:

1. A letter of nomination which delineates the nominee's contribution to mechanics education and no more than two additional letters of support,
2. A one-page letter from the nominee describing his or her personal philosophy regarding mechanics education,
3. Nominee's curriculum vitae.

The award consists of a \$200 cash prize, a plaque to be awarded at the Mechanics Division Banquet, and early registration for the ASEE Annual Conference along with registration for the Mechanics Division Banquet and Business Meeting Luncheon.

Mechanics Division James L. Meriam Service Award

The Mechanics Division James L. Meriam Service Award may be given annually to recognize significant service to the Mechanics Division as characterized by notable leadership, significant contributions, and prolonged and dedicated service. Candidates for the award must be members of the Mechanics Division and must have served the Division for a minimum of ten years. No individual may receive the award more than once, and members of the Division's Awards Committee are not eligible for the award until two years after completing their service on that committee. Nominations may be made by all members of the Mechanics Division except for those members serving on the Division's Awards Committee. Each nomination package must include the following:

1. A chronological listing of the candidate's service to the Division,
2. A narrative statement detailing the significant elements of the service.

The award consists of a plaque to be given at the annual Mechanics Division Banquet and early registration for the ASEE Annual Conference along with registration for the Mechanics Division Banquet.

Attendance at the ASEE Annual Conference is required for the awardees. Nominations are due by **January 31, 2011**.

Point of contact for submission of nominations or for additional information is Dr. Rungun Nathan, Division of Engineering, Penn State Berks, 225, Luerssen Building, 2080 Tulpehocken Road, Reading, PA 19610-6009; telephone: 610 396 6170; fax: 610-396-6124. Electronic submissions is preferred and will be accepted by sending the nomination materials to rungun.nathan@psu.edu.

Dear Mechanics Division Colleague,

Could you please pass this to a friend or colleague and help us in recruiting them as a new member. Thank you so much for your help?

Rungun Nathan
(Chair, Membership committee)

AMERICAN SOCIETY OF ENGINEERING EDUCATION
**** MECHANICS DIVISION ****

Dear Colleague:

On behalf of the ASEE Mechanics Division, I invite you to become a member of the Division. The Mechanics Division strives to disseminate developments and trends in mechanics to engineering educators and to foster interest in mechanics as a discipline, and has the following objectives:

- Provide a formal organizational structure to promote, encourage, and facilitate ASEE activities pertaining to mechanics education;
- Provide a forum for discussion and exchange of ideas, opportunities, and challenges pertaining to mechanics education and technology;
- Disseminate knowledge concerning mechanics teaching and learning; and
- Recognize and encourage teaching excellence and scholarship related to mechanics

The Mechanics Division is also establishing closer ties with other synergistic groups, such as the ASEE Mechanical Engineering and Civil Engineering Divisions, the Applied Mechanics Division of ASME, and the Engineering Mechanics Division of ASCE. Annual membership dues are \$2 and are used to fund Division activities such as awards and general operational expenses, but *dues are waived for the first year for new members*.

If you are interested in joining the Division, please complete the information requested on the next page and send it by email to rungun.nathan@psu.edu or by regular mail (the form on the next page is formatted for mailing). Once you are a member, you will receive information regarding Division activities and resources. We look forward to hearing from you!

Sincerely,

Rungun Nathan
Penn State - Berks
Chairman of the ASEE Mechanics Division Membership Committee

Fold Here

Add
Postage

Professor Rungun Nathan
Penn State - Berks
Tulpehocken Road, P.O. Box 7009
Reading, PA 19610

RE: Mechanics Division Membership Application

Fold Here

Name (Include Title): _____
Department: _____
University/Company: _____
Address: _____
Office Phone #: _____
FAX #: _____
E-mail: _____

Send Division Information (check one): _____ US Mail _____ E-mail (*Preferred*)