



# Mechanics Division

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## NEWSLETTER

Fall 2007

Chair: Tim Philpot  
Secretary: Phillip Cornwell

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

### Message from the Chair

I would like to extend greetings to each of you on behalf of the ASEE Mechanics Division Officers. I hope your summer was productive and enjoyable and that your classes and other endeavors are going well this semester.

The 2007 Annual Conference in Honolulu was very successful, and being in Hawaii was enjoyable in so many ways. The Mechanics Division sponsored four technical sessions at the Honolulu conference, and in collaboration with the Mechanical Engineering and Civil Engineering divisions, we co-sponsored three additional sessions focused on innovations in the introductory mechanics courses. Twenty-six papers were accepted to appear in the technical sessions and in the conference proceedings, and all of our sessions were well attended. I would like to thank all of our authors, presenters, and our session moderators (Shahnam Navee, Tom Nordenholz, Autar Kaw, Phillip Cornwell, and Doug Carroll) for their gracious service, and I'd especially like to thank Christine Masters, last year's chair, for the leadership she provided to the division in 2006-2007.

At our annual Mechanics Awards Banquet, we were privileged to have Professor Dennis Lieu of the University of California – Berkeley speak to us about engineering graphics. Many awards were given out, and you can find a complete list of these awards on the ASEE Mechanics Division web site, located at <http://comp.uark.edu/~jjrencis/aseemechanics/>. Check it out! This site is maintained by Joe Rencis, our friend, colleague, and past chair of the division. Thanks, Joe!

Our business and the executive committee meetings were well attended in Honolulu. Thanks to all of you who attended and contributed to these meetings. And, please do keep coming to these meetings, as you are bound to find some of the nicest and friendliest mechanics people there!

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

**Tim Philpot, 2007-08 Mechanics Division Chair**

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### Mechanics Education Wish List / Research Ideas / Clearinghouse of Suggestions

In this issue of the Mechanics Division newsletter, I would like to initiate a new feature called the **Wish List**. Everyone who teaches the mechanics courses would like to improve their instruction and spice up their courses. I propose that we start informally collecting some ideas and suggestions pertaining to Statics, Dynamics, and Mechanics of Materials and then circulating this Wish List by means of the newsletter. These wishes could be big projects or something as simple as "I would like a straightforward statics machine analysis problem involving something other than pliers, vise-grips, or bolt cutters."

If we start sharing some ideas, we might find that other Mechanics Division members have already developed the thing that we were looking for. Or, we might give new (or even old) faculty members some ideas for research projects that will bring new and effective enhancements to our courses. Send your ideas to me at [philpott@umr.edu](mailto:philpott@umr.edu) and let's give this a try. Thanks, **Tim**.

## Message from the 2008 Mechanics Division Program Chair

Hi everyone:

With October upon us, the clock is counting down to October 19. This is the deadline for submitting an abstract to the 2008 Annual Conference & Exposition. If you're procrastinating- now is the time to stop and send your abstract in. Operators are standing by to take your submission! Just go to

<http://www.asee.org/conferences/annual/2008/Call-for-Papers.cfm>

for detailed information regarding the whole abstract and paper submission process. Complete information on how to access and submit via SmoothPaper is provided in the Author's Kit. And, if when you try and access the site all you see is "here" in the upper left corner of the screen - click that. This is the ASEE's secret way to keeping out Safari users but now you know the secret for defeating that plan. See you in Pittsburgh!

**Benson Tongue, Program Chairman - [bht@saber.net](mailto:bht@saber.net)**

## Call for Award Nominations (Due by January 31, 2008)

### 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 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 three individuals 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 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 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 (in triplicate) by **January 31, 2008**.

Point of contact for submission of nominations or for additional information is Dr. Lia V. Brillhart, 252 Gage Road, Riverside IL 60546, phone 708-442-7725, or URL: <http://comp.uark.edu/~jjrencis/aseemechanics/>. Electronic submissions will also be accepted by sending the nomination materials to [lvbrillhart@sbcglobal.net](mailto:lvbrillhart@sbcglobal.net).

## **Post Conference Notes**

### **Mechanics Division - 2007 ASEE National Conference in Oahu Hawaii**

#### **Best Paper Award**

"A Web-Based Electronic Book (Ebook) for Solid Mechanics," Kurt Gramoll, Univeristy of Oklahoma

#### **Best Paper Presentation Awards**

##### **Session 1368 – What's New in the Mechanis of Materials?**

Julie Linsey, "From Tootsie Rolls to Composites: Assessing a Spectrum of Active Learning Activities in Engineering Mechanics"

##### **Session 1568 – Innovative Mechanics Education Programs and Projects**

William Howard, "An Introductory Engineering Design Project Utilizing Finite Element Analysis and Rapid Prototyping"

##### **Session 2268 – Internet Delivery of Mechanics Courses**

Kurt Gramoll, "A Web-Based Electronic Book (Ebook) for Solid Mechanics"

##### **Session 2468 – Improving Mechanics Courses**

Madhukar Vable, "MOM in Action"

##### **Session 3168 – Innovative Teaching Techniques in Mechanics**

Rick Williams, "A Versatile and Economical Apparatus for Experiments in Statics"

##### **Session 3666 – What's New in Dynamics?**

L. Glenn Kraige, "Animation Software for Upper-Level Dynamics and Vibration Courses"

#### **Overall Best Paper Presentation in the Mechanics Division**

Kurt Gramoll, "A Web-Based Electronic Book (Ebook) for Solid Mechanics"

**Congratulations to everyone!!**

# Annual Business Meeting Minutes (draft)

Minutes – ASEE Mechanics Division  
Business meeting minutes  
Wednesday, June 27, 2007, 12:30 PM  
Hawaii Convention Center

Attendees: Jennifer Kadowec, Phil Cornwell, Rungun Nathan, Christine Masters, Rich Ruhala, Laura Ruhala, Tim Philpot, Michael Hardin, Mark Holdhusen, Elliot Eisenberg, Nancy Denton, Karim Muci, Tom Nordenholtz, Shahnam Navaee, Junlan Wang, John Wood, Benson Tongue, Brian Self, Adrian Lew, Chris Papadopoulos, Scott Danielson, Ing-Chan Jong

1. Welcome/Introductions (Masters)
2. Approval of 2006 Business Meeting Minutes (Masters)
3. Report from Divisions Officers
  - a. Program Chair (Tim Philpot)
    - i. 42 abstracts were submitted and 26 of these were accepted to appear in the proceedings.
    - ii. 75 mechanics division members volunteered to review abstracts.
    - iii. 7 sessions (5 mechanics division sessions, 1 joint session with the ME division and 1 poster session)
  - b. Program chair-elect (Tongue)
    - i. Next year's conference is in Pittsburg.
    - ii. Anybody with interesting different types of sessions should send ideas to Benson.
      1. There was a suggestion to have a panel session of well known mechanics educators. There was a question about publish to present for panel sessions.
      2. There was a suggestion to have a session where there a lot of short demos/hands-on ideas.
    - iii. Volunteers were requested for reviewing papers.
  - c. Secretary (Masters)
    - i. Phil Cornwell elected by acclamation to this position.
  - d. Treasurer (Self)
    - i. The division is in fine financial shape.
    - ii. Sponsor income \$2250.00
    - iii. Award expenses \$3744.10
    - iv. BASS account started year at \$6783.45 and should end around \$5468.70.
  - e. Awards Committee (Denton)
    - i. Committee report distributed and call for nominations.
    - ii. Cary Fisher chosen for the Archie Higdon Distinguished Mechanics Educator Award
    - iii. Adrian Lew, Junlan Wang, Wenbin Yu winners chosen for the Beer and Johnston Outstanding New Mechanics Educator Award Outstanding New Mechanics Educator Award.
    - iv. James L. Meriam Service award not awarded.
    - v. Best Presentation of the 2006 ASEE Annual Conference awarded to Thomas Nordenholtz
    - vi. Best paper for the 2007 ASEE Annual Conference awarded to Kurt Gramoll.
    - vii. There was a good pool of candidates. Nominees are automatically considered the following years.
    - viii. Elliot selected as ASEE fellow.
    - ix. Information about awards is online.
    - x. Lia Brillhart will be chair next year
  - f. Membership committee (Nathan)
    - i. Same report as executive committee meeting.

- ii. Currently there are 425 members.
    - iii. Laura Ruhala volunteered to chair the membership committee next year.
    - iv. Michael Harden volunteered to serve on membership committee.
  - g. Division Web site (Rencis)
    - i. A snapshot of website was passed out.
    - ii. Educational links are still desired.
    - iii. Monographs have been put on the website.
    - iv. A new committee to look at “monograph” section of website and decide what we might do with this idea was formed. Committee members include Nancy Denton, Rungun Nathan, and Chris Papadopoulos.
- 4. Announcements and Appointments
  - a. Program Chair-Elect (Masters)
    - i. Language in by-laws changed. Anybody on the executive committee is eligible to enter the leadership track.
    - ii. Program Chair-Elect for 2007-2008 is Gary Gray.
  - b. Executive Committee Elections (Kadlowec)
    - i. Nominees for two positions on the Executive Committee are John Harden and Rungun Nathan. Motion to accept these nominations by acclamation was passed.
  - c. Standing Committees (Masters)
    - i. A sign-up sheet for standing committees was passed around.
- 5. PIC Report (Masters)
  - a. Bylaw revisions to be done every 10 years
  - b. Statistics for this conference: 1600 papers, 1500 authors, 3000 registered for conference. There are currently about 13000 ASEE members.
  - c. There is concern over low participation in officer elections. Anybody with ideas should pass them on to Christine or Jennifer.
  - d. ASEE is considering eliminating the Emerging Trends session.
- 6. PIC Chair Report (Kadlowec)
  - a. None
- 7. Old Business
  - a. By-Laws Revisions
    - i. The new bylaws were approved (see attached).
    - ii. It was proposed to put all the changes in one place and to sent them out to executive committee members.
    - iii. A motion was made and passed that the Executive Committee be granted authority to make any necessary editorial corrections (not substantive) to the bylaws that may be discovered.
  - b. Monographs – Ad-Hoc committee to develop criteria was formed (see above.)
  - c. Librescu Award
    - i. A proposal was made for a new award in honor of Professor Librescu from Virginia Tech. The award would be for a physics/math K-12 educator who helps bring students into mechanics. It was proposed that the educator come from the geographical region of that year’s ASEE Annual Conference. Geographically restricting an award is an issue with ASEE and this proposal is currently being examined.
    - ii. Awards committee is to come up with a first draft of this idea along with other ideas. Glenn Kraige and Brian Self also volunteered to help. It might need to get a financial sponsor for this award.
- 8. New Business
  - a. Hands-on-Mechanics challenge to members
    - i. Mechanics division members were encouraged to submit materials to the Hands-on-Mechanics website.

- ii. The Chair also proposed encourage the ME and CE divisions to put information on this website in their newsletters.
  - b. Mechanics Division Banner. It was proposed to have a design competition to have a convenient way to display the Mechanics Division banner for the ASEE picnic. The winner gets mentioned in the newsletter.
9. Other Business
- a. None
10. Passing of the Banner (Masters)
11. Adjournment 2:00 PM (Philpot)

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Add  
Postage

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

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**2007/2008 MECHANICS DIVISION OFFICERS**

- Chair:** Timothy Philpot, University of Missouri – Rolla  
(573) 341-4285, [philpott@umr.edu](mailto:philpott@umr.edu)
- Past Chair:** Christine Masters, Penn State University  
(814) 865-6674, [cbm100@psu.edu](mailto:cbm100@psu.edu)
- Program:** Benson H. Tongue, University of California, Berkeley  
(510) 643-8629, [bhtongue@me.berkeley.edu](mailto:bhtongue@me.berkeley.edu)
- Program Chair Elect:** Gary Gray, Penn State University  
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- Secretary:** Phillip Cornwell, Rose-Hulman Institute of Technology  
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