

**AMERICAN SOCIETY OF MECHANICAL ENGINEERING**  
**APPLIED MECHANICS DIVISION**  
**Committee on Uncertainty & Probabilistics (COUP) Meeting**  
**November 18, 2003**  
**Washington, DC**

**Minutes**

**Time:** November 18, 2003, Tuesday, 1:30 pm-3:30 pm

**Attendance:** Mohammad Noori (Chair, North Carolina State Univ), Lori Graham-Brady (Vice Chair, Johns Hopkins Univ), Marc Mignolet (Arizona State Univ), Soheil Saadat (North Carolina State Univ), Mohammad Modarres (Univ of Maryland), Jason Pepin (Los Alamos National Labs), Bernard Grossman (NASA NIA)

**1. Welcome and Introduction**

The first formal meeting of COUP was introduced by Chair, Mohammad Noori.

**2. Approval of COUP Operational Rules**

With 7 members in attendance, the operational rules included at the end of this document were approved unanimously.

**3. Overview of NIA program**

Bernard Grossman provided an overview of the NIA program, which represents a new model for university/industry/government integration. For those who would like to find out more about the NIA program, **please visit:**

<http://research.nianet.org/%7Egrossman/presentations.html> and click on NIA Overview Nov. 03.

**4. Overview of NASA Safety Program**

Bernard Grossman provided an overview of the NASA Safety Program. A copy of this presentation is available upon request.

**5. Discussion Regarding Future of COUP**

Future activities of the COUP committee were discussed at length. A few action items were agreed upon:

- The COUP committee will co-sponsor sessions at the ASCE Probabilistic Methods Specialty Conference, with the ASCE EMD Probabilistic Methods committee. For more information on these sessions, contact Mohammad Noori (mohammad\_noori@ncsu.edu) or Lori Graham-Brady ([lori@jhu.edu](mailto:lori@jhu.edu)).

- A list of COUP members and their contact information will be added to the COUP website that is now available under the Applied Mechanics website: <http://www.asme.org/divisions/amd/committees/techcomm.html>
- The next meeting of the COUP committee will be decided by a poll of members in order to optimize committee meeting attendance. The ASME IMECE does not appear to be the ideal mechanism for attracting the majority of our members; therefore, alternative meetings will be proposed. Any members who wish to express a preference early, please contact Mohammad Noori ([mohammad\\_noori@ncsu.edu](mailto:mohammad_noori@ncsu.edu)) or Lori Graham-Brady ([lori@jhu.edu](mailto:lori@jhu.edu)). Some options discussed were (1) the biennial ASME vibrations conference that could be alternated yearly with a ASME mechanics/materials meeting; (2) the AIAA/SAE forum on Nondeterministic Methods, which occurs annually in April; (3) the ASCE Specialty Conference on Probabilistic Methods. Unfortunately, there does not seem to be an annual meeting within ASME that would suit all committee members, other than IMECE. Suggestions from the committee membership are more than welcome.
- The Chair and Vice-Chair will contact Bob McMeeking of the *Journal of Applied Mechanics* to see how COUP can be more directly linked to the journal review process for papers relevant to COUP activities.

## Appendix 1: ASME COUP OPERATIONAL RULES

Technical Committee

The Committee on Uncertainty and Probabilistics (COUP) of the Applied Mechanics Division of the American Society of Mechanical Engineers.

### 1. Purpose of the Committee

The COUP of the Applied Mechanics Division (AMD) of the American Society of Mechanical Engineers (ASME) exists to promote, support and advance the state of the art and science of Applied Mechanics in the area of modeling the uncertain behavior of materials, structures and processes. The committee's interests cover the area broadly and include relevant physical phenomena, theoretical and mathematical problems, constitutive modeling issues, experimental aspects, numerical modeling, and computational validation, among others. In addition to efforts in advancing the state of the art in traditional applications of uncertainty quantification and probabilistic methods, the committee also seeks to demonstrate the important role of these techniques in multi-disciplinary and emerging technology areas, such as Structural Health Monitoring, Advanced Materials, MEMs, Controls, Structure Media Interactions, and Environmental Problems. To fulfill this role the Committee will:

- A. Encourage the presentation and publication of substantive papers in the area of uncertainty quantification and probabilistic mechanics principally by sponsoring symposia at ASME meetings and publishing the associated technical content in bound symposia volumes. The committee will promote and solicit participation from the community for publishing in the *Journal of Applied Mechanics*, *Probabilistic Engineering Mechanics*, and the on-line journal *Uncertainty in Engineering Mechanics*, as the main journals representing the scope of the new committee. Joint sponsorship of symposia with other groups within the AMD, within the ASME, and with appropriate outside groups is also encouraged.
- B. Highlight special needs and advances by promoting presentations, publications and panel sessions on selected topics in uncertainty and probabilistics.
- C. Serve as a focal point in the AMD and the ASME for uncertainty and probabilistics in the engineering community at large.
- D. Develop liaisons with other divisions of the ASME, and with corresponding committees of other national and international engineering and scientific societies.
- E. Maintain and support ASME recognition of the contributions to applied mechanics of engineers and scientists working in the subject area; this is principally accomplished through the recommendation of special and general lectures at ASME meetings and through the nomination of selected individuals for ASME awards, including elevation to the rank of Fellow of the Society.

## 2. Committee Members

Members of the committee are members of the ASME from academia, industry, and government who support the purpose and activities of the COUP. Members are appointed by the Chair of COUP for a 2-year term. This term is renewable for an indefinite number of terms, at the Chair's discretion. Appointment to membership rests on the nomination of a candidate by an active member of the committee based upon the excellence of the nominee's contributions to the field. The nominee must furnish a current vitae in demonstration of accomplishments in the field for review by the Chair. Nominations for membership from Committee members must be presented in writing to the Committee Chair; however, no person may be nominated without that person's consent.

## 3. Officers

The COUP is served by two officers: a Chair and a Vice-Chair. The term of service for the Chair will be two-years (renewable for one additional term). Upon the expiration of the term of service for the Chair, the Vice-Chair will assume the position of Chair and a new Vice-Chair will be elected. Therefore, every two years, only one election will be carried out for on elected officer. The professional development and other logistical matters will be handled by appointing other member(s) for these "special" tasks. The Vice-Chair is elected every two years from among the committee membership (including the ex-officios) during the ASME International Mechanical Engineering Congress & Exposition (IMECE). The term of office for either position runs from July 1 of the year immediately following the election (i.e. approximately 6.5 months after the election) through June 30 two years later. Nominations for the Vice Chair are accepted from Committee members at appropriate IMECE. A nominee is elected Vice Chair/Secretary when he/she receives a majority of the votes cast on written ballots by the committee members present. If more than two nominees are involved and no nominee receives a majority vote, the nominee with the smallest number of votes drops out of the election and a new vote is taken; this process repeats until a nominee receives a majority of votes. The result of the election must be conveyed to the Secretary of the AMD Executive Committee.

### Chair Duties

A. Calling and conducting all committee meetings. Notifying all members of a regularly called committee meeting by letter/email at least four weeks in advance of the meeting; this letter shall be accompanied by an agenda for the forthcoming meeting (including time and date) and a copy of the minutes for the most recent meeting.

B. Representing the COUP at meetings of the AMD General and Program Committees.

C. Providing a list of current COUP members to the AMD Executive Committee at each IMECE.

D. Ensuring that the COUP maintains an adequate and active membership through timely election and re-election of members.

E. Monitor committee activities and motivate committee members to perform dependably and enthusiastically.

### **Vice-Chair Duties**

A. Recording attendance and taking minutes at each meeting, forwarding same to the Chair within two weeks, incorporating the Chair's additions and corrections where appropriate, and distributing the minutes to the members.

B. Maintaining a current list of all COUP members and associates, their addresses, telephone numbers and email addresses.

C. Maintaining committee records and transferring them to the newly elected Vice-Chair during the transition from Vice-Chair to Chair.

D. Acting for the Chair when the Chair is absent from a meeting.

If either officer is unable to complete his/her term of office, the other officer automatically fills both positions until the next regularly called meeting.

### **4. Meetings**

The chair of the COUP calls a regular meeting during each ASME IMECE. He/she may also call special meetings as required. As a minimum, the agenda of a regularly called meeting includes:

A. Reading of the minutes (including attendance) for the previous regularly called meeting.

B. Consideration of new and continuing members.

C. Election of a new Vice-Chair (when required).

D. Review of current performance regarding Activities A-E listed in Section 1 of this set of Operational Rules.

### **5. Revisions of Operational Rules of Committee**

This Operation Manual takes effect on January 1, 2002. It may be revised after that date at any regularly called meeting of the committee by two-thirds vote of the members present. Such revision is subject to approval of the AMD Executive Committee.