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## **MINUTES OF THE SPRING 2003 MEETING**

Date: Sunday, March 2, 2003

Time & Place: 10:00 a.m.  
Room 1047 ERF Building  
842 W. Taylor Street  
University of Illinois at Chicago

Present: Members and Ex-Officio  
Bergman, Banerjee, Chen, Clark, Dohner, Dyke, Feeny, Flowers, Hamidzadeh, Han,  
Luo, Parker, Raman, Rahn, Raman, Royston, Shabana, Tan

Non-Members  
D. Lewicki, S. Sinha

Han (TCVS Chair) called the meeting to order at 10:00 a.m. Each of those in attendance introduced himself/herself.

### **1. Approval of Minutes**

A motion was made and seconded to approve the minutes (as corrected) of the Fall 2002 meeting. The minutes were approved.

### **2. New Business**

#### **a) Proposed Formation of the Technical Committee on Multibody System Dynamics (TCMSD) - (Han)**

There was considerable discussion of the reasons for the formation of this new technical committee and its impact on TCVS activities. The former name (CADYN - Committee on Computational and Analytical Dynamics) was changed because it was felt that it was too close to TCVS. Shabana indicated that the new committee will conduct a biennial conference that will be part of the odd-year IDETC. He also indicated that, if ASME decides not to support the new committee, a similar committee will be proposed under the auspices of International Federation of Theory of Machines and Mechanisms (IFTOM).

A motion was made and seconded to support the creation of the Technical Committee on Multibody System Dynamics (TCMSD). This support will be in the form of a letter sent to the upcoming DED meeting by the TCVS chair. The motion was passed. A letter was prepared and signed by the TCVS chair, Han.

Han introduced the idea that TCVS should consider updating the committee name. There was some discussion on this topic and it was tabled for further consideration under new business.

#### **b) Report on TCVS budget (Clark)**

Clark has received no requests for reimbursement for committee related expenses since the last meeting. \$500 has been given to the TCVS custodial fund from DED. Hereafter, TCVS will have

its own discretionary fund and will not receive any funds from DED. TCVS funding will come primarily from the Vibrations Conference. Any requests for reimbursement (such as copying and mailing costs) should be sent to the Vice-Chair (Clark).

Some money from each Vibrations Conference goes into accounts for the den Hartog and Mykelstad Awards. The den Hartog Award is a DED award and the Mykelstad Award is a TCVS award. Clark was requested to send an email to the membership detailing the amount in each account and how much is needed to upgrade the den Hartog Award to the level of the Timoshenko Award.

**c) Report on IMECE 2002 and 2003 (Rahn)**

The Technical Committee on Vibration and Sound sponsored the following three symposia (12 sessions total) at IMECE 2002:

1. Dynamics, Acoustics, and Simulation  
Organizers: Han, Luo, and Hamidzadeh – 8 sessions.
2. 5<sup>th</sup> International Symposium on FSI, AE & FIV+N  
Organizer: Michael Paidoussis – 3 sessions
3. Active Control of Vibration and Noise  
Organizers: Tzou, Tan, and Jalili – 1 Session

TCVS is currently sponsoring or co-sponsoring four symposia at IMECE 2003. DED provided an initial allocation of twelve sessions that have been divided up as follows:

1. Vibration and Control of Mechanical Systems I, II, III, IV, and V (5 sessions + 1 reserve)  
Organizers: Hamidzadeh, Rahnejat, and Luo  
Current Status: 40 abstracts accepted
2. Nanoscale Dynamics, Sensing and Control I, II, and III (3 sessions)  
Co-Sponsor: DSC; Organizers: Raman, Sitti, and Horowitz  
Current Status: 5 abstracts accepted
3. Nonlinear Dynamics in Mechanical Systems I, II, and III (3 sessions)  
Organizers: Flowers, Wang and Zu  
Current Status: 8 abstracts accepted
4. Active Control of Vibration and Noise (1 session + 1 reserve)  
Co-Sponsor: AMD and DSC; Organizer: Tan  
Current Status: 2 abstracts accepted

For the first time, ASME is requiring all authors and organizers to use the ASME web-based conference tool for IMECE 2003 at <http://www.asmeconferences.org/congress03/>. Although the latest ASME deadline for abstract submission (Feb 21) has passed, abstracts will continue to be accepted at the IMECE site. By the end of March, Krishna Gupta, the DED representative, will do an internal reallocation of sessions within DED, possibly canceling sessions with less than 3 abstracts. After March, TCVS may get additional sessions that were unused by other Divisions/Groups.

The allocation of IMECE sessions to TCVS appears to have become more consistent over the past few years. Albert Luo was complimented for his consistent efforts in organizing symposia for the IMECE.

**d) Report on IDETC 2003 (Shabana and Royston)**

A report describing the paper counts for each of the IDETC 2003 conferences was distributed. The Vibrations Conference has 310 papers and one 1.5 hour panel request. The total count for IDETC 2003 is 985 and three panel sessions. Royston reported that these numbers were up from IDETC 2001 and on a similar level with IDETC 1999. He requested nominees for the plenary speakers. The registration fee will be \$490 for advanced full registration. This is a slight increase over 2001.

Parker commented that it is quite possible that a significant profit will be made from this meeting. Banerjee suggested that the effect on attendance of increasing registration be assessed. Concerned was also expressed with regard to vibration areas that were not represented by the 2003 symposia and the lack of advertising by ASME.

Additionally, Shabana and Royston reported that:

1. The deadline for paper submission was extended to February 14, 2003.
2. The ASME Engineering Technology & Management group (ET&M) will participate in the 2003 DETC's. ET&M will sponsor one session and two tutorials.
3. Some conferences and committees already provided topics for tutorials with names of tutorial lecturers. The plan is to have four tutorials on Tuesday, September 2 (afternoon); and four tutorials on Saturday, September 6 (morning).
4. The use of the ASME web tool for paper submission has been discussed, and it was agreed not to use the web tool for the 2003 DETC's.

**e) Report on IDETC 2005 (Hamidzadeh and Luo)**

Hamid Hamidzadeh and David Lee (of CIE) will jointly chair the meeting. Albert Luo will serve as the program chair. The site that has been selected is Long Beach, CA. A detailed report is attached.

**f) Report on Proposal for IDETC 2007 (Han)**

H.S. Tsou has submitted a letter of intent to serve as chair for the IDETC 2007. Several possible locations were discussed, including Orlando, Florida.

**g) Report on Design Show (Dohner)**

TCVS will sponsor one session at the National Manufacturing Week, Design Show Conference next year. This session will be entitled,

Mesh Generation: Theory and Application for the practicing engineer.

By John Chawer  
President of Pointwise, Inc.

And Steve Owens  
Member of the Technical Staff  
Sandia National Laboratories

This session will provide a brief overview of some of the fundamental mesh generation algorithms and techniques used in today's commercial CAE tools. It will also contain information on how these tools may be used to solve current engineering problems.

**h) Report on Journal of Vibration and Acoustics (Bergman)**

A detailed report was distributed by Bergman. Points that were highlighted are:

- Jerry Ginsberg and George Flowers have each agreed to serve a second term as associate editors. H. S. Tzou declined to serve a second term and Charles Farrar stepped down early.
- Robert Clark, Alexander Vakakis, and Bingen Yang completed their second terms on December 31.

- Shirley Dyke, John Main, Robert Parker and Dane Quinn have been nominated and approved as new associate editors.
- The journal currently has 20 papers in its backlog.
- Gordon Kirk, Karl Grosh, and Ahmed Shabana will each guest-edit special issues.

**i) Liaison Reports**

The TCVS Liaison for each group is given in parentheses.

*Noise Control and Acoustics Division (Grosh)*

Karl Grosh could not attend the meeting but indicated that he had nothing to report with regard to NCAD.

*Applied Mechanics Division – Dynamic Systems and Structures Committee (Luo)*

Albert Luo stated there was nothing new to report.

*Applied Mechanics Review – (Pierre)*

Christophe Pierre could not attend the meeting. He submitted a written report.

- 1) The AMR Abstracts Database has been split from the Journal
- 2) Both the Database and the Journal are now available on-line
- 3) Although, the number of subscriptions continues to decline by about 50 per year, the AMR operation realized a \$5000 surplus. The primary challenge to AMR remains how to make it attractive to a broader readership.

*Aerospace Division--Adaptive Structures Committee (Wang)*

Wang was unable to attend. He submitted a written report. The AS Committee is sponsoring 4 smart structure conferences this year: SPIE, AIAA-ASME/SDM, ICAST, ASME/IMECE. We (TCVS) have good collaboration with the AS Committee in the past, especially during ASME/IMECE. Although there is no need/plan for formal joint sessions this year, members of the two committees have been participating in each other's conferences as individual participants.

*Design Engineering Division – Power Transmission and Gearing Committee (Parker)*

The major activity of the PTGC is the planning of the September conference. 162 papers have been submitted. There is a plan to take a survey of PTG submissions and cross-list those with the VIB papers for the upcoming IDETC 2003.

Parker will be cycling off of TCVS but will continue work on developing collaboration between TCVS and PTGC.

*DED International Activities Committee (Dyke)*

1. The International Activities Committee of the Design Engineering Division is planning to hold a second symposium as part of the 2004 International Design Engineering Technical Conference in Utah. The first such symposium was held in Pittsburgh in 2001. These will be held in even numbered years from now on.
2. A new international society known as the "Design Society" is being formed to oversee ICED (next one in Stockholm in August 2003) design conferences. ASME will participate as a cooperating society.
3. The committee has agreed to continue its support of ICED (International Conference on Engineering Design), MOVIC (Motion and Vibration Control), and SEED (Sharing Experiences

in Engineering Design).

**j) Report on TCVS Web Page Development (Raman)**

Chris Rahn has been upgrading and uploading TCVS minutes to the website. The website has been updated and revised.

**k) Industrial Subcommittee (Dohner, Banerjee, and Chen)**

The Industrial Subcommittee is considering making changes to its mandate. It will report on its recommendations in that regard at the next meeting. Banerjee will be cycling off the Industrial Subcommittee and becoming a friend. Appreciation was expressed for his efforts on behalf of TCVS.

**l) Report from CADYN Subcommittee (Royston and Shabana)**

1. The subcommittee "Computational and Analytical Dynamics" (CADYN) was formed as a subcommittee of the Technical Committee on Vibration and Sound in the Spring of 2002. The recommendation of forming this subcommittee was made by the DED Executive Committee at the 2002 March meeting in Chicago. The members of the Executive Committee recommended submitting a proposal to form a new technical committee on multibody system dynamics after one year. The proposed new committee will sponsor a new international conference on multibody system dynamics.

2. The goals of forming CADYN were defined as follows:

- I. Organize and maintain the success of the Symposium on Multibody Dynamics and Vibration.
- II. Explore the possibility of establishing a journal in this area.

3. The members of CADYN are:

Tom Royston	(Chair)
Ahmed Shabana	(Co-Chair)
Bahram Ravani	
Werner Schiehlen	
Subhash Sinha	

4. It is expected that the Fourth Symposium on Multibody Dynamics and Vibration will be more successful than the previous ones. Papers with excellent were received.

**m) Report from ASME Fellow Nominating Subcommittee (Wang)**

Wang was unable to attend. He submitted a written report.

A couple of potential candidates have been identified and will start the nomination process late spring/early summer.

**l) Other new business.**

a) Subcommittee on Micro- and Non-scale Systems (Ray and Raman)

Arvind Raman discussed the current activity in this area and the motivation for establishing this subcommittee. It was noted that DED has three other subcommittees planned in this area. It is quite possible that this subcommittee will be a full-fledged technical committee within DED within the next year.

b) Name change for TCVS (Ray)

Bergman endorsed the concept changing the committee's name to more adequately represent the major interests of the committee. He noted that the committee activities were typically more structural acoustics rather than sound. The name of the journal will not be changed from the Journal of Vibration and Acoustics at the present time. However, the discussion focussed on the lack of committee activity in the acoustics and sound area. Due to a lack of time, further discussion was deferred until the next meeting. Han and Bergman will work together to develop a proposal for the next (Fall 2003) TCVS meeting.

**3. Old Business.**

None.

**4. Election of New Members**

The committee met in a closed session to discuss the candidates and vote.

Shi-Emn Chen, Hamid Hamidzadeh and Thomas Royston were each re-elected to a second term as members of TCVS. George Flowers remains a member by virtue of being TCVS secretary. Bappa Banerjee, Robert Parker will be cycling off of TCVS, having completed two terms. They were thanked for their service to the committee.

Edward Berger, Malcolm Crocker, Zaichun (Frank) Feng and I.Y. (Steve) Shen were each elected as new members of TCVS.

**5. Election of the 2003 J.P. den Hartog and N.O. Myklestad Awardees**

The committee met in a closed session to discuss the candidates and vote.

After extensive discussion, the committee selected Professor Vinod Modi as the recipient of the 2003 den Hartog Award (to be awarded posthumously) and Professor Y. K. Cheung as the recipient of the 2003 N.O. Myklestad Award.

The meeting was adjourned at 12:15 p.m. A luncheon sponsored by the Department of Mechanical Engineering of the University of Illinois at Chicago followed the meeting.

**REPORT ON**  
**2003 DESIGN ENGINEERING TECHNICAL CONFERENCES**

September 2-6, 2003 in Chicago, Illinois

5. The deadline for paper submission was extended to February 14, 2003.
6. The ASME Engineering Technology & Management group (ET&M) will participate in the 2003 DETC's. ET&M will sponsor one session and two tutorials.
7. Some conferences and committees already provided topics for tutorials with names of tutorial lecturers. The plan is to have four tutorials on Tuesday, September 2 (afternoon); and four tutorials on Saturday, September 6 (morning).
8. The use of the ASME web tool for paper submission has been discussed, and it was agreed not to use the web tool for the 2003 DETC's.

Ahmed Shabana  
January 16, 2003

**REPORT ON**  
**THE 2005 ASME INTERNATIONAL DESIGN ENGINEERING**  
**TECHNICAL CONFERENCES**  
**Long Beach, California**

**Organizing Committee**

**General Chairs:** Hamid R. Hamidzadeh (TCVS) and **Co-Chairs:** David Lee (CIE)  
**Program Chair:** Albert C. J. Luo

**Advisory Committee**

Professor Subhash Sinha, 1999 General Conference Chair  
Professor Dean Mook, 2001 General Conference Chair  
Professor Ahmed Shabana, 2003 General Conference Chair  
Professor Chin An Tan, Chair of the TCVS

**Local Arrangement Committee**

Professor James E. Bobrow, University of California, Irvine  
Professor Daniel C. H. Yang, UCLA, MANE Department

**Location**

After developing two proposals for different sites and continuous efforts by Bob Niehaus on behalf of the ASME, the Long Beach Hyatt Hotel has been selected as the site for the 2005 IDETC. The rates are very reasonable and the Convention Center is next door to the Hyatt. The confirmed room rate for 2005 is \$175 single/double. Both the Hyatt and the Convention Center can provide adequate number of rooms for committee meetings and conference sessions.

**Conferences Included in IDETC**

1. **Biennial Conference on Mechanical Vibration and Noise - 22 Symposia** are expected
2. **Design Automation Conference**
3. **International Conference on Design Theory and Methodology**
4. **Design for Manufacturing Conference**
5. **Computer in Engineering Conference**
6. **Engineering Information Management Conference**

**Deadlines**

9. The deadline for paper submission will be January 24, 2005.

10. The Call for Papers announcement will be forwarded to ASME in June 2004.
11. The web sites for all conferences will be developed by June 2004.
12. Over twenty proposals for symposia on different topics for the Vibration Conference are expected before June 2004.

Respectfully submitted,

Hamid R. Hamidzadeh and Albert C. J. Luo

February 18, 2003

# ASME International 20th Biennial Conference on Mechanical Vibration and Noise

## LIST OF SYMPOSIA

### Confirmed Symposia

- System Identification and Reduced Order Modeling With Applications to Linear and Nonlinear Systems (L. Bergman, A. Vakakis and D. Quinn)
- Systems with Friction and Impacts: Modeling, Stability and Control (J. Awrejcewicz)
- Fractional Derivatives and Their Applications (O. Agrawal, J. A. T. Machado and J. Sabatier)
- Friction Induced Vibration and Noise (M. A. Ozbek)
- Dynamics and Identification of Piecewise Linear and Nonlinear Systems (S. Natsiavas and Papadimitriou)
- Experiments with Nonlinear Dynamic Systems (A. Berlioz and R. Dufour)
- Vibration of Complex Structures (M.P. Castanier and C. Pierre)
- Nonlinear Dynamics and Control for Rotor Systems (Y. Ishida, G. Flowers, H. Yabuno)
- Dynamics and Control of Time-Varying and Time-Delay Systems and Structures (S.C. Sinha and E.A. Butcher)
- Vibration and Control in Manufacturing Systems (H. Nayeb-Hashemi)
- Active Control of Vibration and Noise (Nader Jalili)
- Vibration and Acoustics in Manufacturing and Bio-mechanical Systems (A. Al-Jumaily)
- Nonlinear Dynamics and Oscillations (B. Balachandran)
- Rotor Dynamics and Control (Guang Meng)
- Vibration and Noise Control -- Active, Passive or Hybrid (K. W. Wang and W. Clark)
- Nonlinear Vibration and Control of Structures (G. Rega)
- Multibody Dynamics in Power Train Systems (H. Rahnejat)
- Vibration and Control of Continuous Systems (C. Rahn and R. Parker)
- Smart dynamical Systems (C. Steve Suh)
- Nano- and Micro-Electromechanical Systems (J. Lu)

### Other expected Symposia

- Multi-body Dynamics and Vibration
- Hysteresis and Vibration
- Piezoelectric and Magnetostrictive Actuators, Including MEMs Devices
- Vibration and Sound in Biomedical Applications
- Non-smooth Dynamics
- Identification and Resolution of Stability Problems in Rotating Machinery
- Fault Detection/ Diagnostics in Rotating Machinery
- Dynamics and Vibration of Robotic Systems
- Vibration of Nonlinear Systems
- Damage Assessment & Monitoring of Structural and Mechanical Systems Based on Modal Data
- **Induced Vibration of Stay Cables in Cable Stayed Bridges**
- Nonlinear Dynamics, Bifurcations and Chaos in Nano and Micro-Electromechanical Systems