

## ASME Technical Committee on Multibody Systems and Nonlinear Dynamics (TC-MSND)

Friday, February 5, 2010, 8:30-10:30 a.m. (EST)  
Teleconference

### Minutes

**Present: (Members)** Bala Balachandran (chair), Olivier Bauchau (vice-chair), Alain Berlioz, Harry Dankowicz (recording secretary), Peter Eberhard, Tamás Kalmár-Nagy, John McPhee, Aki Mikkola, Rudranarayan Mukherjee, Dan Negrut, Lawrence Virgin; **(Friends)** James Critchley, Bogdan Epureanu, Michael Sherman, Subhash Sinha.

**Absent members:** Kurt Anderson, Eric Butcher, Jin -Hwan Choi, Javier Cuadrado, Walter Lacarbonara, Christophe Pierre, Wan-Suk Yoo

1. **Call to order**

Meeting called to order by Bala Balachandran.

2. **Approval of minutes from last meeting**

A motion was made to approve the minutes of the last meeting of the TC-MSND on September 1, 2009 at the San Diego Convention Center, San Diego, CA. The motion was seconded and approved unanimously.

3. **Treasurer's report**

No new information was provided. The treasurer (Olivier Bauchau) was asked to follow up with Hamid Hamidzadeh regarding the account status.

4. **New Initiative -- DFD**

A new collaborative initiative aimed at the formal organization of a technological discipline known as DFD—Dynamics For Design—was presented by Harry Dankowicz. This initiative has grown out of discussions with members of the TC-MSND as well as members of the ASME Technical Committee on Vibration and Sound (TCVS). A motion was made (see appendix) to constitute a joint working group between the two technical committees to work towards concrete activities that will support this initiative. The motion was seconded. After discussion on the merits of the overall initiative, including the scope of the discipline and ways of increasing industry participation, the motion was approved unanimously. As this initiative has already met with the approval of the TCVS executive committee, a joint working group will be formed shortly with the intent of presenting the two committees with a concrete proposal later this spring.

5. **Conference reports**

a. **2010 IDETC**

Bala Balachandran and Harry Dankowicz reported on the Special Conference on Mechanical Vibration and Noise (VIB), which is part of the 2010 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conferences (2010 IDETC/CIE) and will take place at the Fairmont Queen Elizabeth Hotel, in Montréal, Canada, August 15–18, 2010. This Conference is sponsored by the Technical Committee on Vibration and Sound and supported by the Technical Committee on Multibody Systems and Nonlinear Dynamics through the inclusion of Bala Balachandran and Harry Dankowicz on the organizing committee. The Conference provides an international meeting in the fields of Vibration and Noise Engineering. Papers have been solicited in the areas of dynamics, vibration, acoustics and control. Student participation at this event has been encouraged and a special session is planned for papers in which a current student (at the time of submission) is the first author. Research concerning the influence of dynamics on the design of systems will also be highlighted. Around 60 draft papers have been submitted. Of these, no more than 40 will be selected for oral presentations with the option of a poster presentation for those not selected for an oral presentation. A total of more than 1100 abstracts were submitted to the overall conference, a record for an even-year IDETC/CIE meeting.

b. **2011 MSNDC**

No information was provided.

c. **2010 IMSD**

Aki Mikkola reported on The First Joint International Conference on Multibody System Dynamics (IMSD 2010) which will be held in Lappeenranta, Finland, May 25-27, 2010. The Joint International Conference on Multibody System Dynamics, IMSD, will be organized every other spring in even years. The 2012 IMSD is planned for May 29-June 1, 2012 in Stuttgart, Germany. The purpose of the Conference is to serve as a meeting point for the international multibody community. This Conference provides an opportunity to exchange high-level, recent information on the theory and applications of multibody systems. The Conference is co-sponsored by ASME (American Society of Mechanical Engineers), IFToMM (International Federation for the Promotion of Mechanism and Machine Science), IUTAM (International Union of Theoretical and Applied Mechanics), KSME (Korean Society of Mechanical Engineers), and JSME (Japan Society of Mechanical Engineers). The International Steering Committee for the 2010 IMSD include Jorge Ambrosio, Kurt Anderson, Krzysztof Arczewski, Olivier Bauchau, Carlo Bottasso, Javier Cuadrado, Peter Eberhard, Caishan Liu, John McPhee, Aki Mikkola, Friedrich Pfeiffer, Werner Schiehlen, Ahmed Shabana, Nobuyuki Shimizu, and Wan-Suk Yoo. Around 200 papers have been submitted to the IMSD 2010. Keynote speakers include Kurt Anderson, Carlo Bottasso, Peter Eberhard, John McPhee, Ahmed Shabana, and Nobuyuki Shimizu.

6. **Journal reports**

a. **JCND**

Subhash Sinha reported on the status of Journal of Computational and Nonlinear Dynamics. Ahmed Shabana has been nominated by the ASME Publications Committee as the new technical editor for a term commencing in January 2011. Dan Negrut and Olivier Bauchau have put together a special issue on computational multibody dynamics with 12 papers that will form the July 2010 issue of the journal. There were 166 new submissions in 2009 with a peak following the 2009 MSNDC. The overall rejection rate is around 67%. Committee members recommended that the technical editor communicate with the ASME Publications Committee to see whether an impact factor could be computed based on the ISI formula and included on the journal's website, even if the ISI citation report is yet to include the journal.

7. **Sub-committee reports**

a. **Publicity & Information**

Dan Negrut reported on developments with moving the TC-MSND website information to a page hosted by the ASME and available at

[http://divisions.asme.org/ded/multibody\\_systems\\_nonlinear.cfm](http://divisions.asme.org/ded/multibody_systems_nonlinear.cfm)

Hosting by ASME adds a layer of complexity in that any updates must first be submitted to the ASME webmaster. Nevertheless, the permanence of the ASME site and the uniformity across multiple technical committees affords a more well-defined presence. The site is successively being populated with updated material. Suggestions for further improvements were solicited from committee members.

b. **Bylaws & Operating Guidelines**

Harry Dankowicz reported on the amended committee by-laws which were approved by a 2/3 vote of all regular members of the committee and which are effective November 6, 2009. The amended by-laws were developed by the Bylaws & Operating Guidelines subcommittee chaired by Harry Dankowicz and including Walter Lacarbonara and Rudranarayan Mukherjee. The subcommittee is continuing work on a draft operating guidelines document which will be shared with the committee in the near future. This document will not require a formal vote, but is instead meant to be a living document that reflects current practices of the committee.

c. **Awards**

Harry Dankowicz reported that a call for nominations for the Lyapunov and d'Alembert awards should be made this year. The awards committee membership, currently Olivier Bauchau (chair) and Harry Dankowicz may need to be rotated in the near future.

d. **Membership nominations**

Rudranarayan Mukherjee reported on behalf of himself, Eric Butcher, and Tamás Kalmár-Nagy, on the activities of the Membership Nominating Committee. The committee was appointed on October 15,

2009, and completed its task on December 15, 2009, by submitting for the consideration of the committee 16 nominations to fill the 9 expected vacancies in the committee membership in 2010 and 2011. Nominated for membership were Carlo Bottasso, James Critchley, Andrew Dick, Bogdan Epureanu, Jozsef Kovecses, Michael Leamy, Stefano Lenci, Brian Mann, Andreas Müller, Corina Sandu, Werner Schiehlen, Ahmed Shabana, Michael Sherman, Subhash Sinha, Yoshiaki Terumichi, and Xiaopeng Zhao. An electronic vote on the nominations is to be held through e-mail by February 15, 2010.

8. **Other business**

A brief discussion was held on how to improve the quality of papers submitted to the MSNDC. Harry Dankowicz mentioned that the Bylaws & Operating Guidelines subcommittee is considering putting forward a concrete proposal for how to improve the conference organization so as to ensure high standards of content. Further discussion was deferred until this proposal is formally presented to the committee.

**Members only**

9. **Discussion of new member nominations**

A brief discussion considered those qualities desirable of committee members. It was suggested that broad participation from industry, academia, and international partners was preferable. It was also suggested future nominations should try to contribute to the committee diversity.