

AIAA Adaptive Structures Technical Committee Meeting Minutes
Schaumburg, IL
Tuesday, April 8 2008; 7:00-10:00 pm

1. Introductions

- a) The ASTC members gathered at 7:00 pm for dinner.

Diann Brei called the meeting to order at 7:10 pm and presented the agenda for the meeting. During dinner the roster was circulated, and attendees updated their contact information. All individuals introduced themselves.

2. Approval of minutes:

The minutes from the previous ASTC meeting had been emailed to committee members prior to the meeting. The minutes were approved as amended.

3. Special reports:

George Lesieutre explained that the new SDM organization consisted of three committees. Next year is the 50th Anniversary so the meeting will be held in Palm Springs, CA. The 2010 meeting will be held in Orlando; the 2011 meeting will be held in the central region, and the 2012 meeting will be on the west coast. The Ashley Award is a new Aeroelasticity award that will be offered. The Technical Activities Committee (TAC) has stood up an ethical standards committee. A banned paper list now exists as part of this committee effort.

4. Chair's Report (Diann Brei):

- a) Diann Brei briefed membership status and statistics. The number of members to revolve off will depend on the number of new members voted on. As of this meeting there are 38 total ASTC members, with 7 new members (4 domestic and 3 international) having applied. The membership categories (industry, academia, etc.) were also reviewed:
- Percentage of industrial participation increased from 21% to 23%
 - Number of associate members stayed the same
 - International membership increased by 3 last year and could increase another 3 this year, depending on voting
 - Volunteers to rotate off are encouraged
- b) Steven Griffin gave an overview of the Adaptive Structures Shootout. The Adaptive Structures Shootout was a competition in which participants attempted to implement the best control law on adaptive structures hardware. During the competition, a significant change in the dynamics of the structure occurred, forcing the controller to adapt to the change. Although not originally intended as such, all the competitors turned out to be students. The competition appeared to be an overall success, and opinions were solicited regarding the form future competitions might take.
- c) TAC Workshop: Vit Babuska and Diann Brei recalled their experience at this workshop, held at Reno, where incoming TC chairs and vice chairs received training.
- AIAA TAC training for incoming TC chairs and vice chairs
 - Same every year
 - Provided a TC chair handbook
 - Main take-aways

- ASTC (and all SDM TCs) is well organized and healthy
 - TAC organizational structure is changing
 - Might be a good idea to make a short “guide to ASTC” for new members
- d) TAC Funds: Diann Brei mentioned that the TAC committee had dollars available to help fund efforts in support of the conference or Technical Committees; an application is required from the TC. Frank Abdi mentioned that he had requested money for the website at last year’s meeting, but that no action was taken. Steven Griffin suggested that Frank might send an email request to Vit, who will forward the request to the TAC committee.

5. Publications (Steven Griffin):

- E-Newsletter – Diann Brei mentioned that there were some issues with twice-a-year publication. The second Newsletter was nearly complete as of this meeting. One article per year per committee was suggested. The newsletter is included on the Adaptive Structures TC website as well as the ASME website.
- Highlights Article – David Voracek agreed to do the article again this year and mentioned that the current article was completed.
- Aerospace America Article – No mention was made of this year’s article.
- AIAA book update – Norm Wereley said that there were now 24 chapters under review over the next 6 weeks. Production was expected by the end of summer or early fall. Reviews are the last step before production.
- Special Morphing Aircraft Issue Update – Vit Babuska collected 6 final papers for the Journal of Aircraft Morphing Aircraft Issue
- Journal of Spacecraft and Rockets – Greg Agnes solicited papers, especially in the field of aeroelasticity. A special issue is a possibility. Diann will add an expertise column to membership roster to aid Greg in finding reviewers.
- Website Update – Frank Abdi was requested to update the website as follows: take off the advertisement for the Adaptive Structures Shootout and include results from the actual session.

6. Conferences

ASC (Carlos Cesnik and Shiv Joshi) – Shiv mentioned that the roster expertise column will be helpful in picking reviewers for conference abstracts. It was mentioned that the CAS software will be used again next year, but that commercial software is being evaluated. Vit Babuska asked whether a “black list” might be useful when evaluating abstracts. He also suggested that data on “no shows” be examined for a pattern. A suggestion of “overbooking” the session was given, but did not receive committee support. Shiv gave some statistics about the conference:

- 55 total abstracts received
- 5 student abstracts
- 6 Adaptive Structures Shootout abstracts
- 3 papers rejected
- 2 returned for revision
- 49 papers selected
- 94% acceptance rate
- 6 papers withdrawn

ICAST (Norm Werely) - The 2008 ICAST will be held 6-9 October in Ascona, Switzerland. A special program for students was highlighted, including providing low budget accommodations. In 2009, ICAST will be in Hong Kong.

SPIE (Victor Giurgiutiu) – Next year, NSF will have a separate grantees conference.

ASME Adaptive Structures and Materials Symposium at IMECE (Norm Werely/Diann Brei) – This year, the conference was held in Seattle with good attendance. In future years, the IMECE conference is dividing into several smaller conferences. As a result, Adaptive Structures conference sessions are being spun off AIAA will be a cosponsor at what is referred to as a nonfunctional level, which means that AIAA provides no financial support but the AIAA logo will be attached. Many exciting plans were revealed for the new conference including taking advantage of the local chapter to host outings and a possible Karaoke session at the conference. A second, yearly AIAA ASTC meeting was proposed and seconded for this ASME conference. Conference fliers describing more details were passed out to AIAA TC members.

Workshops mentioned: (1) US-Europe Workshop on Adaptive Aerospace Structures and Materials, held in Couvent Royal, Saint-Maximin, France from 4-7 November 2007

7. Awards and Advancements (Dimitris Lagoudas)

Kon-Well Wang was awarded the Adaptive Structures and Materials System Prize, for significant contributions to the advancement of the sciences associated with adaptive structures and/or material systems, American Society of Mechanical Engineers, 2008.

Diann Brei raised the question as to whether or not we want to keep awarding the ASME Adaptive Structures prize at the SDM conference. The short-term decision was to keep it here and to see if the new ASME conference might provide a venue in the future.

8. Education (Ron Barrett)

Steve Griffin presented for Ron.

Ron found partial sponsors for adaptive structures educational kits:

- APC donated piezoceramic disks
- Lord Corporation gave a discount on MR fluid samples
- Being Seen gave a discount on Electroluminescent (EL) wire and inverters
- AFRL donated SMA wires
- AAL donated piezo sparkers

Ron discussed these kits with Lisa Bacon in Reno -- AIAA HQ is awaiting assembly and stands ready to offer them to high school and/or university-level instructors. The kits still need documentation, and volunteers are needed to help with this. The pricing of the materials in the kit was reviewed, and it was mentioned that a grant would be requested from the TAC to cover costs.

9. Industry Subcommittee (Shiv Joshi)

Shiv stepped down as the lead of this subcommittee.

10. International Subcommittee (Victor Giurgiutiu)

Victor's goal was to establish a liaison with aerospace professional organizations in other countries and to exchange best papers in the area. Victor was invited by Royal Aeronautical Society to provide a special issue on flight structures in the United States. Victor noted that he would like to rotate out as chair of this committee.

11. Liaison (Carlos Cesnik)

Rich Cobb, from the Air Force Institute of Technology, will present results for next year's keynote lecture or a special one hour talk. Keats Wilkie won a NASA invention award for Macro-Fiber Composite Actuators. A morphing vehicle symposium will be held at a future date.

12. Old business.

None.

13. New business (Diann Brei)

a) New Member Elections (Diann Brei)

Candidate new members present at the TC meeting were given a chance to provide a short background and describe their interests. Non TC members were asked to leave the room, and a vote was held on acceptance of candidate members. People considered for membership included

International

- Ing Boris Grohmann, Germany
- Grzegorz Kawiecki, Aernnova, Madrid
- Dyna Benchergui, Bombardier Aerospace

Domestic

-Government

-Academic

–Ram Iver, Texas Tech University

–Andrei Zagrai, New Mexico Institute of Mining and Technology

–James Joo, University of Dayton Research Institute

-Industry

–Ying Teng, Boeing

Boris Grohmann, Andrei Zagrai and James Joo were accepted. Grzegorz Kawiecki, Dyna Benchergui, Ram Iver and Ying Teng were all tabled until next year.

b) Elections and appointments (Diann Brei)

Greg Agnes and Farhan Gandhi were nominated for Vice Chairman. James Joo and Tim Hindle were nominated for Secretary. Voting was close. Greg Agnes and Tim Hindle became Vice Chairman and Secretary, respectively.

c) Items from the floor

Diann stepped down as Chairperson of the Technical Committee and was thanked by everyone. Vit Babuska, the new Chairman, presented her with a plaque.

14. Next AIAA ASTC meeting

- ASME Conference on Smart Materials Adaptive Structures & Intelligent Systems (SMASIS)
 - October 28-30, 2008, Turf Valley Resort, Ellicott City, MD

- www.asmeconferences.org/SMASIS08
 - Extended abstracts due May 3, 2008
- International Conference on Adaptive Structures and Technologies (ICAST)
 - October 6-9, 2008 Ascona, Switzerland
- SPIE Smart Structures + NDE
 - March 8-12, 2009 San Diego, CA
 - spie.org/smart-structures-nde.xml
 - Abstracts due August 24, 2008
- 17th AIAA/ASME/AHS Adaptive Structures Conference
 - May 4-7, 2009, Palm Springs, CA
 - Abstracts due August 11, 2008

15. Adjourn: The meeting adjourned at 10:30 pm.