

**American Society of Mechanical Engineers - Aerospace Division
Adaptive Structures and Material Systems Branch**

Meeting at SPIE 2017

Portland, OR

Monday, March 27, 2017 from 7:00-10:00pm in the Mt. Hood Room of Marriott

AGENDA

1. Attendance and acknowledgment of visitors (Branch Chair: Oliver Myers)

Members Attending: Julianna Abel, Barbar Akle, Paul Alexander, Steven Anton, Diann Brei, Matthew Bryant, Dan Clingman, Manuel Collet, Kenneth Cunefare, Marcelo Dapino, Alper Erturk, Alison Flatau, James Gibert, NamSeo Goo, JaeHung Han, Ryan Harne, Darren Hartl, Nancy Johnson, Amin Karami, SooBum Lee, Junrui Liang, WeiHsin Liao, Kenneth Loh, Chris Lynch, Uwe Marschner, Hani Naguib, Chris Nieszrecki, William Oates, Morvan Ouisse, Zoubeida Ounaies, Kara Peters, Ralph Smith, Vishnu Baba Sundaresan, Lihua Tang, Pablo Tarazaga, Rocco Vertechy, Andrei Zagrai

Friends Attending: John Gallagher, Jared Hobeck, Mostafa Nouh, Donghyeon Ryu, Shima Shahab, Andres Arrieta, Lihua Jin, JR Lee, Xianxu Bai, Paris Von Lockette, Mohammad Albakri, Jacob Dodson, Reza Rizvi, Scarpa Fabrizio, Rosalin Wynne, John Domann, Wen-Jong Wu

Oliver calls the meeting to order 7:12PM. Welcomes all the attendees and asks for introductions.

2. Review and acceptance of SMASIS 2016 meeting minutes (Branch Chair: Oliver Myers)

3. Membership Report (Branch Secretary: Darren Hartl for Gary Seidel)

- 3.1. Circulation of roster for updating
- 3.2. Breakdown of membership

Hartl gives a summary of the current roster: As of today, 142 total members (112 academic, 26 industry, 11 government). However, as per previous discussions, I have executed the transition of many of these members to “friends of the Branch” according to the guidelines laid out in the bylaws (number of meetings attended in past two years). This will be a big change and will reduce the total number of members to 76. However, I am giving those notified of their status transition a few more days to appeal, etc. This should lead to a more accurate email distribution to members, etc.

4. Treasury Report (Branch Treasurer: Cornel Ciocanel for Darren Hartl)

- 4.1. Status update

The transition to ASME One has stabilized. Now we have a new policy that Cornel reviews quickly regarding how we will request a budget going forward. Because this is a new policy, we don't have a current budget to share. One key item is that all TCs have to request budget for the years for all things they propose that cost money. But right now there is no such thing as a Branch budget.

- 4.2. Acknowledgement of Waiver Donations (Zoubeida Ounaies, Billy Oates, and Gyuhae Park)

5. Update on ASMS Branch Ascension to ASMS Division with the ASME.

- 5.1. Update (Zoubeida Ounaies).

Will combine Item 6 and 7 so will need some time. Shows slides on organization under ASME (Division → Branch → 6 TCs listed in agenda). There are three other big TC's under the Division, which makes us unusual. This makes us different regarding budgets, etc. Budget is collected by AERO Division and then submitted to ASME.

The Division is 5530 members. We are the fourth biggest. Oct 2016 balance is \$180k, but we share with other entities. She gives the Chair, Co-Chair, etc. She will become Chair in July (and this is why giving the update). Slater makes everything possible as the treasurer. There are several members and then members of the General Committee of Past Chairs which are important. Current budget is

\$23210 for the Branch (meals, AV, rooms, awards, etc). Aero Division is fully supportive of ASMS Branch and its activities.

ASMS Branch ascension: We had asked about ascending to a Division status. This was to protect our community, awards, SMASIS, etc. One ASME was changing things (going through a reorg) but we wanted more autonomy and control over our conferences. But now...ASME has stabilized, Division is supportive of the Branch, budget format has changed such that we can't transfer positive balance from SMASIS, etc., so that is no longer an option. Finally, our numbers are very small compared to the current Division, and numbers matter (~100 vs 5000 members). So she recommends not to ascend, but instead we will work hard on the succession plan so that we continue to be represented and protected. D. Brei working on a working group to formalize this path, for example.

DBrei: Moves to stay a Branch and not ascend. ZO seconds. Discussion begins.

CLynch: I would like to hear from those there we strong on going to a Division since they had an opinion. I had leaned toward staying with the Division.

DBrei: I was one of the ones that instigated. At that time we thought we could transfer the money and have more control. We went to a Branch, we were one of the first. We could have been a sub-division, but then you had to ascend to a division in 3 years. We were not at all at the same membership level as the other TCs, so we had to do something. But now, if we stay in the Division, we have to make sure that we stay active in the Division. This is because the budget never goes below the Division.

CLynch: Were we able to get the awards endowed?

Brei: We got the Adaptive Prize Medaled and the Gary Anderson endowed. There may be miscommunications regarding some of the other prizes, but we are still working. Right now we are supposed to spend out annually. For this reason we need to keep the operating budget high so they get used to it.

OMyers: Now vote. Motion is put to a vote, carries unanimously.

ZO: Note that we now need to nominate the next member of the Division.

Brei: I nominate Oliver. Cunefare seconds. Since there was no discussion, motion carries.

6. Update on Aerospace Division by Aerospace Division Executive Committee Chair (Vice Chair: Z. Ounaies)
7. Status of Branch's Technical Committees (Branch Vice Chair: Cornel Ciocanel)
[The following were updated during the meeting.]
 - 7.1. Active Materials and/or Multifunctional Materials (Chair: Jayasimha Atulasimha and co-Chair: Gary Seidel)
Main focus of meeting was strengthening our presence at SPIE. We are strong at SMASIS but need to do better at SPIE
 - 7.2. Adaptive Systems Dynamics and Controls (OLD: Chair: James Gibert and co-Chair: Rocco Vertechy)
Mentions the new ascension. Rocco will ascend, Manuel Collet to coChair and Julianna Abel to Secretary.
Focused on Best Paper Awards and the Special Issue in SMS and how to make it permanent.
Cornel: Glad you mentioned this. We have had problems with TCs promising awards and then not following through and weren't able to get the funding. We don't want this in the future. In the future, all award amounts must be requested by Aug. 15th.
 - 7.3. Structural Health Monitoring (Chair: Donghyeon Ryu and co-Chair: Ya Wang)
Hae Young Noh is new secretary. Organizing special sessions at other conferences. Also organizing a special issue in JIMSS. There was recently a new journal focusing on SHM/NDE within ASME. This is what we focused on.

7.4. Active Material Technology and Integrated Systems (Chair: Chai Hutapea and co-Chair: Onur Bilgen)

Officers need to be updated

No report

7.5. Bio-inspired Structures and Systems (Chair: Pablo Tarazaga and co-Chairs: Eric Freeman, Aimy Wissa) Leadership is correct.

We also had 7 technical presentations, for a total of 26 talks. All talks were presented/attended (no no-shows). Invited speakers were Don Leo, Jeff Baur, and Josh Bongard (University of Vermont, nearby institution, not a regular attendee).

Each of the presentations associated with the reviewed conference papers were judged by volunteers within the audience (typically symposium chairs/co-chairs and session chairs/co-chairs) who didn't have conflicts of interest. The papers that had both high marks for the presentation and the publication were invited to submit their work to a special issue within SMS. Currently 8 groups confirmed plans to submit, and the deadline was earlier this semester – I don't have new information on this personally.

Recurring themes are the invited issue and streamlining the peer-review process.

7.6. Energy Harvesting (Chair: Ryan Harne and co-Chair: Steve Anton)

Matthew Bryant is the chair. Ryan Harne is the co-Chair..need to ...now Ryan is the Chair and Steve Anton is the coChair and Amin is the secretary.

MB: 10 attendees plus 2 new members. We talked about our best paper award, which we have had for 3 years.

Harne: Thanks ASMS and JIMSS and for those that set it up. The next award goes to [missed...too fast]. And he thanks the reviewers.

1. Review of TC Awards (Oliver Myers)

OM: Thanks the TCs for all their work. Further emphasizes that as we go forward, there will be a protocol for budgeting that we will need to stick to. We will reinitiate the training for the TC leadership. We call it the "Boot Camp." We are planning this for Sept. 17th, the day before the SMASIS conference.

2. Update on SPIE Best Student Paper competition (Constantin Ciocanel and Darren Hartl)

DHartl: This year we were down to only 15 submitted extended abstracts, but this could have been my own fault for not pushing the advertisement more or extending the submission deadline by a few weeks. In any case, 6 finalists were selected and the competition was held today after lunch. The final awardees will be named tomorrow morning.

3. Report on SMASIS conference (Ken Loh and Ralph Smith)

- 3.1. Summary of SMASIS 2016

- 3.2. Discussion of plans for SMASIS 2017—Snowbird, UT

Ken reports on behalf of Billy and MD: Acknowledges all the behind the scenes help (Brei, Nacy, Ralph). Applause. Acknowledges the SYMP chairs/co-chairs. Summarizes: 2016 had a loss of 34 abstracts over 2015.. Total presentations went from 268 to 246. Poster session was new and will continue to 2017.

Thanks the reviewers and then acknowledges the new SYMP leadership. Not we have 8 SYMP, but we actually added a 9th, which is run by the conference leadership, and this gives them the freedom to coordinate the "New Emerging Topics" papers to populate this. Will not be open to public but will be coordinated.

Brei: Might want to open it up to see if you might get new and different papers.

Ken: Good point. We will consider.

ZO: Are you going to highlight them as a special session, etc.

Ken: We are still seeing about this.

ZO: We had a special place in the program to get the sessions in front of a bigger audience.

Ken: We are going back to the Cliff Lodge at Snowbird. The website is live. The dates on the flyer are now corrected. To clarify, the abstracts move to April 7, the Full are due May 8. Final full are due July 11. Reviewers will have 4 weeks to complete reviews.

Uwe M.: Who is in charge of the website? Ken addresses.

Ken: Will continue student activities and outreach. Then reviews how we can help (participate, bring students, review, etc.)

4. Report on SPIE Smart Structures/NDE conference (Jay Kudva, Greg Reich)

4.1. 2016 – Symposium Chairs: Jay Kudva and Theodoros Matikas; Symposium Co-Chairs: Tribikram Kundu and Greg Reich

Nobody to report on the conference.

4.2. Report on Specific Conferences at SPIE

4.2.1. Active and Passive Smart Structures and Integrated Systems XI (Chair: Gyuhae Park co-Chair: Alper Eturk)

Alper: Next year I will move to Chair. We had 118 papers this year, but it is down from 140, and this is because other SYMP have similar sessions and authors may go there. Dian: Was there a hit when we left San Diego? Alper: No.

4.2.2. Behavior and Mechanics of Multifunctional Materials and Composites XI (Chair: Nakhiah Goulbourne, co-Chair: Hani Naguib)

We had 62 originally, and after rejection and review, we are down to 55. This is similar to last year. But this is low, and we will work to try to build this up. As well, we will be looking to ascend with the new Chair, etc.

4.2.3. Industrial and Commercial Applications of Smart Structures Technologies XI (Chair: Dan Clingman, Steven Griffin, co-Chair: Alan L. Browne)

After Alan's illness, we are looking for a new co-Chair. We had 19 papers.

4.2.4. Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems (Chair Jerome Lynch, co-Chairs: Kon-Well Wang and Hoon Sohn)

No representative

4.2.5. Smart Materials and Nondestructive Evaluation for Energy Systems III (Chair: Norbert Meyendorf)

Theodore and Kara are the co-Chairs. Kara: I don't have the numbers but we are new and seem to be taking off well.

4.2.6. A Tribute Conference Honoring Daniel Inman (Chair: Don Leo, co-Chair: Pablo Tarazaga)

Out to eat

5. Report on AIAA /AHS Adaptive Structures Conference (Ed White)

5.1. 2017 - January 9-13, 2017, Gaylord Texan, Grapevine, TX

5.2. 2018 – January 8-12, 2018, Gaylord Palms, Kissimmee, FL

6. Report on International Conference on Adaptive Structures & Technology (ICAST) (Alper Erturk)

6.1. 2016 – October 3-5, 2016, Lake George, NY, USA.

6.2. 2017 – October 8-11, 2017, Cracow, Poland (The 28th International Conference on Adaptive Structures and Technologies (ICAST 2017))

6.3. 2018: Seoul, Korea (NamSeo Goo, JaeHung Han)

7. Discussion on TC Best Paper Awards. (Cornel Ciocanel)

Just a follow up on the budget that we had earlier. Reiterates the same thing discussed earlier. These TC awards are a significant part of the total budget, so let's make sure we do it right.

8. Honorific Subcommittee

- 8.1. ASME Adaptive Structures and Material Systems Prize (Norman Wereley)
 OM: Spoke with Norm. The award has been chosen, etc. But we cannot update on this since ASME has not approved the final prize.
- 8.2. ASMS Best Paper Awards (Oliver Myers)
 - 8.2.1. Structures and Structural Dynamics (Report by Wei Hsin Liao)
 Ryan L Harne and Danielle T Lynd, "Origami acoustics: using principles of folding structural acoustics for simple and large focusing of sound energy," *Smart Materials and Structures*, 25 (2016) 085031
 - 8.2.2. Materials and Material Systems (Report by Nakhiah Goulbourne)
 Bodaghi, M., Damanpack, A.R. and Liao, W.H. "Self-expanding/shrinking structures by 4D Printing" *Smart Mater. Struct.* 25 (2016) 105034
 - 8.2.3. Gary Anderson Award (Cornel Ciocan)

Award goes to Andy Sarles. We had a good pool this year. Better than last year. Andy wanted to thank everyone that supported him along the way, etc. He says he is really honored. He will be at SMASIS.

Then he discusses reaching out to nominees from Europe and Asia. We are not seeing global nominations, and this needs to improve.
 - 8.2.4. Ephraim Garcia Best Paper Award (Mohammad Elahinia)
 Walker et al, "Process development and characterization of additively manufactured nickel-titanium shape memory parts." *Journal of Intelligent Material Systems and Structures* 27.19 (2016): 2653-2660
 - 8.2.5. ASME Fellow Nominations and New Fellows (Marcelo Dapino)
 Says there is one nomination. Reviews the requirements.
 - 8.2.6. SPIE Smart Structures Lifetime Achievement Award (Jay Kudva)
 ZO: We should recognize the current winner (Ralph Smith). Applause.
- 8.3. Limiting best paper award submission to one category. (Mohammad Elahinia)
 Cornel: Out of the feedback we received this year, one thing that was important was that submissions should be to one category, not to both. Choose the category that fits your paper the best, especially since the two categories are quite different. This is may have been accidental, but be careful.

C Lynch: A few items before we leave the awards. I heard from Rob today: While some of us have made it as Fellows. Now you have to go to Senior Member before you can be a Fellow. With the Garcia award...Natasha feels that even if ASMS wants to continue to handle, perhaps it could be an IOP SMS award instead of ASME. They would fund it into the future. Not sure what the current status is and how it is funded by ASME.

ZO: This is an interesting point. I have been asked if any of the awards qualify for donations from journals. CL: This might work, but SMS doesn't want to donate to ASME but rather give the award themselves. We probably couldn't do them together either. We will talk offline.

9. Branch web site report (Onur Bilgen)
 - 9.1. ASME Website status update:
 - 9.1.1. Missing (older) minutes uploaded
 - 9.1.2. Members/officers list updated (now including Gary)
 - 9.1.3. SPIE 2017 Agenda uploaded
 - 9.2. Website/domain/YouTube report for the Meeting at SPIE:
 - 9.2.1. With the \$156 collected at SMASIS'16, the domain is renewed by Sergio. (\$19.78 forwarded to next renewal.) Thank you for the donations!
 - 9.2.2. Next request for donations: SMASIS 2017. (Bring the hat...)
 - 9.2.3. ASMS YouTube page is active – the link is available on the ASMS Website. We currently have 7 subscribers – we need more. We have only one video – please send video links using the attached guidelines.
 - 9.3. LinkedIn group and Twitter (Barbar Akle)
 Very little interest and very few people. We really need to see why we have this. LinkedIn might be

useful if we were using it for jobs, etc. But do we want them? Barbar requests that secretary send the email list so that he can send an invitation to join. [Done 4/14/2017]

9.4. Facebook page (LeAnn Faidley)

10. Nomination of new Branch members (Chair: Oliver Myers)

- 10.1. Dr. Andres Arrieta (nominated by D. Hartl)
- 10.2. Dr. Mostafa Nouh (nominated by A. Karimi)
- 10.3. Dr. Junrui Liang (nominated by Wei-Hsin Liao)
- 10.4. Vijaya V.N. Sriram Malladi (nominated by Vishnu Sundaresan)
Ken C. motions to approve, Chris Lynch seconds. Passes unanimously.
[Added to official roster 4/15/2017]

Additional discussion on how to address this in the future. Should they have to come to meetings before? Ken suggests a picture and 5 bullet points. Why do they want to be in the Branch?

Marcelo: It is a two-way street. We really want to know how they can help. They ought to have to say what they want to do. Their top options. Dian, Cornel, and Oliver will take the action to update this protocol for new members, your membership in Branch vs. TC, etc.

11. Adjourn

Ken moves, Marcelo seconds,...passes unanimously