

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

Meeting Minutes

Meeting at SMASIS 2018

San Antonio, TX

Monday, September 10, 2018, 7:30 PM – 10:00 PM in the Texas D/E/F, 4th Floor

Attendees:

Members:

Julianna Abel, Paul Alexander, Steven Anton, Andres Arrieta, Jayasimha Atulasimha, Theocharis Baxevanis, Richard Beblo, Giovanni Berselli, Onur Bilgen, Diann Brei, Constantin Ciocanel, Manuel Collet, Marcelo Dapino, Carlos De Marqui, Eric Freeman, John Gallagher, James Gibert, Darren Hartl, Nancy L. Johnson, Bjoern Kiefer, SooBum Lee, Suyi Li, WeiHsin Liao, Sergio L. dos Santos e Lucato, Jonathan Luntz, Vijaya Malladi, Uwe Marschner, Oliver Myers, Hani Naguib, William Oates, Roger Ohayon, Zoubeida Ounaies, Michael Philen, Andy Sarles, Janet Sater, Gary Seidel, Ralph Smith, Henry Sodano, Ji Su, Pablo Tarazaga, Travis Turner, Aimy Wissa, Lingyu Yu, Wael Zaki

Friends:

Joseph Calogero, Tizoc Cruz-Gonzalez, Jacob Dodson, Scarpa Fabrizio, Marco Fontana, Benjamin Grisso, Jovanova Jovana, HaeYoung Noh, Johannes Riemenschneider, Tyler Tallman, Rosalind Wynne, Oumar Barry, Austin Phoenix, Carol Livermore, Serife Tol, Amira Meddeb, Francesco Danzi, John Swensen, Anastasia Wickeler, Kundu Auni, Libo Wu, James Allison, Dan Cole, Wonhee Kim, Kazuko Fucki, Nathan Salowitz, Amira Amali, Michelle Makhoul Mansour

AGENDA

1. Attendance and acknowledgment of visitors (Branch Chair: Cornel Ciocanel)
 - 1.1. **Cornel: Introduction**
2. Review and acceptance of SPIE 2018 meeting minutes (Branch Chair: Cornel Ciocanel)
 - 2.1. **Oliver gave motion**
 - 2.2. **Seconded**
 - 2.3. **Approved**
3. Membership Report (Branch Secretary: Michael Philen)
 - 3.1. Circulation of roster for updating
 - 3.2. Breakdown of membership
4. Treasury Report (Branch Treasurer: Gary Seidel)
 - 4.1. Status update
 - 4.1.1. **Gary: Branch level everything looks good.**
 - 4.1.2. **Janet: 18 cents left.**
5. Update on ASME revenue from conferences (Diann Brei)
 - 5.1.1. **Diann: ASME changing. ASME felt like members were not connected to ASME. ASME is considering going back to a revenue model where the revenue model would be shared at 50%. However if we lose money, that money comes from the revenue fund. I'll find out more from Tim Graves. If able, we'll try to filter down to Branch and TCs. In the past, this was good for the Division.**
 - 5.2. Update on Aerospace Division by Aerospace Division Executive Committee Chair (Ralph Smith)
 - 5.2.1. **Ralph: Presented an overview of the organization of the committee. Stated that we have a big vibrant active branch. The Aerospace Division is the third largest division in ASME. Janet needs proposed budget as early as May. It is very important to be up to date on TC and**

- Branch roster. Give information to Mike Philen. Every member in TC needs to be Branch members. Important to make sure everything is up to date.
- 5.2.2. Janet: Each TC has \$500 to spend for paper awards. Pass the information to Mike Philen. There is an ASME form to fill out. The TCs can announce at SMASIS or SPIE. TCs need to spend by June 30th. Need award information from each TC no later than July 1st.
- 5.2.3. Ralph: Diann did great at the leadership summit, lots of work, thank you thank you!
- 5.3. Acknowledge election of xx to serve as branch representative to executive committee
- 5.3.1. Cornel: Received 1 nomination – Janet Sater.
- 5.3.2. Diann motioned, all said I.
- 5.3.3. Accepted.
6. Status of Branch's Technical Committees (Branch Vice Chair: Darren Hartl)
- 6.1. Active Materials and/or Multifunctional Materials (Chair: Gary Seidel and co-Chair: Cornel Ciocanel)
- 6.1.1. Gary: 30 ish people at TC meeting. 2 symposia, symposium 1 had 42 paper, symposium 2 had 44 papers.
- 6.2. Adaptive Systems Dynamics and Controls (Chair: Manuel Collet and co-Chair: Julianna Abel)
- 6.2.1. Manuel: Approximately 20-25 people. Picked 2 papers for award. Discussed activities to increased participation, like hosting new sessions.
- 6.3. Structural Health Monitoring (Chair: Ya Wang and co-Chair: Haeyoung Noh)
- 6.3.1. Have about 36, discussed the new bylaws , discussed best paper awards. Discussed special issue for journal.
- 6.3.2. People gave 1 minute introduction slides to advertise.
- 6.4. Active Material Technology and Integrated Systems (Chair: Chai Hutapea and co-Chair: Onur Bilgen)
- 6.4.1. Onur: 12 persons attended the meeting. Chai is retiring. Rich Beblo is ascending to secretary. Discussed best paper awards.
- 6.5. Bio-inspired Structures and Systems (Chair: Aimy Wissa and co-Chair: Eric Freeman)
- 6.5.1. Aimy: 27 members, 25 attended. Selected leadership. Eric will chair. 27 publications this year. Plan to award 2 best paper awards.
- 6.6. Energy Harvesting (Chair: Steve Anton and co-Chair: Amin Karami)
- 6.6.1. Steve: 5 members in attendance, 3 guests, 1 new member join. Elected new leadership today. Discussed sms paper special issue submission. Will send Mike Philen review process form for the best paper award.
- 6.7. Cornel: Send updated roster to Mike.
7. Update on SMASIS Best Student Paper competition (Julianna Abel, Mostafa Nouh, Dan Cole)
- 7.1.1. Best paper and hardware competition. 33 submissions for best paper. Went with top paper from the 5 symposium. Winner will be announced at banquet.
- 7.1.2. 5 hardware submissions. 3 judges. Winner announced at banquet.
- 7.1.3. Lots of student activities: Network activity during lunch, had 54 high school students, 14 graduate students volunteered
- 7.2. TC Requirements for Paper Review (Gary Seidel)
- 7.2.1. Gary: Important for TC members to review papers. Past year difficult to get papers reviewed. Important to get people to volunteer.
8. Report on SMASIS conference (Billy Oates and Mohammad Daqaq)
- 8.1. Summary of SMASIS 2018
- 8.1.1. Billy: *'He put on a large Texas hat.'* Alamo reception tomorrow night and banquet afterwards. Thanked all symposium chairs. 288 total presentations this year, increase from over years.
- 8.2. Discussion of plans for SMASIS 2019

8.2.1.Oliver: Thank you again Billy. KY for 2019. Downtown Louisville. Omni hotel. March 18th abstract due.

9. Report on SPIE 2018 Smart Structures/NDE conference (Zoubeida Ounaies)
 - 9.1. Z: In Denver Colorado, March 3-7th, 2019 Same hotel as last year. Our community organizes about 4 of these conferences. Names and people organizing these need to be updated.
 - 9.2. 2018 – Symposium Chairs: Tribikram Kundu and Greg Reich; Symposium Co-Chairs: Zoubeida Ounaies and Hoon Sohn
 - 9.3. Report on Specific Conferences at SPIE
 - 9.3.1. Active and Passive Smart Structures and Integrated Systems (Chair: Alper E Turk co-Chair: Jae-Hung Han)
 - 9.3.2. Behavior and Mechanics of Multifunctional Materials and Composites (Chair: Hani Naguib, co-Chair: Nakhiah Goulbourne)
 - 9.3.3. Nano-, Bio-, Info-Tech Sensors and 3D Systems (Chair: Varadan co-Chairs: Khosla/Furukawa/Kim/Song/Choi/Roh)
 - 9.3.4. Nondestructive Characterization and Monitoring of Advanced Materials, Aerospace, Civil Infrastructure, and Transportation (Chair: Shull co-Chairs: Gyekenyesi/Yu/Wu)
 - 9.3.5. Health Monitoring of Structural and Biological Systems (Chair: Kundu co-Chair: Fromme)
 - 9.3.6. Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems (Chair: Hoon Sohn, co-Chairs: Jerome Lynch and Kon-Well Wang)
 - 9.3.7. Smart Materials and Nondestructive Evaluation for Energy Systems (Chair: Theodore Matikas, co-Chair: Cara Peters, Norbert Meyendorf, Chris Niezrecki)
 - 9.3.8. Smart Structures and NDE for Industry 4.0 (Chair: Norbert Meyendorf co-Chair: Clingman)
10. Report on AIAA/ASME/AHS Adaptive Structures Conference (Darren Hartl)
 - 10.1. Darren: Primary event is the organizing a symposium at ASC.
 - 10.2. 2018 - January 8-12, 2018 Kissimmee, FL
 - 10.2.1. Down to 25 papers.
 - 10.3. 2019 – January 7-11, 2019 San Diego, CA
 - 10.3.1. Numbers are way up – maybe 35-40 papers. A couple of joint sessions with other conferences.
11. Report on International Conference on Adaptive Structures & Technology (ICAST) (Nam Seo GOO)
 - 11.1. Roger: 2020 in Canada. 2023 will be Paris
 - 11.2. 2018 – October 3-5, 2017, Cracow, Poland.
 - 11.3. 2019 – September 30 - October 4, 2018, Konkuk University, Seoul, Republic of Korea.
12. Honorific Subcommittee
 - 12.1. ASME Adaptive Structures and Material Systems Prize (Presented by: Ralph Smith, Awardee: Diann Brei)
 - 12.1.1. Ralph: Strong list of candidates this year. Send nominations to Ralph Smith. Rest of pool in it for the next 3 years.
 - 12.2. Gary Anderson Award (Presented by: Cornel Ciocanel, Awardee: Andres F. Arrieta)
 - 12.2.1. Darren: Congratulate Andres again this year.
 - 12.3. ASMS Best Paper Awards
 - 12.3.1. Structures and Structural Dynamics (Presented by: Cornel Ciocanel)
 - A. Pagano, T. Yan, B. Chien, A. Wissa and S. Tawfik, “A Crawling Robot Driven by Multi-Stable Origami,” Smart Materials and Structures, Vol. 26, No. 9, 094007, 2017.
 - a. Applause
 - 12.3.2. Mechanics and Materials System (Presented by: Cornel Ciocanel)

Tyler Tallman, Sila Gungor, Goon mo Koo, Charles Bakis, “On the inverse determination of displacements, strains, and stresses in a carbon nanofiber/polyurethane nanocomposite from conductivity data obtained via electrical impedance tomography”

Applause

- 12.3.3. Ephraim Garcia Best Paper Award (Presented by: Cornel Ciocanel)
Darren Hartl, Jacob Mingear, Brent Bielefeldt, John Rohmer, Jessica Zamarripa, Alaa Elwany , “Towards High-Frequency Shape Memory Alloy Actuators Incorporating Liquid Metal Energy Circuits”

Applause

12.4. TC Best Paper Awards

- 12.4.1. Energy Harvesting (Presented by: Ryan Harne/Steve Anton)
Caldwell, Nicholas B., Daqaq, Mohammed F., “Exploiting the principle parametric resonance of an electric oscillator for vibration energy harvesting”

12.4.2. Adaptive Systems Dynamics and Controls (Presented by: Rocco Vertechy/Manuel Collet)

- a. Pietro Bilancia, Giovanni Berselli, Umberto Scarcia, Gianluca Palli, “Design of a beam-based variable stiffness actuator via shape optimization in a CAD/CAE environment”
- b. Amanda Skalitzy, Austin Gurley, David Beale, Kyle Kubik, “Design and Analysis of SMA Woven Fabric”

12.5. ASME Fellow Nominations and New Fellows (Marcelo Dapino)

12.5.1. Marcelo: No new news. Box on roster to communicate eligibility. On SPIE side, there are 2 new members. 4 new SPIE senior members. To become SPIE fellow, need to be senior member first.

13. Bylaws Updates (Cornel Ciocanel)

13.1.1. Cornel: We should form a committee to review the bylaws since the bylaws have not been updated since 2013. It’s time to review and update. I would like to put a motion to put a committee to look at the bylaws.

13.1.2. Marcelo: We brought changes made to the bylaws to groups to vote on them. He did not recall forming committee to do this, instead used executive committee to make changes.

13.1.2.1. Diann: People can learn a lot by revising the bylaws. I recommend new upcoming leadership to take on making the edits to the bylaws and have senior faculty review it. We should engage current leadership.

13.1.3. Cornel: It is appropriate to start at the leadership level.

13.1.4. Marcelo: TCs should provide input.

13.2. Previous meeting requirements for new members (Cornel Ciocanel)

13.3. Role and definition of Treasurer (Gary Seidel)

14. Branch web site report (Onur Bilgen)

14.1. Onur: website serves as permanent repository for TCs. Need help to make sure content is accurate.

14.2. ASME Website status update:

14.2.1. Members/officers list updated

14.2.2. SMASIS 2018 Agenda uploaded

14.3. Website/domain/YouTube report for the Meeting at SPIE:

15. Ascension of Branch Chair (Cornel Ciocanel)

16. Ascension of Branch Co-Chair (Darren Hartl)
17. Ascension of Branch Treasurer (Gary Seidel)
18. Vote on Branch Treasurer (Darren Hartl)
 - 18.1. Requests nominations from body
 - 18.1.1. **Darren: Mike Philen elected as Treasurer of the Branch.**
19. Nomination of new Branch members (Darren Hartl)
 - 19.1.1. **Motion to reinstate Sergio and Paul Alexander as Members – reinstatements.**
 - Call for nominations.
 - Review of nomination slide(s).
 - 19.2. Marco Fontana nominated by Rocco Vertechy
 - 19.3. Kazuko Fuchi nominated by Rich Beblo
 - 19.4. Amir Ameli by Hani Naguib
 - 19.5. Jovana Jovanova nominated by Mary Frecker
 - 19.6. Ben Grisso by Steve Anton
 - Motion to approve all 5 candidates for membership. All 5 have been approved.**
20. Adjourn