

## Biomedical Ultrasound/Bioresponse to Vibration

The most significant event related to the TC over the past year was the decision to change the name to Biomedical Acoustics. The name change was initially discussed in Portland at the Thursday night TC meeting and the consensus was that it was time for a shorter and more representative name for the TC. The discussion was continued in San Antonio and an initial vote was taken to change the name to Biomedical Acoustics (BA). Due to the low number of attendees at the TC meeting, a follow-up-email vote of all ASA members with BB as their primary interest was taken and 100% of the 90 respondents voted to change the name of the TC to Biomedical Acoustics. On the final day of the Baltimore meeting, the Executive Council approved the name change. The full name change will take some time to propagate through all official documents, but should be fully in place by the Seattle meeting in Spring of 2011.

The 158<sup>th</sup> ASA meeting in San Antonio was a relatively relaxing week. There was a single special session spanning morning to afternoon titled "Multiple Scattering of Waves: From Theory to Application" chaired by Guillaume Haiat and Purnima Ratilal. There were two contributed sessions "Bubbles, Cavitation, and Heating" chaired by Parag Chitnis and "Imaging, Therapy, and Propagation" chaired by Mark Wochner. Co-sponsored sessions included "40<sup>th</sup> Anniversary of the Khokhlov-Zabolotskaya (KZ) Equation" and "Light and Sound in Science, Engineering, and Medicine". Mark Wochner acted as the TPOM representative for the meeting. Members active in BB that received the honor of Fellow included Michael Averkiou, Constantine Coussios, Diane Dalecki, Mostafa Fatemi, Kullervo Hynynen, Michael Insana, Andrew Szeri, Shin-ichiro Umemura, and Oleg Sapozhnikov. Hats off to Christy Holland on the Membership Committee for efficiently handling the large number of applicants that came through all at once. In addition, Christy Holland was one of four speakers for the short course titled "Acoustical Imaging Applications: Seismic, Underwater, Biomedical, and Speech" and Stanislav Emelianov presented the BB Hot Topics in Acoustics talk titled "Biomedical Photoacoustics: From Sensing to Imaging to Therapy". Finally, Lucie Somaglino finished her term as Student Council Representative and Derek Thomas was elected as the new student representative to BB.

Special sessions (and organizers) at the 159<sup>th</sup> ASA meeting in Baltimore included 1) "Ultrasonic Characterization of Bone" (Keith Wear), 2) "Ultrasound Induced Cellular Bioeffects" (Carr Everbach), 3) "Numerical Modeling for Medical Ultrasound" (Robert McGough and Vera Khokhlova), 4) "Ultrasonically Activated Agents" (Oliver Kripfgans), and 5) "Blast-induced Traumatic Brain Injury: Mechanisms, Assessment, Therapy, and Mitigation" (Steve Kargl, Willy Moss and Tom Matula). Also, thank you to the Contributed Session Chairs Parag Chitnis, Matthew Urban, Diane Dalecki, and James McLaughlin. Keith Wear and Carr Everbach were the TPOM representatives for the meeting. The Student Paper Award was given to Kelley Garvin for her paper "Ultrasound standing wave fields induce endothelial cell sprouting within three-dimensional engineered tissue" and 2<sup>nd</sup> prize went to Christian Anderson for his paper "Comparison of conventional ultrasonic phase velocity and attenuation measurements of cancellous bone to estimates obtained using Bayesian probability theory." Members active in BB that received the honor of Fellow included Jean-Yves Chapelon, Pascal Laugier, and Keith Wear. And last but not least, our very own Ron Roy received the Helmholtz-Rayleigh

Interdisciplinary Silver Medal for his work in BB and PA. We are all very proud of him and will be lining up to imbibe his wisdom.

A few items of business arose in Baltimore at the Thursday night TC meeting. First, Charlie Church replaced Tim Leighton as the POMA Associate Editor for BB. Second, Tyrone Porter is Chair, along with Kevin Haworth and Todd Hay, of an Ad Hoc Committee to revise the format of the student paper competition for BB. A discussion ensued about how to organize the student paper competition and it was decided to try a poster format in Seattle. Students will present their normal oral presentation but a separate poster session will be organized at which the students will briefly summarize their work to a panel of judges. The judges will confer and then award the prizes. The feeling was that this will provide a more uniform judging format and will give the students a chance to discuss their work with a wide variety of attendees. We will decide whether or not to continue this format based on feedback from participants.

Finally, Christy Holland, Charlie Church, Doug Mast and Ron Roy served on an Ad Hoc Committee to revise the scope of the TC (Rules, Appendix A). The current draft was discussed, slightly modified, and then the attendees voted unanimously to adopt the new scope. The new scope for the TC is: Concerned with the study of the interactions of acoustic waves with biological materials, including cells, tissues, organ systems and entire organisms. Relevant areas of interest include but are not limited to: 1.) Diagnostic and therapeutic applications of acoustics in medicine, 2.) Biological effects of exposure to mechanical vibration and acoustic waves, 3.) Acoustic propagation in biological materials, 4.) Instrumentation, 5.) Ultrasound field calibration, exposimetry and dosimetry, 6.) Ultrasound contrast agents, 7.) Medical image and signal processing, 8.) Characterization and processing of biological materials, and 9.) Physiological measurements.

In addition to everyone who volunteered to help this past year, we would like to acknowledge the contribution of some specific individuals. The Associate Editors of JASA and JASA-EL for BB related areas are Charles Church, Doug Miller, Doug Mast, Robin Cleveland, Mardi Hastings, Oleg Sapozhnikov, Paul Barbone, Joel Mobley, Steve Kargl, Mark Hamilton, Tom Matula, Joel Mobley, and Andrew Szeri. Shira Broschat is the outgoing webmaster of the former BB website and the Chair will act as webmaster of the new BA site (<http://acosoc.org/TechComm/BATC>). Lawrence Crum is the representative to the Medals and Awards Committee. Christy Holland is the representative to the Membership Committee. Steve Kargl is the representative on a committee to update the PACS structure. Peter Kaczowski and Vera Khokhlova are the representatives to ASACOS.

Jeffrey Ketterling

Chair, 2009-2011