

2017-2018 Annual Reports

Biomedical Acoustics

This annual report summarizes the activities within the Biomedical Acoustics TC during the Boston meeting (Spring 2017) and through the New Orleans meeting (Fall 2017). The 173rd ASA meeting was held in Boston, MA. The special sessions were “Standardization for Ultrasound Medical Devices” organized by Subha Maruvada and Volker Wilkens; “PDE Constrained and Heuristic Inverse Methods in Elastography” organized by Mahdi Bayat and Wilkins Aquino; “Beamforming and Image Guided Therapy” organized by Costas Arvanitis, Meaghan O’Reilly, and Constantin-C. Coussios; “Beamforming and Image Reconstruction (joint with PA)” organized by Martin D. Verweij and Hendrik J. Vos; “Impact of Soft Tissue Inhomogeneities and Bone/air on Ultrasound Propagation in the Body” organized by Vera A. Khokhlova and Robin O. Cleveland; and “Session in Honor of Edwin Carstensen” (joint with PA and UW) organized by David Blackstock. The TPOM representatives for the meeting were Kang Kim and Siddhartha Sikdar.

We had an eventful BATC meeting on Wednesday night with over 40 attendees. At this meeting, we discussed Task Force I (Awareness of Acoustics) and possible recruitment to help develop video content that promotes BATC activities via social media. BA agreed to support a proposal for a future ASA meeting to be held in Sydney, Australia and technical initiatives to support PASS 2018 and the 2018 Symposium on Nonlinear Acoustics. A request was made for additional associate editors.

Many thanks to our continuing representatives: Tom Matula (Membership Committee), Constantine Coussios, Wayne Kreider (ASACOS), and Sanjay Yengul (Student Council chair). We welcomed the Tao Sun as incoming student council representative and Subha Maruvada as incoming BACT chair.

We had an outstanding student poster competition in Boston. This poster competition was organized and coordinated by Kevin Haworth. First place went to Ying Zhang for his poster “Interaction between lithotripsy-induced surface acoustic waves and pre-existing cracks.”

Second place went to Clair Rabut on her poster “Full 3D dynamic functional ultrasound imaging of neuronal activity in mice.” Third place went to Natalia Ilyina for her poster “Model-based ultrasound attenuation estimation.” The poster judges in Boston were Costas Arvanitis, Paul Barbone, Hong Chen, Larry Crum, Teresa Herd, Klazina Kooiman, Pieter Kruizinga, Bob McGough, Doug Mast, Karla Mercado, Himanshu Shekhar, Mengxing Tang, Brian Tracey, Matt Urban, Michel Versluis, Martin Verweij, and Rik Vos. We also had the privilege of congratulating Elisa Konafagou and Tyrone Porter as new ASA Fellows and Brad Treeby for being awarded the Bruce Lindsay Award. The 174th ASA meeting was held in New Orleans, LA. The special sessions were “Wave Propagation in Complex Media: From Theory to Applications (Joint with SA and Vibration and PA)” organized by Guillaume Haiat and Pierre

Belanger and “Ultrasound-Mediated Neuromodulation” organized by Parag Chitnis. The TPOM representatives for the meeting were Siddhartha Sikdar and Kang Kim.

The BATC meeting on Wednesday evening was also eventful, with 30 attendees. We discussed the results of the International Meeting survey where BA voted to have international meetings every 2–3 years over 4–5 years or 10 years. The consensus was to have international meetings every 4 years. We also discussed the Awareness of Acoustics outreach initiative and the need to have all ASA members update the exploresound.org database. In other topics, a BA technical initiative idea was proposed involving future educational workshops on ultrasound simulation packages. It was proposed that the first workshop would be on the FOCUS software and taught by Bob McGough. A technical initiative to fund this workshop was submitted to TC. The workshop was proposed for the Louisville meeting.

The efforts of everyone who contributed to the Biomedical Acoustics Technical Committee this past year are gratefully acknowledged. This includes, but is not limited to, incoming and outgoing BATC representatives on committees (Medals and Awards, Membership, and ASACOS) for the Acoustical Society, Associate Editors, special session organizers, session chairs, the student council representative, poster session judges, and the poster session organizer. The Associate Editors of JASA and JASA-EL for BA related areas are W. W. L. Au, C. C. Church, R. R. Fay, J. J. Finneran, M. C. Hastings, G. Ha€iat, D. K. Mellinger, D. L. Miller, A. N.

Popper, T. J. Royston, A. M. Simmons, C. E. Taylor, K. A. Wear, and Suk Wang Yoon. Timothy G. Leighton is the BA editor for POMA. I would also like to thank everyone else who contributed to or participated in Biomedical Acoustics activities during the past year. See you in Victoria.

SUBHA MARUVADA

Chair, 2017–2020

Biomedical Acoustics Technical Committee