**2017 Annual Reports**

Technical Committees represent thirteen different areas of acoustics in the Society. Appointments to the Technical Committees take place in January. Members who are interested in being appointed to a technical committee should send a message to asa@acousticalsociety.org.

Acoustical Oceanography (AO)

Animal Bioacoustics (AB)

Architectural Acoustics (AA)

Biomedical Acoustics (BA)

Engineering Acoustics (EA)

Musical Acoustics (MU)

Noise (NS)

Physical Acoustics (PA)

Psychological and Physiological Acoustics (PP)

Signal Processing in Acoustics (SP)

Speech Communication (SC)

Structural Acoustics and Vibration (SA)

Underwater Acoustics (UW)

**Acoustical Oceanography**

This annual report reviews activities of the Technical Committee on Acoustical Oceanography (TCAO) for the 174th and 175th meetings of Acoustical Society of America (ASA) in New Orleans, Louisiana and in

Minneapolis, Minnesota. While we took our foot off the gas pedal this year after two internationally coordinated meetings in the previous year the AOTC enjoyed a wonderfully productive and eventful year.

A highlight is always our special sessions where we heard from scores of our talented researchers including 20 student papers. Here we focused on the topics of (1) Oceanographic contributions to ocean soundscapes, (2) Acoustic scattering from hydrocarbons and hydrothermal vent systems, (3) Biological effects on seabed geoacoustics, (4) Acoustics in estuaries, bays, inlets, fjords, and rivers, (5) Acoustic seabed characterization, and (6) Ambient noise oceanography in polar regions. I thank all my skilled session organizers for their successful planning and execution of their sessions, many of which were live broadcast.

Over the year there were also several awards to be celebrated. At the New Orleans meeting Woods Hole Oceanographic Institution (WHOI) Senior Scientist Dr. Andone Lavery was the recipient of the 2017 Walter Munk Award where she delivered the prize lecture entitled “New platforms, technologies, and approaches for remote inference of physical and biological parameters using acoustic scattering techniques.” Her citation reads “Through discrimination between the scattering by zooplankton and physical microstructure using broadband acoustic measurement methods and models, Andone Lavery has quantified important biological and physical parameters leading to new understanding of both ocean physical processes and marine biology.” Also at the New Orleans meeting we acknowledged AO founding father Michael Buckingham for his Pioneers of Underwater Acoustics Silver medal, awarded to him by the Underwater Acoustics Technical Committee. Michael’s citation reads “For contributions to the understanding of ocean ambient noise and marine sediment acoustics.” Following along at the Minneapolis meeting WHOI Associate Scientist Y. T. Lin was recognized with the AOTC Medwin Prize. Dr. Lin’s prize lecture was entitled “Three-dimensional shallow water sound propagation and applications toward acoustical oceanography,” and his citation reads “For fundamental advances in 3-D shallow water acoustics and applications to geoacoustic inversion and marine mammal acoustics.”

The AO students also shined during this past year with several exemplary papers. Award winners for New Orleans were in first place Elizabeth Weidner of the University of New Hampshire (UNH) with her paper entitled “Investigating bubble transport and fate in the watercolumn with calibrated broadband split-beam echosounder data” and in second place Jay Johnson of the University of Texas at Austin (UTA) with his paper “Variations in ultrasonic transmission behavior along seagras

s leaf blades.”

In Minneapolis the first place paper was given by Josee Belcourt of the University of Victoria with the title “Gradient-based Bayesian geoacoustic inversion for sediment properties at the New England mud patch” and getting equal second places was Matthew Zeh of UTA with his talk entitled “Acoustical characteristics and contributions of bubbles released from melting glacier ice” and Elisabeth Brown from Rensselaer Polytechnic Institute for her paper entitled “Implications from a clay/silt suspension model of mud for data from the Seabed Characterization Experiment.” Well done students and I must say you made the judges life quite difficult because of the high quality of your work.

Continuing on the topic of awards, the AO and Underwater Acoustics (UW) technical committees are pleased to announce the establishment of the yearly Urick prize for the best AO or UW student paper

published in the Journal of the Acoustical Society. The $500 prize is named in honor of Dr. Robert Urick of Catholic University of America who authored the classic and still very popular text book Principles of

Underwater Sound. We thank Charles Wiseman for helping establish the prize by offering to use a portion of the royalties from an upcoming reissuing of the Urick text. We also thank Jim Miller, Chair of the Acoustical Society Foundation Board for turning the idea into a reality.

Last, I want to thank everyone in the TC for all the effort that they put out this year in creating an energetic and dynamic atmosphere in AO and the greater society as a whole. We look forward to a productive and exciting year ahead.

JOHN A. COLOSI

Chair, 2016–2019

**Animal Bioacoustics**

After two very large meetings in a row (Honolulu, December 2016 and Boston, June 2017), the recent two meetings (New Orleans, December 2017 and Minneapolis, May 2018) were smaller and very peaceful for Animal Bioacoustics.

In New Orleans, we had five special sessions: “Bioacoustic Contributions to Underwater and Terrestrial Soundscapes,” “Neurophysiology of Echolocation,” “General Biosonar,” “General Bioacoustics,” and a session

“In Memory of George Ioup: Acoustics in the Gulf of Mexico.” Thirteen students entered the Animal Bioacoustics Student Presentation Award Competition, with Kali Burke taking first prize for her presentation on “Exposure-induced changes in laboratory mouse ultrasonic vocalizations” and Jack LeBien taking second prize for his presentation on “Species-level classification and clustering of beaked whale echolocation recordings.”

In Minneapolis, we had five special sessions: “Bat and Biomimetic Sonar,” “Plant Bioacoustics,” “Lessons on Auditory Perception from Exploring Insect Hearing,” “Animal Sound Production and Hearing,” and “History of Animal Bioacoustics.” The latter session highlighted research achievements in Animal Bioacoustics from the past century and was extremely well received, with requests to host this session again in the near future. Again, 13 students entered the Student Presentation Award Competition, with Jay Johnson winning first prize for “Ultrasonic transmission behavior in Posidonia oceanica rhizomes” and Xavier Mouy winning second prize for “Analysis of haddock (Melanogrammus aeglefinus) sounds recorded in the Northwest Atlantic.”

In terms of Animal Bioacoustics Technical initiatives for the year 2018, the ASA generously supported the International Congress of Neuroethology in Brisbane, an Animal Sonar Workshop in Brisbane, and the SeaBASS summer school in New Hampshire. Our Technical Committee is actively involved in the development of acoustic standards. We currently have working groups on the Effects of Sound on Fish and Turtles; Towed Array Passive Acoustic Operations for Bioacoustic Applications; Description and Measurement of the Ambient Sound in Parks, Wilderness Areas, and Other Quiet and/or Pristine Areas; Noise and Vibration in Animal Laboratory Facilities; Auditory Evoked Potential Testing of Toothed Whale Hearing; and Acoustic Metadata for Passive Acoustic Monitoring. Everybody is welcome to joint and actively participate.

Thank you to all the members of the Animal Bioacoustics Technical Committee for your support and involvement in the various activities of the ASA.

CHRISTINE ERBE

Chair, 2015–2018

**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 Acquino; “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 with 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€ıat, 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

**Engineering Acoustics**

This annual report reviews the efforts in Engineering Acoustics (EA) from the 173th June meeting in Boston, Massachusetts, to the 175th May meeting in Minneapolis, Minnesota. In that time span, the members and supporters of Engineering Acoustics produced 39 JASA articles in Engineering Acoustics.

The preference of the membership is for the EA committee meeting to be held at 4:30 p.m. on Tuesday if the program will allow. The program for Boston was too full but the EA meeting returned to 4:30 p.m. in subsequent meetings. The EA session on Sunday in Boston was chaired by Stephane Durand. Monday’s special sessions (2aEA, 2pEA) on “Ducts and Mufflers” were chaired by Mats A ° bom and David Herrin. The special sessions (3aEA,3pEA, 4aEAa) on Microelectromechanical Systems (MEMS) Acoustic Sensors was chaired by Vahid Naderyan, Kheirollah Sepahvand, and Robert D. White. Engineering Acoustics Topics (4aEAb) was chaired by Lane P. Miller and Hubert S. Hall. Thursday morning’s EA topics were chaired by Jordan Cheer and Andrew W. Avent. The afternoon session was chaired by Alexander L. Butler and Ferina Saati Khosroshahi. The best student presentation was given by Song Wang (5pEAa10) on “Generalized finite difference time domain simulation on acoustical moving boundary problems.”

The December 2017 session in New Orleans (174th meeting) had mixed weather, and a snowstorm closed the airport on Friday which caused delays for homeward bound travelers. The general topics in acoustics (1aEAa, 1aEAb, 1pEAa, 1pEAb, and 2pEA) were chaired by Kenneth Walsh. The special session on Thermophone Transduction (2aEA) was chaired by Thomas R. Howarth and Andrew R. Barnard. A contributed paper in this topic by Mahsa Asgarisabet was judged as best student paper. The EA meeting was held on Tuesday, December 5, at 4:30 p.m.

The main business was the election of a new EA Chair since the three-year term of Dr. K. M. Walsh ended with the Spring meeting. The election was conducted between the New Orleans meeting and the 175th meeting in Minneapolis. Dr. Mike Haberman was elected as EA Chair for the next three years.

The 175th meeting opened in Minneapolis on May 7, 2018. The first EA special session was on Miniature Acoustic Transducers, which was held on Tuesday and chaired by Vahid Naderyan. General Studies on Transducers was held on Wednesday and was chaired by K. M. Walsh.

The second special session held on Thursday was chaired by Dehua Huang on Advanced Transduction Technologies. The EA committee meeting took place at 4:30 on Tuesday. Mike Haberman was introduced as the newly elected EA Chair. The best student paper was by Athanasios Athanassiadis of MIT.

It has been an interesting three years and I have enjoyed working with everyone at ASA, in particular Elaine Moran. Her support and guidance were indispensable. I am looking forward to going to future meetings where I can relax and just enjoy the presentations. Thank you for the support over the last three years.

KEN WALSH

Chair, 2015–2018

**Musical Acoustics**

During 2017–2018 the Technical Committee on Musical Acoustics (TCMU) was chaired by Andrew Morrison. The representatives to the Society committees were: James P. Cottingham, Medals and Awards; Andrew Morrison, Committee on Standards and the Publication Policy Committee; James Beauchamp, Membership; and Martin Lawless, Student Council. Associate editors of the society publications for the area of musical acoustics were Tamara Smyth, Thomas Moore, Andrew Morrison, and Joe Wolf (JASA); D. Murray Campbell and Thomas Moore (JASA Express Letters); and Randy Worland (POMA). The Technical Program

Organizing Committee (TPOM) representatives for the two meetings of the ASA were Whitney Coyle and Peter Rucz. Gary P. Scavone of McGill University was recognized as an ASA Fellow for contributions to the analysis and modeling of musical instruments. Those appointed or reappointed as TCMU members during the year were: Ernesto Accolti, Judit Angster, Rolf Bader, Xavier Boutillon, Jonas Braasch, Murray D. Campbell, Rene E. Causse, Whitney L. Coyle, Nicholas J. Giordano, William M. Hartmann, Keith A. Moore, Andrew Piacsek, John C. Price, Brad H. Story, Sten O. Ternstrom, Stephen C. Thompson, George Tzanetakis, Christopher E. Waltham, Randy S. Worland, and Shigeru Yoshikawa.

At the 174th meeting of the ASA in New Orleans, December 4–8, 2017, the TCMU sponsored three special sessions and one general session. The three special sessions were: “Marching Band Instruments” chaired by Murray Campbell, “Cajun Music: Accordions, Culture, and History” chaired by Jim Cottingham, and “Measurement Methods and Instrumentation for Musical Acoustics” co-chaired by Thomas Moore and Wilfried Kausel. The general topics in musical acoustics session was chaired by Whitney Coyle. Winners of the award for best student papers were Montserrat Pamies-Vila and Lauren Neldner. At the 175th ASA meeting in Minneapolis, May 7–11, 2018, the TCMU sponsored one general and two special sessions. The special sessions were: “Acoustics of Choirs and Vocal Ensembles” chaired by Jim Cottingham, “Sound Effects and Perception” chaired by Jonas Braasch. The general topics in musical acoustics session was chaired by Taffeta Elliott. Colin Drown, Richard Lissemore, and Susan Bissemeyer won awards for Best Student Papers.

James Cottingham continues to maintain an excellent website for TCMU, which can be accessed at http://tcmuasa.org/. It includes links to future meetings, minutes of previous TCMU meetings, annual reports, student paper award winners, and useful links to teaching websites and musical acousticians.

ANDREW J. MORRISON

Chair, 2014–2020

**Noise**

During 2016–17, the membership of the Technical Committee on Noise has been active in the Society and been honored to serve. Two members, Patricia Davies and Christopher Struck, were honored as Fellows in May 2018. Peggy Nelson was elected to serve as the vice president elect and was a co-chair of the Minneapolis meeting. Scott Sommerfeldt is serving as the vice president. Lily Wang is the current president of the Society. All have been active within TCNS through chairing sessions and helping to organize recent meetings.

TCNS has promoted the development of upcoming talent. This year marks the third year of the Leo and Gabriela Beranek Scholarship in Architectural Acoustics and Noise Control. This year’s recipient is Ms. Kieren Smith who is pursuing her Ph.D. in Architectural Engineering Acoustics at University of Nebraska-Lincoln. Kieren is a graduate of Brigham Young University in Physics with a Mathematics minor. In addition, this year is the second year for the Virginia and Frank Winker Memorial Scholarship for Graduate Study in Acoustics. This year’s recipient is Mr. Caleb Goates who is pursuing a Master of Science degree in Physics and Astronomy at Brigham Young University. Caleb is also a graduate of the Brigham Young University having earned his Bachelor of Science in Applied Physics. Coincidentally, we note that the advisors for these two scholars are Drs. Lily Wang and Scott Sommerfeldt for Keiren and Caleb, respectively. As the outgoing TCNS Chair, I would encourage faculty at all universities to encourage students to apply for these two scholarships. I, along with the members of the Beranek scholarship committee [Eric Reuter (Chair TCAA), Tony Hoover, Alex Case, Carl Rosenberg] and the Winker scholarship committee [Christopher Struck (ASA Standards Director), Eric Reuter (Chair TCAA), and Ken Walsh (Chair TCEA)] have been privileged to review the applications of the students.

TCNS has honored several Young Investigators for the excellent paper that they have presented at the New Orleans and Minneapolis meetings. In New Orleans, Christopher Jasinski presented a paper entitled “Acoustic excitation impact on aerodynamic drag measured in aeroacoustic liners.” Jay Bleifnick presented a paper entitled “Evaluating hospital soundscapes to improve patient experience.” In Minneapolis, three papers were honored for the Young Investigator awards. Simon Benacchio presented a paper entitled “Acoustical corrections to be used for improved inear noise dosimetry measurements.” Fabien Bonnet presented a paper entitled “Application of a registration method on magnetic resonance images to evaluate the displacement field of a human subject ear canal to various earplug insertions.” Yutong Xue presented a paper entitled “Fibrous material microstructure design for optimal structural damping.” Congratulations to each of these young investigators.

One of the new efforts undertaken by the Society and promoted by the TCNS is the International Noise Awareness Day. Brigitte Schulte-Fortkamp championed the outreach for the ASA and Lily Wang organized our participation on April 25. Lily Wang moderated an online Google Hangout discussion with Arlene Bronzaft, Bennett Brooks, William Murphy, Peggy Nelson, and Brigitte Schulte-Fortkamp. The teleconference was recorded and will be posted on the ASA’s YouTube channel.

The 174th meeting of the ASA was held in New Orleans with 6 TCNS-led sessions and 66 papers presented. David Woolworth and William Murphy served as the TPOM representatives. The 175th meeting of the ASA was held in Minneapolis. At this meeting, 54 papers were presented in six noise-led sessions. For the Boston Meeting, Peggy Nelson and William Murphy were the TPOM representatives. At both meetings, numerous other sessions were co-sponsored by TCNS.

Thanks to following people who have represented TCNS within the ASA during this time: Kirill Horoshenko and Brigitte Schulte-Fortkamp on the Medals and Awards Committee, Alex Case on the Membership Committee, John Weber on Student Council, Rich Peppin on ASACOS (Committee on Standards), and Christopher Struck, Standards Chair. For the Young Investigator Award, William Murphy coordinated both the New Orleans and Minneapolis meetings. The JASA Associate Editors for Noise are Giovanni Brambilla, Sanford Fidell, Kirill Horoshenkov, Yun Jing, Ray Kirby, Alexandra Lobeau, William Murphy, and Alan Wall.

The JASA Express Letters Associate Editor for Noise is Eddie Lau. The Editor for the Proceedings of Meetings in Acoustics is Kent Gee with Alan Wall, Alexandra Lobeau and Cameron Fackler serving as associate editors.

I wish to express my gratitude to the members of TCNS for having had the confidence to allow me to serve as their representative to the Technical Council for the past three years. I am thankful that Scott Sommerfeldt asked me to stand for election. Lily Wang—Thank you for being a joyful servant on the Technical Council. I have had the opportunity to develop procedures and to select the recipients of the Beranek and Winker scholarships. I have enjoyed working with the members of those committees.

The past and current presidents and vice presidents of the Society have invested countless hours to ensure that the Acoustical Society of America remains a strong and authoritative source for acoustic knowledge. I look forward to being able to support the incoming TCNS chair, James Phillips. Finally, those who have served in any office within the Society know that at the heart of the ASA is its staff. Elaine, Jolene, Lou, Kelly, Susan, Dan we would owe you a debt that cannot be repaid for your devotion to excellence and service.

WILLIAM J. MURPHY

Chair, 2015–2018

**Physical Acoustics**

This report summarizes activities of the Physical Acoustics Technical Committee following the Boston meeting (Spring 2017) and includes the New Orleans meeting (Fall 2017) and the Minneapolis meeting (Spring 2018). I shadowed Josh Gladden (PATC chair 2014–2017) at the Boston meeting and started my term as TC chair at the New Orleans meeting

The 174th meeting in New Orleans included several special sessions: “30th Anniversary of the National Center for Physical Acoustics,” Richard Raspet, Craig Hickey, and Josh Gladden (live streamed); “Sound Used as an Investigative Tool for Industrial Solutions,” Gabriela Petculescu; Acoustofluidics, Kedar Chitale and Max Denis; “Infrasound, Atmospheric Sound Propagation, and Turbulence,” Roger Waxler; “Acoustics of Detecting Gravitational Waves using LIGO,” Josh Gladden and Kenneth Gilbert; “Nonlinear Elasticity in Geomaterials,” Marcel Remillieux and Pierre-yves Le Bas. Jay Maynard was selected to replace Carr Everbach as PA representative on Medals and Awards committee. Details of the Physical Acoustics Summer School (PASS) were announced, and a committee was formed to discuss options for a student paper award at future ASA meetings. Kent Gee will chair this effort.

The 175th Meeting in Minneapolis had 5 special sessions, three of which were live streamed: “Novel Methods in Computational Acoustics I and II,” D. Keith Wilson, Amanda Hanford; “Infrasound for Global Security I and II,” Philip Blom; “Ultrasound and High Frequency Sound in Air in Public and Work Places: Applications, Devices and Effects,” Timothy Leighton and Craig Dolder; “Sonic Boom I and II,” Alexandra Loubeau and Joel Lonzaga. Thanks to the efforts of Kent Gee, a student paper award competition is put in place and the first award will be announced at the Victoria Meeting.

VEERLE M. KEPPENS

Chair, 2017–2020

**Psychological and Physiological Acoustics**

The Technical Committee on Psychological and Physiological Acoustics (PPTC) was chaired by Magdalena Wojtczak from 2014–2017 and after the Boston meeting in June 2017, I took over as Chair. My first meeting as Chair was New Orleans in December 2017. Fall meetings are generally less well attended by PPTC, and there were two poster sessions and one podium session organized. The technical committee meeting on Tuesday night had about 20 attendees.

The Minneapolis meeting in May 2018 was much more enthusiastically attended by PPTC, with five special sessions and seven other sessions of contributed talks and posters, as well as ten sessions co-sponsored with other technical committees. The Gold Medal was awarded to William Yost in Minneapolis, the von Bekesy medal was awarded to David Kemp (whose work was honored with a special session), and the Hartmann Prize in Auditory Neuroscience was awarded to Shihab Shamma, who presented the Auditory Neuroscience Prize Lecture. Deniz Baskent and Monita Chatterjee were elected ASA Fellows. A special session was devoted to honoring the work of Neal Viemeister. Andrew Oxenham gave the tutorial lecture, “Hearing loss and the future of auditory implants.” Peggy Nelson was Co-Chair of the Meeting Organizing Committee and Andrew Oxenham was the Chair of the Technical Program Organizing Committee, with Anna Diedesch as the PPTC representative.

At the PPTC meeting in Minneapolis, which was attended by over 100 people, we thanked the following members for their service on the PPTC: Matt Goupell, Jungmee Lee, Sunil Puria, and Pat Zurek. Six new members started their terms: Michael Akeroyd, Anna Diedesch, Richard Freyman, Antje Ihlefeld, Alan Kan, and Elin Roverud. Six members have terms continuing until 2019: Huanping Dai, Karen Helfer, Pamela Souza, Elizabeth Strickland, Sarah Verhulst, and Matthew Winn. Seven members have terms that will end in 2020: Joshua Bernstein, Emily Buss, Hari Bharadwaj, Monita Chatterjee, Ross Maddox, Christopher Shera, and Christian Stilp. Six new members who will start their terms in 2019 were elected: Douglas Brungart, David Eddins, Ruth Litovsky, Virginia Richards, G. Christopher Stecker, and Kelly Whiteford.

PPTC is grateful for the many members who contribute to ASA. For JASA, Adrian K. C. Lee is the Coordinating Editor and there are eight Associate Editors for Physiological Acoustics: Carolina Abdala, Ian C. Bruce, Karl Grosh, Philip X. Joris, Adrian K. C. Lee, Brenda Lonsbury-Martin, Christopher A. Shera, and G. Christopher Stecker. There are six Associate Editors for Psychological Acoustics: Les R. Bernstein, Virginia Best, Jonas Braasch, Mathias Dietz, Jennifer Lentz, and Virginia Richards. Brenda Lonsbury-Martin and Qian-Je Fu are the PP Associate Editors for JASA-EL, and Charles Church handles PP for POMA. In 2017–2018 the following PP members served on the following committees: Andrew Oxenham—Executive Council; Peggy Nelson—Acoustical Society Foundation Board, Women in Acoustics; Brenda Lonsbury-Martin—Medals and Awards (Chair); Judy Dubno—Medals and Awards; Marjorie Leek—Membership (Chair); Elizabeth Strickland—Membership; William Hartmann—Rules and Governance; Adam Svec—Education in Acoustics; Mary Florentine—Education in Acoustics; Brian B. Monson—Education in Acoustics; Jont Allen—Archives and History; Skyler Jennings—Standards; Anna Diedesch—Women in Acoustics; Jennifer Lentz—Women in Acoustics, Archives and History; Dorea Ruggles—Women in Acoustics; Elin Roverud—Women in Acoustics, Education in Acoustics; Frederick Gallun—Publication Policy; Tutorials, Short Courses, and Hot Topics; Ethics and Grievances (Chair); Kelly Whiteford—Student Council; Lynne Werner—Strategic Task Force 1;

Adrian KC Lee—Strategic Task Force 3 (Chair).

I completely updated the PPTC webpage (http://tcppasa.org/) in time for the Minneapolis meeting, and any suggestions, corrections, or additions should be submitted using the links on the pages. Over the coming year, the PPTC is already planning many special sessions (four for Victoria, BC and seven for Louisville) and will be continuing to reach out to our colleagues in Physiological Acoustics, clinical researchers, and educators in acoustics and hearing sciences, as well as those emerging scientists in all areas relevant to PPTC through special sessions and technical initiatives.

As Chair of PPTC, I welcome new technical initiatives, special sessions, and any other suggestions that will ensure our part of ASA is vibrant and growing for years to come. I charged the membership at the meeting in Minneapolis to be sure to nominate their deserving colleagues for medals and awards and to be made ASA Fellows. The diversity of PPTC and of ASA is our greatest strength and we must do everything we can to make sure that as wide array of personal backgrounds, areas of expertise, and perspectives as possible are represented and honored at our meetings and in our society.

FREDERICK M. GALLUN

Chair, 2017–2020

**Signal Processing in Acoustics**

The Technical Committee on Signal Processing in Acoustics (TCSP) concludes a productive year highlighted by a wide-ranging set of special sessions addressing various signal processing challenges faced in acoustics.

At our Fall Meeting in New Orleans we hosted four special sessions: “Detection, Classification, Localization and Tracking” was organized by Ballard Blair of MITRE and Lee Culver of Penn State and delivered novel signal processing approaches for small aperture, and high clutter scenarios. “Signal Processing in Acoustic Meta-materials” organized by Jeff Rogers and Matthew Guild of NRL brought together researchers interested in exploiting acoustic meta material and new modalities of sensing with novel methods and implementations. “Exploiting Sources of Opportunity” organized by Kai Gemba of UCSD brought together insightful solutions using opportunistic sources such as vocalizing marine mammals and ship noise

to extract acoustic parameters. “Source Tracking with Microphone/ Hydrophone Arrays” spanned methods, implementations and experimental validation and was organized by Kainam Thomas Wong of Hong Kong Polytechnic University, and Siu-Kit Lau of the National University of Singapore. Our New Orleans Technical Program organizers were Kai Gemba and Zoi-Heleni “Eliza” Michalopoulou of the New Jersey Institute of Technology.

At the Spring 2018 Meeting in Minneapolis we hosted six special sessions; “Time Reversal Acoustics” was organized by Brian Anderson of BYU and revisited a popular topic with diverse acoustic focusing applications. “Acoustics of Virtual Reality” was organized by Buye Xue of Starkey, and Jens Meyers of mh acoustics and addressed analysis of real world acoustic scenes for virtual and augmented reality. “Signal Processing for Complex Environments” organized by Sandra Collier and K. Thomas Wong presented innovative and practical solutions to challenging environments. “Reconfigurable and Conformal Array Processing” organized by Ryan Harne of Ohio State University gave attention to the control of acoustic source topologies for wave field guidance and techniques for conformal, reconfigurable arrays. Lee Culver of Penn State University and K. Thomas Wong organized the special session, “Co-prime and sparse arrays.” Zach Waters of The Naval Research Laboratory organized “Continuous Active Acoustics” bringing together researchers interested in low power high duty cycle active acoustic detection and localization. The Signal Processing program for Minneapolis was organized by Thomas Wong and Buye Xu.

Our Young Presenters Award for New Orleans and Minneapolis were organized and lead by Jeff Rogers. The following presentations were recognized during the New Orleans Meeting: Kamyar Firouzi of Stanford University for “Multi-touch ultrasonic touchscreen,” Ludovic Tenorio-Halle of UCSD for “Double-difference tracking of bowhead whales using unsynchronized directional acoustic recorders in the Beaufort Sea” and Brendan Nichols of Georgia Institute of Technology for “Weighted coherent processing on sparse volumetric vector sensor arrays.” During our Minneapolis meeting the following presentations were recognized: Brian Worthmann of the University of Michigan for his “Cross-term analysis in frequency-difference based source localization methods,” Dane Bush of Rensselaer Polytechnic Institute for “Investigations on n-tuple coprime arrays” and Mallory Morgan of Rensselaer Polytechnic Institute for her “Automatic recognition and immersive representation of environmental soundscapes.”

The TCSP sponsored the Gallery of Acoustics (GoA) at our Spring Minneapolis meeting. Contributors provided a varied, far ranging set of sound displays and visual explanations that captivated the ASA meeting judges. We were pleased to see a wide range of Technical Committees represented at the GoA this year. The presentation “Ultrasonic Wave Propagation Measured with Refracto-Vibrometry” by Benjamin Rorem, Matthew Mehrkens, and Thomas Huber of Gustavos Adolphus College and “Hearing Sounds” by Daniel Smieja of The Hospital for Sick Children were awarded the top 2 places. The GoA is organized by Michael Muhlestein of UT Austin. To see these and past displays please visit the GoA website at http://tcspasa.org/gallery-of-acoustics as you consider putting your research on display and please consider leaving a comment at http://asastudentcouncil.org/boston-asa-gallery-acoustics-submissions/. Our student representative this year has been Sarah Young of BYU. John Buck, UMass Dartmouth represents TCSP before the ASA Committee on Education. James Preisig of JPAnalytics serves as the TCSP representative to the Membership Committee. Ning Xiang serves as representative to the Medals and Awards Committee. Ben Faber serves as TCSP representative to the ASA Committee on Standards. The TCSP website is located at

http://tcspasa.org. The TCSP is served by a talented and conscientious group of associate editors and we are immensely grateful for their patience and care this year. We welcome Jeff Roger as an SP Associate Editor for the Proceedings of the Meetings on Acoustics (POMA), joining Ryan Harne and Paul Hursky of Sonar-synesthetics. Peter Gerstoft of UCSD serves as our coordinating editor to JASA. Our JASA Associate Editors are Zoi-Heleni Michalopoulou, Karim G. Sabra of Georgia Institute of Technology and Kainam Thomas Wong of Hong Kong Polytechnic University. Our JASA Express Letters Associate Editors were Lisa Zurk of Portland State University and Dave Chambers of Lawrence Livermore National Laboratories.

We look forward to our Fall 2018 meeting jointly sponsored with the Canadian Acoustical Association in Victoria Canada. The Technical Committee on Signal Processing has elected Brian Anderson of BYU to serve as Chair for the 2018–2021 term. We are excited to have Brian lead our efforts to advance the theory and methods of inference from ever increasing volumes of acoustic observations.

PAUL GENDRON

Chair, 2015–2018

**Speech Communication**

This report summarizes activities within the Speech Communication TC between the Boston meeting (Spring 2017), the New Orleans meeting (Fall 2018), and the Minneapolis meeting (Spring 2018) Leadership: Current members of the TC are:

Term to 2018

Mary Esther Beckman

Ann R. Bradlow

Cynthia G. Clopper

Ann Cutler

Carol Y. Espy-Wilson

Daniel Fogerty

Mark A. Hasegawa-Johnson

Eric J. Hunter

Mafuyu Kitahara

Laura L. Koenig

Brad H. Story

Keiichi Tajima

Kiyoko Yoneyama

Term to 2019

Tessa C. Bent

Charles B. Chang

Helen M. Hanson

Diane Kewley-Port

Shrikanth S. Narayanan

Liran Oren

Sona Patel

Catherine L. Rogers

Christine H. Shadle

Christian E. Stilp

Maureen L. Stone

Mark Vandam

Emily Q. Wang

Xinhui Zhou

Term to 2020

Christina C. Akbari

Donald Derrick

Terry L. Gottfried

Lori J. Leibold

Lucie Menard

Emily Myers

Tyler K. Perrachione

Megha Sundara

Lynne A. Werner

Ex officio:

Suzanne E. Boyce, member of Membership Committee (replaced by Benjamin Munson as of June 2018)

Anders Lofqvist, member of Medals and Awards Committee

Shae Morgan, member of Student Council

Zhaoyan Zhang, member of ASACOS

Other SC TC members who have provided strong support for the Speech Community include Eric Hunter, who maintains our web page, as well as our Facebook and Twitter accounts and Ann Bradlow who is a member of the Executive Council. Several SCTC members also served on tasks forces formed to the implementation of the ASA Strategic Plan, including Ann Bradlow and Maureen Stone (Financial Stewardship), Tessa Bent (Member engagement and diversity), and Diane Kewley-Port (Dissemination of Information and Knowledge). Alexander Francis has also agreed to represent our TC on the ASA Panel on Public Policy. I also thank Sarah Ferguson, Kelly Berkson, and Emily Wang for taking detailed minutes at the Honolulu and Boston meetings. We appreciate the time and energy contributed by our TC members.

A special thanks to the TC members who will complete their term of service in June 2018.

Publications: Current Associate Editors for JASA are: Speech Production—E. Jacewicz, L. Koenig, and Z. Zhang; Speech Perception—D. Baskent, T. Bent, S. Ferguson, M. Sundara, and B. Tucker; Speech Processing—C. Espy-Wilson, J. Hansen, and M. Mandel. Associate Editors for JASA Express Letters are: Speech Production—A. Lofqvist; Speech Perception—M. Cooke and R. Smiljanic; Speech Processing and Communication Systems and Speech Perception—D. D. O’Shaughnessy. Kanae Nishi will be working with Cathi Rogers as AEs POMA for SC.

Kanae is replacing Peter Watson who has filled this role for 7 years. We thank Peter for his time and commitment to the POMA. Technical Program: Over the last three ASA meetings, the Speech TC organized a number of stimulating special sessions on diverse topics

(summarized below). These sessions ran very smoothly and were well received by our members. Melissa Baese-Berk and Kristin van Engen were TPOS for the past two meetings. Our TC is grateful for the dedication and care of these individuals who ensure that SC program planning is in good hands. Our members have also embraced the live-streaming initiative. At the Fall 2017 (New Orleans) meeting we sponsored three special sessions: “Articulatory and Acoustic Characteristics of Nasalization,” organized by Liran Oren; “Teaching Phonetics and Speech Science in the New Millennium: Challenges and Opportunities,” organized by Ben Tucker and Cathy Rogers; “The Southern States: Social Factors and Language Variation,” organized by Wendy Herd and Irina Shport.

At the Spring 2018 (Minneapolis) we sponsored 3 Special Sessions: “South Asian Languages,” organized by Kelly Harper Berkson, Sameer Khan, Christina Esposito, and Indranil Dutta; “Adapting Methods and Models for Vocal Production Across Human and Non-human Primate Species,” organized by Mary Beckman, Ben Munson, and Michael Wilson; “Session in memory of James J. Jenkins,” organized by Kanae Nishi, Terry Gottfried, and Linda Polka.

Student poster competition: Thanks to the special efforts by Patrick Reidy and Chao Yang Lee we have some new tools that make organizing the poster competition more efficient. These tools help to identify judges from program, assign judges to posters, and gather judge’s scores and comments using an electronic form to automate the data compilation. Each meeting we pick two winners and also provide every student who is a valid candidate for the competition with some feedback from the judges of their poster. The energy poured into developing this process and the high volume of student entries and judges participating at each meeting

demonstrates our strong commitment to high quality research and to the mentorship that this entails. The Fall 2017 (New Orleans) competition was organized by Charles Chang and Kelly Berkson; the Spring 2018 (Minneapolis) competition was organized by Kelly Berkson and Wendy Herd.

Awards: No awards were given in Speech Communication this year. The SC TC needs to put more energy into preparing nominations as our TC has a number of accomplished scientists who are very strong award candidates.

Membership: One new fellow in Speech Communication was selected this year: Tessa Bent. The SC TC also needs to put more energy into nominating fellows. There is no shortage of deserving candidates in our TC.

Stetson Scholarship: The Review Committee for 2018 included Jody Kreiman (Chair), Eric Hunter, Lori Leibold, Helen Hanson, and Peter Assmann. We thank them for their time and effort in reviewing the applications.

LINDA POLKA

Chair, 2016–2019

**Structural Acoustics and Vibration**

The Structural Acoustics and Vibration Technical Committee (SAVTC) had an effective and fruitful year of special sessions sponsored by the committee and hosted Student and Young Presenter competitions at all of the meetings. This annual report covers SAVTC activities and meetings occurring during the one-year 2017–18 period beginning after the Spring 2017 ASA Boston meeting. During this period, Robert Koch completed his third year of the 2015–2018 first term as chair of the SAVTC. Early in 2018 an election was held and administered by the ASA where Robert Koch was re-elected as ASA SAVTC Chair for a second three-year term for the period 2018–2021. Robert is honored by the reelection and will work hard to try and deserve the vote of confidence. During this same period, the SAVTC’s own Brian Anderson and James Phillips were elected as the new Chairs of the Signal Processing and Noise Technical Committees, respectively. Congratulations to them both! The SAVTC extends its gratitude to the many SAVTC members and friends of SAV who actively participate as volunteer lead representatives for numerous ASA committee and editorial activities including, but certainly not limited to:

• Robert Koch (ASACOS);

• James Phillips (Medals and Awards);

• Robert Koch (Membership Committee);

• Brian Anderson (SAVTC Web page);

• Tyler “TJ” Flynn (Student Council);

• Matthew Kamrath (Education in Acoustics Committee);

• Ben Shafer (Student Paper Competition);

• Ben Shafer and Robert Koch (Technical Program Organizers);

• Brian Anderson (Coordinating Editor), Li Cheng, Karl Grosh, Nail

Gumerov, Nicole Kessissoglou, Kai Ming Li, Franck Sgard, Nickolas

Vlahopoulos, and Kuangcheng Wu (JASA Associate Editors for SAV);

• Greg McDaniel (JASA Express Associate Editor for SAV);

• Steve Shepard (POMA Editor).

Update: Just following the Spring 2018 ASA Minneapolis meeting, the current terms for Brian Anderson (SAVTC Coordinating Editor), Li Cheng, and Nail Gumerov ended on 30 June 2018 as JASA Associate Editors for SAV (Thanks to them all!). A search for a new SAVTC Coordinating Editor to succeed Brain Anderson is underway. At the 174th ASA meeting in New Orleans, Louisiana, SAVTC sponsored the following three special sessions and one General session of contributed papers with a total of 44 papers presented (16 invited, 28 contributed):

• “Acoustic Metamaterials”: Co-Chairs, Christina Naify and Michael Haberman;

• “Standards in Structural Acoustics and Vibration”: Chair, Benjamin Shafer (ASACOS Standards committee has agreed to co-sponsor the session);

• “SAV Applications of FEA, BEA, and SEA Computational Methods”: Co-chairs, James Phillips and Elizabeth Magliula;

• “General Topics in Structural Acoustics and Vibration”: Chair, Benjamin Shafer

The TPOM representative was Benjamin Shafer.

SAVTC had 19 papers entered in the Best Student and Young Presenter competition at the 174th ASA Meeting. Ben Shafer coordinated the competition and the winners were:

1st Place

Stephanie G. Konarski, University of Texas at Austin, “Closed-cell hyperelastic elements with mechanical instabilities and structural negative stiffness”

2nd Place

Alyssa T. Liem, Boston University (returning as THIRD TIME finalist!), “Characterizing hysteretic materials in complex systems from vibration measurements”

During the New Orleans meeting, fellow SAVTC member Jerry Ginsberg held a formal book signing event for the recent completion and publication of his new two-volume book set titled “Acoustics—A Textbook for Engineers and Physicists” [Vol. I (Fundamentals) and Vol. II (Applications)]. Sincere congratulations to Jerry from his friends in the SAVTC and the ASA in general for this major and impressive accomplishment!

Also at the New Orleans meeting, the first two SAVTC sessions ever to be live-streamed occurred and appeared to go smoothly and successfully. Specifically, the two special sessions “Standards in Structural Acoustics and Vibration” (1aSA), and “Acoustic Metamaterials I and II” (2aSA/2pSA) were live-streamed in New Orleans.

At the ASA Minneapolis meeting, SAVTC sponsored the following three special sessions and one General session of contributed papers with a total of 43 papers presented (16 invited, 27 contributed):

• “Acoustic Metamaterials”: Co-Chairs, Christina Naify and Alexey Titovich;

• “Improving Education in Structural Acoustics and Vibration”: Co-Chairs, Brian E. Anderson and Scott D. Sommerfeldt;

• “Model Reduction for Structural Acoustics and Vibration”: Co-Chairs, Kuangcheng Wu and Hubert Hall;

• “General Topics in Structural Acoustics and Vibration”: Chair, Benjamin Shafer.

The TPOM representatives were Robert Koch and Benjamin Shafer.

The winners of the Best Student and Young Presenter competition (11 entrees), well-coordinated again by Ben Shafer, are still to-be-determined as of the date of this Annual Report. Winners will be notified soon once the final tallying has been made.

At ASA Minneapolis, the third SAVTC session ever was livestreamed (2pSA: “Improving Education in Structural Acoustics and Vibration” co-chaired by Brian E. Anderson and Scott D. Sommerfeldt). In addition, two Interdisciplinary (ID) special session papers presented by Robert Koch titled “Introduction to the Structural Acoustics Technical Committee” and “Hot Topics in Structural Acoustics and Vibration: Advances in Vibroacoustic Modeling and Novel Materials” were also live-streamed at the Minneapolis meeting. The live-streaming experience for all the above was mostly nonintrusive and largely positive.

The period 2017–2018 of this ASA SAVTC Annual Report represents the year (and two ASA meetings) just following the 2016–2017 year with two consecutive major joint ASA meetings in a row, the Honolulu and Boston meetings, both record setting in size and attendance. These two major events represented a significant challenge to the SAVTC (very successfully met it should be noted, along with all other ASA TC’s) in terms of volunteer time commitments, etc., it is noticed that the two meetings in this annual period had a slight drop in number of sessions planned. This dip is quite normal and completely understandable following the extra burden carried in 2016–17. It is observed that there is already an increase in SAV planned sessions and TC activities in upcoming 2018 ASA meetings and beyond.

A recent priority of the SAVTC Chair has been to increase the numberof new members in the committee and to try and get younger as a committee as well. This is primarily in response to the declining volunteering and meeting attendance of a number of the more senior members of the committee who are now quite understandably drawing down their society activities after decades of contribution at the highest possible levels in the Society. As a result of this thrust, four new SAVTC members were officially added in January of 2018—congratulations and welcome aboard to new SAVTC members Kathryn Matlack, Alexey Titovich, Pei-Tai Chen, and Anthony Bonomo. In addition, another four meeting attendees expressed interest at the ASA Minneapolis meeting and will now be considered and, if deemed suitable, added to the SAV technical committee membership role in the January 2019 new member request cycle.

ROBERT M. KOCH

Chair, 2015–2018, 2018–2021

**Underwater Acoustics**

This report covers the activities of the Technical Committee on Underwater Acoustics (TCUW) and its members during the period from July 2017 through June 2018. The 174th Meeting of the Acoustical Society of America was held at the New Orleans Marriott Hotel, New Orleans, Louisiana, 4–8 December 2017. TCUW sponsored the following seven sessions: “Underwater Acoustic Scattering and Reverberation,” co-chaired by Brian T. Hefner and Edward Richards with 13 contributed talks, “Underwater Acoustic Propagation: Models, Methods, and Statisticsk,” co-chaired by Chad M. Smith and Anthony L. Bonomo with 14 contributed talks, “Sediment Characterization Using Direct and Inverse Techniques,” co-chaired by David P. Knobles and Preston S. Wilson with 20 invited talks and 17 contributed talks, “Session in

Honor of Chester McKinney,” co-chaired by Thomas G. Muir and Clark Penrod with eight invited talks, “Underwater Soundscapes and Noise: Measurement and Abatement,” co-chaired by Kathleen E. Wage and Aleksander Klauson with 11 contributed talks, “Arctic Acoustics,” co-chaired by Matthew Dzieciuch and Jason D. Sagers with seven contributed talks, and “Underwater Measurements and Applications,” co-chaired by Jason D. Sagers and Micheal J. Smith with nine contributed talks. The student paper award winners were Brandon Patterson and Anthony Bonomo who received first and second place, respectively.

The 175th Meeting of the Acoustical Society of America was held at the Hyatt Regency Minneapolis in Minneapolis, Minnesota, 7–11 May 2018. TCUW sponsored the following six sessions: “Instrumentation for Underwater Acoustics” chaired by Aaron Darnton with four contributed talks, “Target Scattering in Underwater Acoustics: Imaging, Spectral Domain, and Other Representations” co-chaired by Daniel Plotnick and Timothy Marston with eight invited talks and 10 contributed talks, “High Performance Computing Applications to Underwater Acoustics” co-chaired by Ying-Tsong Lin and Megan S. Ballard with four invited talks and five contributed talks, “Underwater Acoustic Communications, Positioning and Signal Processing” co-chaired by Wan Lin with 13 contributed talks, “Underwater Soundscape: Measurement and Characterization” chaired by Timothy Duda with four contributed talks, and “Underwater Acoustic Propagation: Models and Experimental Data” chaired by Timothy Duda with nine contributed talks. The student paper award winners were Blake Simon and Thomas Blanford who received first and second place, respectively.

The chair thanks the many volunteers who make the activities of TCUW possible.

MEGAN S. BALLARD

Chair, 2015–2018