

## **Acoustical Oceanography Annual Report 2011**

The Acoustical Oceanography Technical Committee had a busy year in 2011 with a number of significant events at the 160<sup>th</sup> and 161<sup>st</sup> meetings of Acoustical Society of America (ASA) in Cancun, Mexico and Seattle, Washington.

At the 161<sup>st</sup> meeting in Seattle, the 2011 Medwin Prize in Acoustical Oceanography was awarded to Aaron Thode for his contributions to Acoustical Oceanography. His Acoustical Oceanography research has been primarily in marine mammal acoustics but Aaron has also made numerous contributions to Underwater Acoustics and Signal Processing. The Medwin Prize was formally presented at the awards ceremony. Also during the Seattle meeting, Aaron gave the prize lecture, "Skipping stones along the boundary between marine mammal acoustics and acoustical oceanography" to a room filled to capacity. The audience was clearly fascinated by the images and sounds he presented that summarized years of research.

In Seattle, a very successful fisheries workshop was held that was co-sponsored by the ASA the American Fisheries Society. The workshop title was, "Acoustic Challenges in Aquatic Ecosystem Assessment". This was very well attended with posters and lectures presented over a two day period in parallel with the ASA meeting. The workshop organizers were John Horne, (University of Washington), Robert McClure (BioSonics Inc.), Charles Schmid (Acoustical Society of America) and Martin Siderius (Portland State University).

In 2011 there were several outstanding special sessions at both the Cancun and Seattle meetings. At the Cancun meeting there was "Acoustics of Fish Schools and Bubble Clouds" about experimental evidence and theoretical descriptions of low frequency resonances associated with fish schools and wave induced bubble clouds. This session organizer was Orest Diachok. Also in Cancun was the special session, "Remote Sensing with Ambient Noise" on using noise and interferometric methods to obtain information about the environment. Peter Gerstoft and Martin Siderius organized this session. Both Cancun sessions were well attended and had many contributed papers as well as invited lectures. In Seattle, Brian Dushaw and Tim Duda organized "Ocean Observing Systems: Acoustical Observations and Applications" on passive and active acoustic methods for long-term observations of physical, chemical, and biological processes. This session had invited speakers that spanned a wide variety of topics related to ocean observing systems and also had an impressive number of contributed papers. Also in Seattle Jim Lynch organized the special session "Integrating Ocean and Acoustic Observations With Models". This session was primarily about improving results from forward and inverse problems by including physical, oceanographic, geologic, or biologic information in ocean models. Acoustical Oceanography was also featured in the Hot Topics session in Seattle where Brian Dushaw gave the lecture "Building the oceanic concert hall: Multidisciplinary applications of acoustic for ocean observing systems".

There were also impressive student papers presented in Acoustical Oceanography at the Cancun meeting. The first place winner of the student paper contest was James Traer (University of California, San Diego) for "Ocean bottom profiling with ambient noise: A model for the passive fathometer" and second place went to David Barclay (University of California, San Diego) for "Ambient noise in the Mariana Trench." There was no student paper contest for the Seattle meeting.

Unfortunately, 2011 also brought the passing of Clarence S. Clay. He was 87 when he passed away on April 4, 2011. "Clay" was well known among acoustical oceanographers; he co-authored *Fundamentals of Acoustical Oceanography* by Medwin and Clay as well as *Ocean Acoustics* by Tolstoy and Clay. There was unanimous consent among the AO technical committee to organize a special session to honor his memory. It was agreed that the upcoming Kansas City ASA meeting would be the most suitable venue for this session.

Martin Siderius, Chair Acoustical Oceanography

AO Website: <http://acosoc.org/TechComm/AOTC/>

List of committee members: <http://acosoc.org/TechComm/AOTC/members.html>