

## SUMMARY

The 20<sup>th</sup> Conference on Air-Sea Interaction was held 15-18 August 2016 in beautiful Madison, WI, USA, in conjunction with the 21<sup>st</sup> Conference on Satellite Meteorology, Oceanography and Climatology. The joint conference recognized the symbiotic relationship between satellite observations and air-sea interaction. Satellite observations play a vital role in studies of coupled air-sea interaction across a broad spectrum of spatial and temporal scales. Meanwhile, developing accurate satellite observations of geophysically relevant information relies critically on processes occurring at the air-sea interface. The frontiers of this nexus include developing accurate and consistently calibrated climate data records from satellite retrievals, developing new measurement techniques and instruments, and revealing new insights into coupled air-sea interaction phenomena which shapes Earth's climate and weather.

The 20<sup>th</sup> Conference on Air-Sea Interaction consisted of 11 oral sessions and 2 poster sessions, as well as a Keynote session and 2 joint oral sessions with the 21<sup>st</sup> Conference on Satellite Meteorology, Oceanography and Climatology. Two keynote presentations, from Hisashi Nakamura (University of Tokyo, on how midlatitude ocean temperature fronts affect annular mode variability in the atmosphere) and Steven Miller (CIRA/Colorado State University, on advances in day/night band retrievals for science and applications) provided a glimpse of the "state of the science" in each area.

Highlighted sessions from the Air-Sea conference included:

1. A special session in honor of the late Edgar Andreas on *Sea Surface Processes, including Waves, Spray, Bubbles, and Aerosols*. Here, many of Ed Andreas' colleagues gave talks both in memory of Ed, and how he contributed to the observation and science of interfacial air-sea exchange processes. In the session, it soon became clear that Ed's contribution was enormous, with the speakers being very appreciative of both his high standing in the field, and his meticulous attention to detail which benefits people aiming to further the science. Equally important, it was clear that he was much loved as a family man and also as an advisor, supervisor, and scientist.
2. A special session on *the Coupled Air-Sea Processes and EM Ducting Research (CASPER) campaign*. CASPER is multidisciplinary research program aimed towards improving the representation of atmospheric refractivity in the marine atmospheric boundary layer, especially in the surface layer, that significantly impact radar and communication signal propagations over the ocean surface. The first of two planned field campaigns of CASPER, CASPER East, were conducted in October/November 2015. Some of the early results on air-sea interaction and upper ocean processes were presented at the CASPER special session.

The conference covered the full range of air-sea interaction from the small, surface gravity wave-scale to global climate phenomena such as the Madden Julian Oscillation and Annular Modes.

The American Meteorological Society's Committee on Air-Sea Interaction prioritizes training the next generation of air-sea researchers, and the Committee again sponsored a student competition at the 20<sup>th</sup> Conference on Air-Sea Interaction. Cash prizes were awarded for outstanding oral and poster presentations. The winners were: Briana Phillips and Xinyu Xe (poster competition) and Natalia Tilinina (oral presentation).

In addition, a luncheon for students was organized by this conference and the SatMOC organizing committee. It was highly successful, with scientific researchers sitting down with a group of students to give career advice, focusing on what it is like to work in a scientific or commercial institute. A variety of researchers from government labs, universities and industry were able to give helpful opinions.

Also, long-standing Air-Sea Interaction committee member Magdalene Anguelova was presented a certificate for her strong support and dedication of both the AMS Air-Sea Interaction committee and the student competition awards.

The Program Committee acknowledges the many productive discussions needed for coordinating the joint conferences with the Satellite Meteorology, Oceanography and Climatology Committee. We particularly thank Ken Carey for his enthusiasm in promoting the joint conference, which, very unfortunately, he could not attend.

Jennifer Ives, Ricky Sidla, Sotiria Qirjazi and the rest of the AMS staff are thanked for their invaluable assistance and patience with the organization of the conferences. Finally, the Air-Sea Interaction Committee thanks all the conference session chairs and participants for their interest and engagement in the successful series of conferences on Air-Sea Interaction.

#### **Program Committee**

L. O'Neill, Conference lead organizer  
David Richter and R. Justin Small, Conference Co-Chairs

#### **AMS Committee on Air-Sea Interaction**

R. Justin Small (Chair), Grant Deane, Larry O'Neill, Henry Potter, David Richter, Qing Wang, Christopher Zappa, Samantha Wills, Young-Oh Kwon.