Summary

17th Conference on Mesoscale Processes
24 – 27 July 2017 San Diego, CA
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We welcomed over 160 participants and over 190 submitted abstracts at the 2017 17th American Meteorological Society Conference on Mesoscale Processes, held in July in San Diego, California, making the conference one of our best attended in recent years. This year we are once again pleased to have prominent participation by students, as evidenced by the large number of student oral and poster presentations. In addition to the large response from U.S. institutions, we are fortunate to have many international attendees from Europe, Asia, Australia, and South America. This reflects the continued interest and importance of mesoscale meteorology within the broader field of atmospheric science.

Besides the traditional topics found at Mesoscale Conferences including tropical and extratropical cyclones, mesoscale convective systems, microphysical and orographic effects on precipitation, along with data assimilation and mesoscale predictability, this year we also received presentations on mesoscale processes related to atmospheric rivers and in climate models. In addition, we were pleased to emphasize results from the recent field campaigns including the Plains Elevated Convection at Night (PECAN) project, Ontario Lake-effect Systems (OWLeS), the Olympic Mountains Experiment (OLYMPEX), the 2015 Precipitation, Aerosols, and Pacific Atmospheric Rivers Experiment (CalWater2015), and FIRO-2017.

We were also excited about the inclusion of presentations in several important mesoscale research frontier areas not emphasized at previous editions of the conference. One such area is tropical deep convection with invited talks by Dr. Joan Alexander of Northwest Research Associates and Prof. Courtney Schumacher of Texas A&M University on different aspects of this broad research topic with wide-ranging scientific implications. Dr. Marty Ralph from Scripps Institution of Oceanography led off a session on the high-impact phenomenon of atmospheric rivers and their emergence as an important meteorological concept. Turbulence generated by mesoscale convective systems was another highlight of the conference with an invited presentation by Prof. Todd Lane of the University of Melbourne. This dynamically rich topic not only exemplifies the multiscale nature of mesoscale research, but also has important practical implications for commercial aviation. We featured the diagnosis of mesoscale processes within climate simulations, which is a rapidly emerging research area at the interface of weather and climate. Here, we were grateful to have an invited talk by Dr. Andreas Prein from the National Center for Atmospheric Research on convection-allowing modeling of North American mesoscale convective systems under climate change.

The awards for best student presentation went to Kathleen M. Magee from the University of North Carolina (1st place for best poster: "An observational study on quantifying distance to supercell-boundary interactions in the Great Plains"), Stacey Hitchcock of the Colorado State University (2nd place for best poster: “Evolution of thermodynamic vertical profiles from pre-

and post-convective environments of mesoscale convective systems observed during PECAN"), Lawrence Hanft of the University of Nebraska (1st place for best oral presentation: "An observational and modeling study of mesoscale airmasses with High Theta-E"), Leah Campbell of the University of Utah (2nd place for best oral presentation: "Mechanisms of lake-effect forcing and the Tug Hill precipitation maximum during OWLeS IOP2b"), and Hristo Chipilski of the University of Oklahoma (2nd place for best oral presentation: "Understanding MCS-bore interactions through high-resolution data assimilation and numerical simulations").



Conference organizers and students, who won the AMS award for best student presentation. Left-to-right: Katja Friedrich (University of Colorado), Stacey Hitchcock (Colorado State University), Hristo Chipilski (University of Oklahoma), Leah Campbell (University of Utah), Lawrence Hanft (University of Nebraska), Stan Trier (National Center for Atmospheric Research), Tom Galarneau (University of Arizona), not pictured: Kathleen Magee (University of North Carolina).