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Department of Marine Sciences
Presents a Seminar By

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Our Current Understanding of Tornadoes and Their Environments

Decades of observational, numerical, and theoretical studies have revealed many of the essential processes governing tornado formation and eventual demise. Perhaps our clearest understanding regards the development of the parent supercell thunderstorm, characterized by a rotating updraft at midlevels in the atmosphere. This midlevel rotation is found to result from the reorientation of horizontal environmental vortex lines by the storm's updraft as the storm develops in a region where winds change direction and/or speed dramatically with height. However, the development of rotation very near the surface, as required for tornado formation, relies on mechanisms occurring within the storm outflow, and the downdraft plays an important role. The final step in tornado formation involves contracting this rotating air to a small radius beneath an updraft, resulting in tornado-strength tangential winds as angular momentum is conserved. The climatological dependency of tornado formation on environmental parameters such as the level of cloud base and the change in environmental winds over various depths will be explained in the context of our theoretical understanding, and we will examine distributions of these parameters for tornadic storm events and warnings.

Host: Kelly Lombardo

Time & Date: 11:00 am, Friday, March 31, 2017

Place: Marine Sciences Building, Seminar Room 103

Please see this [page](#) for cancelations and additional seminar information,
email marinescienceseminars@uconn.edu, or call 860-405-9152 or 860-405-9151