



# Parallels in tropical cyclone mitigation research for Australia and the U.S.

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Severe impacts of tropical cyclones, thunderstorms and tornadoes continually highlight the need to develop effective mitigation strategies (e.g., engineering, education, outreach) globally for extreme wind events. This talk will present ongoing work in this field of study for Australia and the U.S. with focus on vulnerability models (i.e. functions derived to approximate building damage for a given wind speed) for low-rise residential buildings. The importance of collecting accurate wind, rain and structural data during and after severe events will be discussed with examples of damage investigations and field deployed anemometry systems used in recent tropical cyclones (e.g., Hurricanes Florence and Michael, Cyclone Debbie, etc.). Key differences in wind engineering design between buildings in Australia versus the US will also be presented. In both countries, vulnerability models can be used to demonstrate the value of engineering mitigation upgrades (e.g., window shutters, roof strapping, etc.) in reducing widespread damage. However, the implementation of those upgrades by homeowners is relatively low. This will be discussed in light of recent findings from behavioral research on homeowner decision-making processes for tropical cyclone mitigation.

**Thursday, 24 January 2019, 3:30 p.m.**

**Refreshments 3:15 PM!**

NCAR-Foothills Laboratory  
3450 Mitchell Lane  
FL2-1022, Large Auditorium

*This seminar will be webcast live at:*  
<http://ucarconnect.ucar.edu/live>

*Recorded seminar link can be viewed here:*  
<https://www.mmm.ucar.edu/events/seminars>