



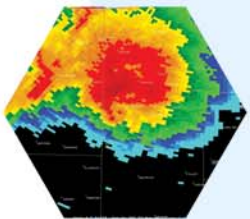
# UNIVERSITY

THE WEATHER SPHERE BRINGS UNIVERSITY, FEDERAL, STATE AND PRIVATE INDUSTRY TOGETHER.



"ECE provides solutions to modern and future engineering challenges through a unique interdisciplinary perspective that relies on new digital signal processing techniques and hardware development."

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Director



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[www.ece.ou.edu](http://www.ece.ou.edu)  
[www.weathersphere.org](http://www.weathersphere.org)

## School of Electrical and Computer Engineering

The interdisciplinary radar team in Electrical and Computer Engineering (ECE) contributes to the Weather Sphere through a focus on three cornerstones with a future vision: radar research, hardware development and new algorithm design.

Next generation radar research is oriented around the conventional Weather Surveillance Radar (WSR-88D), the phased array radar at the National Weather Radar Testbed, and newer radars still in the developmental stages. These radars lead to better forecasts, observations and designs. In view of the next-generation radar research above, significant challenges exist in both theoretical and practical aspects of this research. The ECE advances radar research by developing the highest quality hardware and systems.

ECE researches adaptive algorithms and computational intelligence following next-generation hardware development. Intelligent decisions and forecasts can be made from recognition of patterns and algorithms. These are important when predicting the future states of the system, especially for storm tracking and short-time forecasting.

The ECE team works hand-in-hand with its partners in the School of Meteorology and in close collaboration with federal collaborators in Norman. This has led to high-quality research, peer-reviewed publications, external collaborations, recruitment of top students and prototyping laboratory development.

The confederated team's research is currently funded by the National Science Foundation, NOAA, NASA, Raytheon, Lockheed-Martin and the Office of Naval Research.

