

## NC State Team Selected for FAA Unmanned Aircraft Center of Excellence



NC State's NextGen Air Transportation program will work with a consortium of research universities to help the FAA safely integrate unmanned aerial vehicles into the national airspace. Photo by Marc Hall.

For Immediate Release

May 11, 2015

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The Federal Aviation Administration has selected a coalition of leading research universities, led by Mississippi State University and including NC State, as the Center of Excellence for Unmanned Aircraft Systems (UAS).

NC State's NextGen Air Transportation (NGAT) program is a core member of the ASSURE (Alliance for System Safety of UAS through Research Excellence) team and will lead all University of North Carolina system research about the safe integration of UAS into the national airspace.

"NC State is proud to be a leader in this important research effort," said Chancellor Randy Woodson. "The collaboration and innovation that happens at NC State will bring critical advances to the rapidly evolving field of unmanned aircraft."

The ASSURE coalition was built strategically to provide a balance of skills, knowledge, resources and experience that will be critical to the FAA's UAS research activities. NGAT has led the State of North Carolina's UAS efforts for the last three years and will be the national team's lead for Command and Control Communications research.

Command and Control Communications research is the development of an appropriate link between the unmanned aircraft and the control station to support the required performance of the unmanned aircraft and to ensure that the pilot always maintains a threshold level of control of the aircraft.

Research activities support the safe integration of UAS through testing and development of secure, reliable and robust data links. These links ensure connectivity between aircraft and control stations, aircraft and air traffic control, and other users of the National Airspace System. ASSURE will develop communications protocols and standards for evaluating the performance of links in nominal, contingency and emergency flight operation scenarios.

"This is an exciting day for UAS development in North Carolina," said NGAT Program Director Kyle Snyder. "Being a member of the winning Center of Excellence team was our goal from day one. NC State and the UNC System will be a strong partner in the national effort to test unmanned aircraft technologies, develop new capabilities and support safe, connected integration."

NGAT was established in 2012 under the North Carolina Department of Transportation's Division of Aviation; it has approval from the State of North Carolina and the FAA to conduct research operations for purposes such as agricultural research, emergency response, and surveying and mapping. In just over two

years of flying, NGAT has over 300 flights and 100 flight hours at 6 locations across the state. NGAT is continuing to develop the statewide infrastructure for research and operational UAS integration.

Being selected for the FAA Center of Excellence will advance North Carolina's position as a leader in the fastest-growing sector of the aerospace industry. The center is a five-year commitment that includes \$5M in research funding in each of the first two years, with additional funding to follow.

Besides NC State, the ASSURE alliance comprises Mississippi State University, Drexel University, Embry-Riddle Aeronautical University, Kansas State University, Montana State University, New Mexico State University, Ohio State University, Oregon State University, University of Alabama-Huntsville, University of Alaska-Fairbanks, University of California, Davis, University of Kansas, University of North Dakota, and Wichita State University; associate members include Auburn University, Concordia, Indiana State University, Louisiana Tech University, Tuskegee University, and University of Southampton.

More information about the ASSURE alliance is available [here](#).