UC to Present during First-Ever Live NASA Webcast

By: Desiré Bennett

Out of just seven presentations across the nation, a trio of UC’s own aerospace students will present “Surveillance for Intelligent Emergency Response Robotic Aircraft (SIERRA)” on Thursday, February 28, at 3:50 PM, at the National Council of Space Grant Directors’ Meeting. For the very first time, NASA will be streaming these presentations “live” online.

Ohio Space Grant Consortium (OSGC) aerospace engineering students Bryan Brown, Kevin Davis, and Andrew Puterbaugh will present “Surveillance for Intelligent Emergency Response Robotic Aircraft (SIERRA)” at the National Space Grant Council Directors’ Meeting on Thursday, February 28. The presentation is slated to begin at 3:50 PM and viewers can watch the live webcast on NASA’s DLiNfo Channel.

Kelly Cohen, PhD and associate professor of aerospace engineering & engineering mechanics, supervises the SIERRA (Surveillance for Intelligent Emergency Response Robotic Aircraft) project which integrates small, unmanned aerial vehicles (UAV) with global positioning systems, environmental data, video and fire-prediction software to give real-time information about where a fire is burning, and where it is moving. “The uniqueness in our approach is that we are exploiting UAV technology in a way which sets us apart from other universities involved in UAV technology,” said Cohen.

The SIERRA system is designed to assist firefighters to overcome a major handicap during a wildfire – the inability to see the entire fire.

Cohen believes that implementation of this technology may help save lives. “We utilize the visual information gathered by having a UAV take video of the fire and fuse that with topological information from GOOGLE Earth and weather updates from NOAA to develop a situational awareness ‘picture’ of the fire and how it will develop over time,” he explains. “This detailed prediction capability, which includes worst case scenarios, is lacking today and as a result incident commanders do not always make sound decisions in complex large disaster situations.”
According to Cohen, to be able to share this technology via a NASA webcast is not only exciting but invaluable. “This is not something that happens very often to our UC undergraduates and I am most pleased that our talented and deserving students are getting this level of national exposure.”

Thursday’s 20 minute presentation will include a six minute documentary filmed by the Discovery Channel on SIERRA, a model of the UAV which flew in two flight demonstrations held in West Virginia, and a mini-SIERRA platform, designed by UC aerospace students. “It is important to recognize all of [the team members’] contributions as well as that of the NASA/Ohio Space Grant Consortium which have supported our program financially and by offering scholarships to students working on SIERRA.”