

# Improving Drones to Interact with Everyone

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This talk will focus on the role of human-robot interaction with drones in public spaces and how we can create systems that all end users can successfully control. Prior work on human-interaction with aerial robots has focused on communication from the users or about the intended direction of flight, but has not considered how to distance from and communicate to novice users in unconstrained environments. In this presentation, it will be argued that the diverse users and open-ended nature of public interactions offers a rich exploration space for foundational interaction research with aerial robots. Findings will be presented from both lab-based and design studies, while context will be provided from the field-based research on prescribed aerial ignitions and environmental sampling that is central to the NIMBUS lab. Building upon this foundational work will require a better understanding of user skill acquisition and more adaptive robotics, which will inform the next few years of work with scientists in field environments from Costa Rica to Alaska. This presentation will be of interest to researchers and practitioners in the robotics community, as well as those in the fields of human factors, artificial intelligence, and the social sciences.



Dr. Brittany Duncan is the Ross McCollum Associate Professor of Computing and Director of the NIMBUS lab at the University of Nebraska, Lincoln. Her research is at the nexus of behavior-based robotics, human factors, and unmanned vehicles; specifically she is focused on how humans can more naturally interact with robots, individually or as part of ad hoc teams, in field-based domains such as agricultural, disaster response, and engineering applications. She is a PI on a NSF Early Faculty Career Award (CAREER), a PI on two NSF National Robotics Initiative (NRI) grants, and was awarded a NSF Graduate Research Fellowship in 2010. Dr. Duncan received a Ph.D. from Texas A&M University and B.S. in Computer Science from the Georgia Institute of Technology. For more information, please see: [cse.unl.edu/~bduncan](https://cse.unl.edu/~bduncan) or [nimbus.unl.edu](https://nimbus.unl.edu).

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