# DEPARTMENT OF MECHANICAL ENGINEERING
# WILLIAM MAXWELL REED SEMINAR SERIES

## "Robotic revolution: Recent work in Earth System observing with remotely-piloted aircraft."


**Gijs de Boer, Ph.D.**

**Research Scientist III, Cooperative Institute for Research in the Environmental Sciences**
**University of Colorado Boulder and NOAA Physical Sciences Laboratory**



**Presentation Abstract**

Uncrewed aircraft systems (UAS) or drones continue to gain popularity in atmospheric science due to their ability to provide unique perspectives on atmospheric processes of interest. Over the last decade, I have worked to develop and deploy a variety of UAS around the world to better understand the physics of the lower atmosphere. In recent years, this has included a deployment to the tropical Atlantic to observe the drivers of trade-wind cumulus, a deployment to the central Arctic Ocean to advance our understanding of coupling between the surface and lower atmosphere over a thinning sea ice pack, and a deployment to Wisconsin to observe microscale flows over the Great Lakes and the impact of those flows on local ozone concentrations. In this presentation I will provide an overview of the platforms and missions and offer some insight into the diverse scientific problems that we are attacking with UAS.


**Speaker Bio**

Dr. Gijs de Boer is a research scientist at the University of Colorado's Cooperative Institute for Research in Environmental Sciences, and an Associate Directory of the Integrated Remote and In-Situ Sensing program. His work has involved leveraging data from a variety of observational platforms to improve our understanding of the physics of the lower atmosphere in support of improved prediction of weather, water and climate. In addition to his research, Dr. de Boer actively supports Arctic research through leadership roles in the International Arctic Science Committee, the Interagency Arctic Research Policy Committee, and the US Department of Energy's Atmospheric Systems Research program. His work earned him the Presidential Early Career Award in Science and Engineering (PECASE) in 2016.

**Date: Friday, December 3, 2021**
**Time: 3:00 PM EST**
**Place: Whitehall Classroom Building 114**
**Contact: Dr. Alexandre Martin 257-4462**

Attendance open to all interested persons

College of Engineering

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