

UNCLASSIFIED

**AY 2018-2019
PROSPECTIVE RESEARCH TOPIC
NOMINATION**

CLASSIFICATION	UNCLASSIFIED
RESEARCH TOPIC TITLE	Wind Turbine Radar Interference Mitigation
TOPIC DESCRIPTION	Wind turbines are known to cause pulse-Doppler interference on air traffic / air defense radar systems. Research would investigate potential mitigation methodologies.
DATE SUBMITTED	May 2018
EXTENDED TOPIC DESCRIPTION	Wind turbines cause reduced probability of detection (Pd) of airborne targets. They also induce false tracks and clutter. Both effects are the result of the rotating wind turbine blades inducing a Doppler shift in returning radar signals, thereby mimicking moving targets. Since NORAD employs FAA radar systems for air defense purposes, these effects are of national security concern to NORAD.
DESIRED OBJECTIVES OF THE RESEARCH	Conduct research to determine if there are any methodologies available (e.g., blade coatings, receiver and/or signal processor techniques) that would mitigate wind turbine blade effects.
REQUESTING/SPONSORING ORGANIZATION	NORAD J36
POINT OF CONTACT	Ms. Lauren Schindler, Ms. Jennyfer Myrick & Dr. Ed Campbell
MAILING ADDRESS	250 S. Peterson Blvd, Peterson AFB, CO 80914-3820
EMAIL ADDRESS	n-nc.peterson.n-ncj7.mbx.j72-education-team-omb@mail.mil
TELEPHONE NUMBER (Commercial and DSN)	719-554-6357; 719-554-6819; 719-554-9059
FAX NUMBER (Commercial and DSN)	N/A
DESIRED RESEARCH COMPLETION DATE	FY 2019
AVAILABLE FUNDING, IF ANY	None

UNCLASSIFIED

UNCLASSIFIED

COMMENTS	Research has been previously accomplished by DOD and FAA, but no open source solutions have been published to date.
-----------------	---

UNCLASSIFIED