

Project 12: Wind Turbine identification based on its radar signature

Student Project Proposal

Background

Current state of the art radar monitoring for aircraft detection is based on a land-based radar that covers an area on the order of tens of kilometres. If the covered area has wind turbines these will create inference in the observed radar image that, depending on the used algorithm, can be confused by an aircraft. Due to that it is important to identify these wind turbines and remove the detected radar signature from the obtained radar data.

Scope

The developed method will allow to create aircraft monitoring radars with better performance and lower false alarm rate by:

- Gather a large amount of radar image data from different turbines;
- Analyse the data with a machine learning algorithm to allow to differentiate a wind turbine from other types of non-related detections;
- Create a method based on the machine learning results that correctly detects the wind turbine with a low false alarm rate.

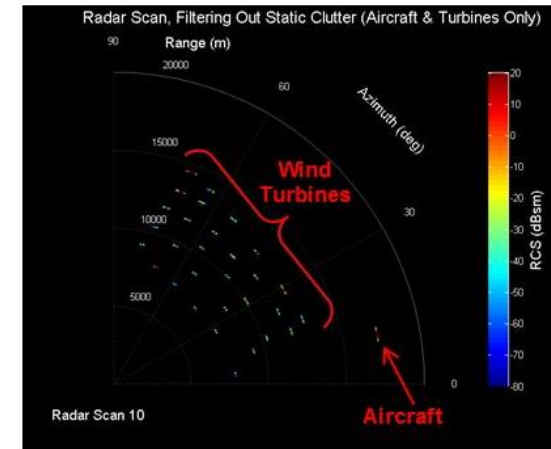
APPLY

Contact person:

Daniel Malafaia

E-mail:

dfsma@vestas.com



<https://www.rfglobalnet.com/doc/researching-the-impact-of-wind-turbines-on-radar-returns-0001>