

International Specialist
Meeting
"Electromagnetic
Waves and
Wind Turbines 2018"

December 6-7, 2018

Delft University of Technology,
Delft, the Netherlands
TU Delft Science Centre,
Mijnbouwstraat 120,
Mekelzaal

<http://radar.tudelft.nl/EMWT>



CALL FOR PAPERS

A short abstract for presentations to be included into the program (about 200 words) should be sent to secr-ms3-ewi@tudelft.nl before October 21st, 2018. Authors will be notified about acceptance until October 31st, 2018.

REGISTRATION

To register to EMWT[®]18 a form can be requested via secr-ms3-ewi@tudelft.nl or you can register via the EMWT[®]18 web-page before November 15th, 2018 (<http://radar.tudelft.nl/EMWT>).

CONFERENCE FEE

A conference fee includes refreshments, lunches and conference dinner, which has to be paid online during registration. For more details please see <http://radar.tudelft.nl/EMWT>.

CONFERENCE ORGANIZATION

All presentations will be given in English. The meeting will be conducted under the patronage of the IEEE Benelux Section.



ORGANIZER/HOST

Delft University of Technology
Delft, the Netherlands

ORGANIZING COMMITTEE

Dr. Oleg Krasnov (TU Delft),
+31(0)15-278-6256
o.a.krasnov@tudelft.nl

Dr. Faruk Uysal (TU Delft),
+31(0)15-278-6303
f.uysal@tudelft.nl

Mrs. Pauline van Beek (TU Delft)
+31(0)15-278-3808
secr-ms3-ewi@tudelft.nl

Web: <http://radar.tudelft.nl/EMWT>



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The global needs in the development of ecologically friendly renewable sources of energy results nowadays in increasing number of wind turbines, which convert the wind energy into electricity. Efficient conversion requires that the scale of turbine's construction has to be in the order of hundred meters, resulting in big linear velocities of rotating blades. For an efficient solution of energy distribution and maintenance problems, such turbines are constructed in groups forming so-called wind-farms. Besides advantages of ecologically friendly energy source, the existence of such wind-farms in populated areas has some drawbacks, like disturbing wireless communications and disrupting operations of existing and future radars, which provide crucial information for air-traffic control, aerospace surveillance, weather nowcast, and forecast. Rotating parts of turbines scatter incident electromagnetic signals with wide continuous Doppler spectra. Such signals can be considered as moving clutter that hides reflections of targets like aircraft for ATC radars and rain for weather radars, and have to be suppressed with novel algorithms for radar signal processing.

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Another urgent problem in radar research field relates to the necessity in detection, recognition, and monitoring of low-level flying drones and UAV helicopters, which becomes widely available for public and commercial services. The interaction of electromagnetic waves with drone's rotating blades works quite similar to that for wind turbines, resulting in the similar behavior of received radar signals with some specific scaling for objects size and duration of their observation. An increasing number of publications and contributions in scientific journals and on conferences prove the growing interest in these topics.

To bring together the experts and researchers in the field of electromagnetic waves within the context of objects with rotating parts (wind energy plants, drones), the EMWT@18 offers a platform to discuss existing and arising problems. In contrast to other conferences, EMWT@18 will cover the field of electromagnetic waves interaction with rotated objects in one specialist meeting.



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