

"Second RIWER and ITG (HF-5, Wave Propagation) Radar Workshop"
**Radar basics for the development of new methods to overcome the interference
of wind turbines on weather radar systems**



RIWER: Removing the Influence of Wind-Park Echoes in Weather-Radar-Measurements

Under the aegis of the project RIWER, the Chemnitz University of Technology (TUC), in cooperation with the German Weather Service (DWD) and the Neubrandenburg University of Applied Sciences (HS-NB) is holding a series of technical discussion events (workshops) on the topic of "Polarimetric Weather Radar Systems". This is the second workshop in the series and it will be conducted by the members of the ITG Committee HF-5 (Wave Propagation).

Date: 30.11.2021

Morning-Session from 09:30 to 12:30

Afternoon-Session from 13:30 to 16:30

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| Language: English Mode: Online Live-Streaming | Objective: Introduction Weather Radar Basics: Part 2 |
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Topics and Contents

- 1. Review of key concepts from the first radar workshop:**
Pulse radar signals, obtaining and understanding I-Q echo signals, polarimetric measurements in hybrid and conventional modes, weather radar equations and radar reflectivity.
- 2. Operating parameters of a weather radar and their influence on the measured radar quantities:**
Relevant key radar measurement parameters and their physical meaning: pulse repetition frequency, pulse length; signal sampling, unambiguous measurement of target range and Doppler velocity, range- and Doppler-resolution, range-Doppler dilemma, antenna characteristics, basic scan modes and scan strategies.
- 3. Physical interpretation weather radar signatures:**
Radar reflectivity and differential radar reflectivity, Doppler velocity and Doppler spectral width for weather targets, correlations, differential propagation phase, and specific differential propagation phase.

Event Organization:

Prof. Dr. Ralf Zichner (TUC), Prof. Dr. Madhu Chandra (TUC),
Prof. Dr. Gerd Teschke (HS-NB)

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