When validating the performance of a flow model in forested areas, it is important that the model accurately represents the forest effects. This presentation concerns the use of remote-sensing technology for describing forest effects, and more specifically, how positioning lidar data can be transferred into a parametrization of forests in wind models. The presentation covers three scales: the single tree, the forest edges and clearings, and the large-scale forested landscape in which the forest effects are parameterized with a roughness length. Flow modeling results and validation against observations are presented along with the different forest presentations for each of the cases. In a new research project called InnoWind, the use of satellite-based alternatives to airborne lidar campaigns are investigated, and examples of satellite products in wind power modeling are discussed.

**General information**
- **Publication status:** Published
- **Organisations:** Department of Wind Energy, Meteorology & Remote Sensing, Resource Assessment Modelling, Aerodynamic design
- **Contributors:** Dellwik, E., Badger, M., Angelou, N., Mann, J., Karagali, I., Hahmann, A. N., Cavar, D., van der Laan, P.
- **Publication date:** 2017
- **Peer-reviewed:** Yes
- **Event:** Abstract from International Conference on Future Technologies for Wind Energy WindTech 2017
- **Electronic versions:** AbstractTemplate_Boulder2017_final.pdf
- **Source:** PublicationPreSubmission
- **Source ID:** 139141131
- **Research output:** Contribution to conference › Conference abstract for conference – Annual report year: 2017 › Research › peer-review