

1. Record Nr.	UNINA9910476900003321
Autore	Struve Achim
Titolo	Analysis of a Rotatable Wind Turbine Tower by means of Aero-Servo-Elastic Load Simulations
Pubbl/distr/stampa	Karlsruhe, : KIT Scientific Publishing, 2021
ISBN	1000123255
Descrizione fisica	1 online resource (340 p.)
Collana	Berichte zum Stahl- und Leichtbau
Soggetti	Civil engineering, surveying and building
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>This work highlights how the costs and CO2-emissions of land-based wind turbines can be reduced by means of an innovative and material efficient support structure concept. Thereby the yaw system is placed at the tower base, allowing the whole wind turbine tower to be rotated. The potential of a rotatable inclined lattice tower concept was analysed by means of aero-servo-elastic load simulations in the FAST environment. A balance between different cost aspects revealed significant savings.</p>