

ForWind, the Center for Wind Energy Research of the Universities of Oldenburg, Bremen and Hannover, offers at the Institute of Physics at the Carl von Ossietzky University of Oldenburg within the group of turbulence, wind energy and stochastic (TWiSt) one

PhD-positions (E13 TV-L, 75%)

until the end of the research project on December 31st 2020. The vacancy shall be filled as soon as possible.

The planned doctoral project is within the field of computational fluid dynamics (CFD) of wind turbines. The project is part of the research project “OptAnIce – Optimal Anti-Icing for rotor blades in cold climate” funded by the Federal Ministry for Economic Affairs and Energy.

In the research project coatings for rotor blades are investigated that shall prevent ice from growing on rotor blades in cold climate. Topic of this part of the project is the numerical simulation from ice growth on rotor blades. Therefore the existing flow solvers have to be extended by heat transport equations, that allow to solve the heat transfer between air flowing around rotor blades and the rotor blades. Besides a method to represent the ice growth has to be implemented. The developed tool is then to be used to simulate different ice profiles on aerodynamic profiles that are used for wind tunnel experiments. That way, validation of the developed tool is assured.

Precondition is a qualifying university degree (diploma or master) in physics or engineering sciences. Practical experience in CFD, preferably in OpenFOAM, is required. As changes and add-ons to the code are necessary, corresponding knowledge are inevitable. The programming language C++, Python as well as a safe handling of Ubuntu via Terminal are desirable. Besides knowledge about aerodynamics of rotor blades and heat transfer are advantageous.

The University of Oldenburg is dedicated to increase the percentage of female employees in the field of science. Therefore, female candidates are strongly encouraged to apply. In accordance to § 21 Section 3 NHG, female candidates with equal qualifications will be preferentially considered. Applicants with disabilities will be given preference in case of equal qualification.

Contact

Please send your application until January 15th with the keyword OPTICE-FW appending all the usual documents, preferably as pdf, via Mail to Lena Vorspel (lena.vorspel@uni-oldenburg.de). Alternatively, you can send the application to ForWind – Center of wind energy research, Lena Vorspel, Kùpkersweg 70, 26129 Oldenburg, Germany.