

PhD position (f/m/d): Assessing the interplay between wind farms and clouds

38 - 40 hours per week

Job description

Are you captivated by the intricacies of fluid mechanics, the complexities of turbulence, the power of high-performance computing, and the potential of wind energy? If you're passionate about pioneering research and eager to be part of a dynamic team, we have an exciting opportunity for you. We're seeking an enthusiastic PhD candidate to explore how dynamic shifts in atmospheric conditions throughout the day influence wind farm performance. This project challenges you to delve into the impact of time-dependent atmospheric changes, going beyond traditional simulations for stationary atmospheric conditions.

This PhD project is part of the ERC Consolidator Grant project WINDFLOW, which strives to develop groundbreaking large-eddy simulation strategies for wind farm flows. Your research will develop novel LES to investigate the interaction among clouds on wind farm performance and atmospheric transport processes. This presents an opportunity to push the boundaries of fundamental fluid and atmospheric dynamics, enhance wind farm efficiency, and deepen our understanding of their interaction with the atmosphere. Join us in pushing the boundaries of wind energy fluid mechanics research!

Requirements

We are seeking applications from motivated early-career researchers with a strong background in fluid dynamics, mechanical engineering, computational physics, applied physics, mathematics, geophysics, or related subject areas. Experience with programming languages such as Fortran, C/C++, MATLAB, or Python is advantageous. Candidates should thrive in an international environment and have excellent communication skills to actively contribute to team research efforts. You will present your work at international conferences. Proficiency in spoken and written English is essential. We value independence and responsibility while promoting teamwork and collaboration among colleagues.

Conditions of employment

This position is integral to the ERC WINDFLOW project and offers integration into a dynamic research group with peers exploring similar themes.

- A full-time position for four years, with a qualifier in the first year.
- Salary and associated conditions are in accordance with the collective labor agreement for Dutch universities (CAO-NU).
- Access to novel research facilities, including top-tier supercomputers.
- Professional and personal development program within Graduate School Twente.
- Excellent mentorship and a stimulating international research environment.
- The monthly salary is € 2.872 in the first year, increasing yearly to € 3.670 in the fourth year.
- There are excellent benefits, including a holiday allowance of 8% of the gross annual salary, an end-of-year bonus of 8.3%, and a solid pension scheme.
- A minimum of 29 holidays in case of full-time employment.
- Free access to sports facilities on campus.

Department

This research is conducted in the Physics of Fluids group at the University of Twente in the Netherlands. Our work spans various fluid mechanical challenges, employing experiments, simulations, and theoretical approaches. The group is affiliated with the Max Planck Center for Complex Fluid Dynamics and the J.M. Burgerscentrum for Fluid Mechanics. For further insights, visit us <http://pof.tnw.utwente.nl> and <https://stevensrjam.github.io/Website/>.

Additional information

To apply, please submit your application by the button below, this should include:

- A cover letter highlighting your specific interests, qualifications, and motivation for this position.
- A detailed CV (resume).
- An academic transcript of BSc and MSc education, including grades.
- Contact information of two academic references who are willing to provide a recommendation.

We are committed to fostering diversity and inclusion at our university and do not discriminate based on race, religion, nationality, gender, sexual orientation, age, marital status, veteran status, or disability. We provide reasonable accommodations for individuals with disabilities during the application process, interviews, and employment. Please contact us to request accommodation.