



### PhD position (f/m/d): Large-scale impact of wind farms on atmospheric flow

#### **Job description**

Are you curious about the intricacies of fluid mechanics, the complexities of turbulence, the capabilities of high-performance computing, and the vast potential of wind energy? If groundbreaking research excites you and you're keen to join a diverse team, we offer an exhilarating opportunity. We invite you to investigate how wind farms influence the performance of adjacent farms. This research is crucial, as we envision numerous wind farms in regions like the North Sea, yet the interactions among these wind farm clusters remain largely unexplored.

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 a fundamental understanding of wind farms' large-scale impact on moisture transport, atmospheric stability, cloud dynamics, turbulent transport within the atmosphere, and the interactions between wind farms. This project represents an opportunity for us to advance our collective knowledge of fluid and atmospheric dynamics relevant to wind energy. Join us in pushing the boundaries of wind energy fluid mechanics research!

#### **Location**

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/>.

#### **Profile**

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.

#### **Our offer**

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 € 2.770 in the first year, increasing yearly to € 3.539 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.

#### **Information and application**

To apply, please email your application to Richard Stevens ([r.j.a.m.stevens@utwente.nl](mailto:r.j.a.m.stevens@utwente.nl)), including:

- 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 letter.

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.