



PhD position (f/m/d): Impact dynamic atmosphere on wind farm performance

Job description

Are you fascinated by fluid mechanics, the intricacies of turbulence, the capabilities of high-performance computing, and the promise of wind energy? If you are enthusiastic about groundbreaking research and keen to join a diverse team, we offer an exhilarating opportunity for you. We are looking for a dedicated PhD candidate to investigate the impact of dynamic atmospheric condition changes throughout the day on wind farm performance. This project invites you to explore the effects of time-varying atmospheric changes, moving beyond conventional simulations of 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 examine the interplay between dynamic shifts in large-scale atmospheric conditions, as described by weather models, and the performance of large wind farms. This PhD provides the opportunity to develop novel insights into atmospheric dynamics and leverage this to improve wind farm efficiency. 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), 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.