



PhD position (f/m/d): Large-scale weather effects in wind farm simulations

Job description

Are you intrigued by the complexities of fluid mechanics, turbulence, and the unexplored potential of high-performance computing? We present an exceptional PhD opportunity for individuals dedicated to pioneering the development of wind farm simulations. Embark on a quest to devise innovative simulation, integrating input from advanced weather models to account for the impact of dynamic atmospheric effects. Use the power of the world's most advanced supercomputers and collaborate with computational experts.

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. Joining our team means contributing to a vital area of research. This PhD opportunity allows you to enhance your understanding of fundamental fluid and atmospheric dynamics while developing simulation technologies. Our aim is to create innovative simulation strategies enabling simulations with unparalleled detail. Join us in advancing the frontiers of wind energy 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.

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.