



PhD position (f/m/d): Simulations of offshore wind farm turbulence

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 study flow dynamics in offshore wind farms, developing novel computer simulations. As the scale of wind turbines and farms expands, particularly in offshore settings, they present novel challenges due to the unique atmospheric turbulence phenomena in the marine environment remain largely uncharted.

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 illuminate the intricate dynamics between wind and waves, assessing their influence on the efficiency of offshore wind farms. This is a chance to advance knowledge in renewable energy and significantly contribute to improving wind farm efficiency. Join us in advancing the frontier 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.