



Research Intern - Vortex Ring Dynamics

Research Center on Stability, Instability, and Turbulence

NYU Abu Dhabi

The Research Center on Stability, Instability, and Turbulence (SITE), New York University Abu Dhabi, seeks to recruit an intern to work in the position: Undergraduate Research Intern, on Vortex Ring Dynamics: experimental & numerical simulations.

The successful applicant will contribute to cutting-edge research in vortex ring dynamics, focusing on both experimental and numerical simulations. They will assist in designing and conducting experiments to visualize vortex ring formation and behavior using advanced techniques such as particle image velocimetry (PIV) and high-speed imaging. Additionally, they will develop and implement computational fluid dynamics (CFD) models to simulate vortex ring interactions under various flow conditions. The intern will analyze data from experiments and simulations, identify key flow characteristics, and contribute to discussions on the physical insights gained. This role offers a unique opportunity to deepen understanding of fluid dynamics, gain hands-on experience with state-of-the-art tools, and work alongside a team of experienced researchers in an engaging, collaborative environment. The candidate will work in the Experimental Fluid Dynamics Lab at SITE and will collaborate and interact with experienced PhD-level researchers and undergraduate students.

Applicants must have a (i) strong interest in fluid mechanics and numerical simulations, (ii) basic knowledge of programming (e.g., MATLAB, Python, or C++), (iii) familiarity with CFD tools (e.g., ANSYS Fluent, OpenFOAM) is a plus, (iv) Hands-on experience with laboratory equipment is desirable but not required, and (v) excellent problem-solving skills and a willingness to learn.

For consideration, applicants need to submit a cover-letter, curriculum vitae, and at least one reference letter, all in PDF format. If you have any questions, please email Dr. Mohamed Ali at: ma8281@nyu.edu.

The internship opportunity is competitive. Applications will be accepted during a short timeframe during Spring and Fall terms. Shortlisted candidates will be notified within a month of the application deadline.

About NYUAD:

NYU Abu Dhabi is a degree-granting research university with a fully integrated liberal arts and science undergraduate program in the Arts, Sciences, Social Sciences, Humanities, and Engineering. NYU Abu Dhabi, NYU New York, and NYU Shanghai, form the backbone of NYU's global network university, an interconnected network of portal campuses and academic centers across six continents that enable seamless international mobility of students and faculty in their pursuit of academic and scholarly activity. This global university represents a transformative shift in higher education, one in which the intellectual and creative endeavors of academia are shaped and examined through an international and multicultural perspective. As a major intellectual hub at the crossroads of the Arab world, NYUAD

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serves as a center for scholarly thought, advanced research, knowledge creation, and sharing, through its academic, research, and creative activities.

EOE/AA/Minorities/Females/Vet/Disabled/Sexual Orientation/Gender Identity Employer

UAE Nationals are encouraged to apply