PhD Positions in the Computational and Theoretical Multiphysics Laboratory
Florida State University

Job Title	PhD Positions in the Computational and Theoretical Multiphysics Laboratory
Department	Mechanical and Aerospace Engineering https://eng.famu.fsu.edu/
Institution	Florida State University Tallahassee, Florida
Date Posted	Sep. 3, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Graduate Student
Academic Field(s)	Robotics Ocean Engineering Naval Architecture & Marine Engineering Mechanical Engineering Bioengineering (all Bio-related fields) Aerospace/Aeronautical/Astronautics Engineering - Other
Job Website	https://www.cfd-online.com/Jobs/showjob.php?record_id=19790
Apply By Email	
Job Description	

Multiple PhD positions are available immediately in the Computational and Theoretical Multiphysics Laboratory in the Department of Mechanical and Aerospace Engineering at Florida State University (https://eng.famu.fsu.edu/me

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Research Areas Include:

- **Multiphase Flow:** Computational and theoretical studies of multiphase systems, including phase change, bubble dynamics, and interface-resolving simulations.
- **Turbulent Boundary Layers and Fluid-Structure Interaction (FSI):** Investigating turbulent flows, flow-induced vibrations, and fluid-structure interactions using high-fidelity simulations and reduced-order modeling.
- **Gust-Airfoil Interaction:** Developing data-driven models to predict unsteady aerodynamic responses of airfoils under gusts, including short-time predictions and flow control strategies.
- **Biolocomotion:** Dynamics of microswimmers, nonlinear low-Reynolds-number flows, and bio-inspired locomotion studied through advanced computational and theoretical modeling.

Relevant Skills/Interests:

- Creativity and interest in interdisciplinary research
- BSc/MSc degree in mechanical, aerospace, civil engineering, applied mathematics, computational physics, or related fields
- Experience in CFD, multiphase flow simulations, unsteady aerodynamics, or biolocomotion
- Programming skills (Python, MATLAB, C++, Fortran)
- Familiarity with machine learning (TensorFlow, PyTorch) is a plus for ML-focused projects
- Strong oral and written communication skills

Start Date:

The start date is as soon as January 2026.

Application Materials:

Please submit the following to **Dr. Kourosh Shoele (kshoele_at_fsu_dot_edu)**:

- A short statement of research interests and background
- CV
- Unofficial transcripts

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- Names and contact information of three references

Include the phrase **"PhD applicant – [preferred research area]"** in the subject line of your email (e.g., "PhD applicant – Multiphase Flow").

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Kourosh Shoele
Mechanical and Aerospace Engineering
FAMU-FSU College of Engineering
2003 Levy Avenue
Tallahassee, FL 32310