



The environmental fluid mechanics group at the University of Houston has 1 open Ph.D. position in fluid mechanics/computational fluid dynamics to start in Fall 2023. The position will be fully-funded including tuition and a stipend.

The Ph.D. student will be responsible to conduct state-of-the-art large eddy simulations of turbulent environmental flows with various urban, coastal, and energy applications. Furthermore, the PhD is expected to perform postprocessing of big environmental data and derive simplified analytical or statistical models to describe different fluid dynamics phenomena.

Required qualifications:

- A BS or MS degree in engineering, mathematics, physics, or other closely related fields
- A strong background in numerical methods, mathematical modeling (especially differential equations), and fluid dynamics
- Experience in developing numerical models and computational algorithms
- Strong hands-on experience with programming in Fortran, C/C++, Python, MATLAB, or other languages
- Strong motivation to perform cutting-edge research and to publish high-impact papers.

Preferred qualifications:

- Experience with parallel computing (e.g., MPI)
- Experience with machine learning in Python or other languages.
- Proficiency in Linux computing environment
- In-depth knowledge of turbulence, hydraulics, and dynamics
- Publication in an internationally recognized journal

Experience with OpenFoam/Fluent/WRF or conducting measurements will be beneficial. The position is available for August 2023. Interested candidates should send their up-to-date CV, unofficial transcripts, unofficial English language test results (if applicable), and a short cover letter (maximum 1-page) to Dr. Mostafa Momen mmomen@uh.edu. Please note that the title of your email should start with "PhD-EFM-CFD". In the cover letter, please include relevant projects, your research interests, as well as your future career goals. The review of candidates will begin immediately and continue until the position is filled.

The civil engineering program at the University of Houston is ranked #62 in the USA according to the [2019 U.S. News and World Report rankings](#). The University of Houston is located in a park-like campus a few minutes from downtown Houston. Houston is the fourth largest city in the U.S. and is the “energy capital of the world”. The greater Houston area offers state-of-the-art recreational facilities, world-class arts and cultural activities, and affordable housing.