



## **Postdoctoral research position**

### **Department of Mechanical Engineering and Laboratory for Laser Energetics University of Rochester**

October 18, 2020

The Plasmas and Fluids group of the Mechanical Engineering Department invites applicants for a postdoctoral research position in the area of computational physics and/or fluid dynamics. The position involves research in hydrodynamic instabilities, complex flows, modeling, and turbulence. The project is of special relevance to Inertial Confinement Fusion (ICF), where hydrodynamic instabilities are a primary obstacle in achieving ignition. The applicant is expected to collaborate with the theory and experimental groups at the Laboratory for Laser Energetics (LLE) where ICF research is conducted. The research has other important applications, including in combustion, astrophysics, and geophysics. The project is a collaboration among Professor Hussein Aluie, Professor Riccardo Betti, and other scientists at the LLE/UofR working in this area.

We welcome applications from candidates with experience in computational fluid dynamics and/or plasma physics, engineering, applied math, or related disciplines.

Evaluation of applications will begin on January 4, 2021 and continue until the position is filled. The position is initially for 2 years with the possibility of extending it for a third year, subject to satisfactory performance. Salary and benefits are competitive and will be commensurate with qualifications and experience.

Applications should be emailed as a single pdf file to Hussein Aluie ([hussein\\*\\*At\\*rochester.edu](mailto:hussein**At*rochester.edu)) and must include (i) a cover letter briefly outlining the candidate's academic background, interests, and his/her future research/career plans, (ii) CV, and (iii) contact information of three references.

#### **About the University of Rochester (UofR) and the City**

Founded in 1850, UofR is a highly competitive private research university which enrolls approximately 6,000 undergraduate and 3,500 graduate students. It has historical links to pivotal US social movements, including women's suffrage (Susan B. Anthony) and abolitionism (Frederick Douglass).



Fluids and Plasma research at UofR has a well-established collaborative group involving several faculty and a large number of students and postdocs. Recently, we have been awarded ~\$13 million to establish and host a multi-institution NSF Physics Frontier *Center for Matter at Atomic Pressures* (CMAP). Successful candidates would join a large group with diverse backgrounds and interests, including active collaborators at MIT, Princeton, UC Berkeley and UC Davis, U. Buffalo, and Livermore National Lab. Our department offers a friendly and stimulating research environment, and enjoys strong ties to a leading DOE fusion research facility, the *Laboratory for Laser Energetics*, which is adjacent to campus, and to the medical school, one of the top in the US.

The city of Rochester is a thriving and affordable, low-stress, medium sized metropolis (metro area population ~1 million) with excellent public services and amenities. It enjoys a vibrant performing arts culture thanks in-part to UofR's Eastman School of Music, often ranked as the top music school in the US, and several small colleges that focus on the arts. For outdoors enthusiasts, there are many well-maintained parks that offer sanctuaries within the city and many gorgeous state parks that are less than a 1 hour drive. Many of the beaches along lake Ontario are within 15-30 minutes from the city, and the Adirondack mountains are within a 3 hour drive.