



Position: PhD student in graduate physics program in Worcester Polytechnic Institute

Description: Wu lab seeks to recruit a self-motivated PhD physics student to advance the knowledge of physics in active fluid system. Active fluid is differentiated from conventional passive fluid system such as pure water, by its capability of self-driving without the intervene of external energy input. Such capability allows active fluid to accomplish the tasks beyond the limit of passive fluid such as self-carrying cargos from Point A to Point B or pumping fluids without a pump. Active fluid is a rising-star topic with an unlimited potential to revolutionize material science. Accepted student will work with the current lab members on characterizing and developing active fluid system such as developing optical control in active fluid to turn on and off activity *in situ*, exploring the self-mixing capability of active fluid system to promote micromixing in microfluidic system, and developing a new active fluid system to mimic cellular dynamics.

For more details about our research, please visit our lab website: <https://wp.wpi.edu/kuntawu/>

Research categories: Physics, fluid dynamics, material science, soft matter, and biophysics

Financial support: Teaching assistantship covering tuition and stipend, with a promotion opportunity to research assistantship depending on research performance and funding availability.

Qualification:

- Ability to communicate with English and read English papers (TOEFL: 84 or IELTS: 7)
- Bachelor's degree in physics, applied physics, or mechanical engineering with a GPA of ≥ 3.2
- Research experience
 - Bonus 1: Research experience in soft matter or biophysics
 - Bonus 2: Conference presentations and publications
- Basic coding skills
- Self-motivation in conducting research
 - Evaluated by the statement of purpose

Application: Email the lab principle investigator, Kun-Ta Wu (kwu@wpi.edu) with a CV and a brief statement of purpose describing the applicant's future research plan. Please title the email as "Application to Wu Lab (applicant's full name)."