

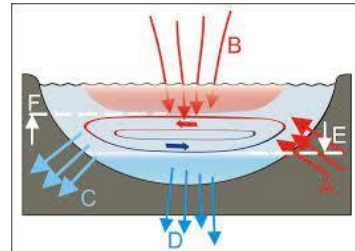
Opportunity description

Potential projects for undergraduate research will be focused on computational and theoretical analysis of fluid dynamics. Some topics include:

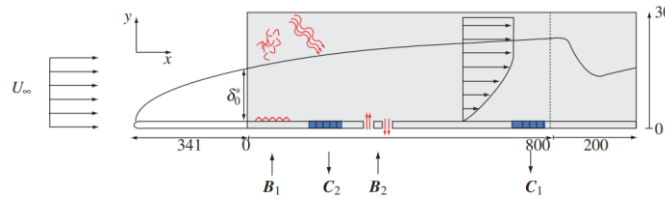
1. Drag reduction of flow over complex surface
2. Convection in oceanography applications
3. Optimal sensor and actuator placement in active flow control
4. Data-driven prediction in climate motivated models
5. Quantum algorithms for linear algebra and applications in hydrodynamics



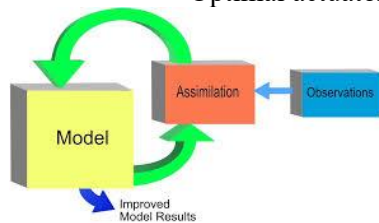
Drag reduction of flow over complex surface



Convection in oceanography applications



Optimal actuator and sensor placement in flow control



Data-drive climate prediction



Quantum algorithm for linear algebra

The student's responsibilities include problem formulation, programming, and data analysis. The student may earn credit for independent study or Mechanical Engineering Honors Research course. Application of summer research fellowship will also be encouraged and supported.

Student Qualification

Senior or junior students having a strong background in mathematics, physics, and computer programming (Python or MATLAB). Courses in fluid dynamics and prior research experience are desired.

How to apply

Interested students can apply this research opportunity by sending an email to Dr. Chang Liu via chang_liu@uconn.edu with a copy of CV and transcript. A paragraph describing the project you are interested in, your motivation and the preferred research duration will be appreciated.