

Chayut Teeraratkul

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- EDUCATION**
- University of Colorado Boulder - Boulder, CO**
Ph.D. Mechanical Engineering Aug 2019 - Present
- Advisor: Debanjan Mukherjee
- University of Rochester - Rochester, NY**
Master of Science in Mechanical Engineering Aug 2017 - May 2019
- Thesis: DiNuSphere - A Scalable Pseudospectral Code for Flows in Spherical Geometries
 - Advisor: Prof. Hussein Aluie
- Bachelor of Science in Mechanical Engineering* Aug 2013 - May 2017
- Cumulative GPA 3.32, Major GPA 3.62
 - Graduated with Distinction
- RESEARCH EXPERIENCES**
- Hemodynamics Interactions With Arterial Blood Clots**
- Developing computational models for an aggregate of deforming bodies (thrombosis) under flow.
- Pseudo-Spectral Turbulence Simulation for Spherical Geometry**
- Developed pseudo-spectral turbulence simulation on a sphere using spherical harmonics basis functions
 - Parallelized the simulation to run over multiple distributed processors
- Performance Evaluation of Underwater Turbine Designs**
- Conducted CFD simulations via ANSYS Fluent on different underwater turbine shroud geometries.
 - Compared the efficiency of each turbine designs.
- TEACHING EXPERIENCES**
- Teaching Assistant:** Graduate courses, University of Rochester
- ME400: Applied Boundary Value Problems (Fall 2018)
- Teaching Assistant:** Undergraduate courses, University of Rochester
- ME123: Thermodynamics (Spring 2018)
 - ME242: Solids and Materials Lab (Fall 2017)
 - ME225: Fluid Mechanics (Fall 2016)
 - CSC160: Engineering Computing (Spring 2015)
- PROFESSIONAL EXPERIENCES**
- Consultant at Qualitrol Corp.** Jun 2016 - Aug 2016
- Performed a CFD simulations via ANSYS Fluent to determine the volume flow rate through the outlet of a pressure relay.
 - Used the simulation results to assist in redesigning the pressure relay.
- AWARD & HONORS**
1. Best Poster Award: 10th Annual Rocky Mountain Advanced Computing Consortium HPC Symposium, 2020
- ABSTRACTS & PRESENTATIONS**
1. **Teeraratkul, C.**, Mukherjee, D. Understanding Flow-mediated Transport in the Arterial Thrombus Neighborhood. *6th Annual Rocky Mountain Fluid Mechanics Research Symposium, Boulder, CO, August 2020*
 2. **Teeraratkul, C.**, Mukherjee, D. Parallel Implementation of a Hybrid Particle-Continuum Finite Element Framework for Blood Clot Biomechanics. *10th Annual Rocky Mountain Advanced Computing Consortium HPC Symposium, Boulder, CO, May 2020*

