SAMUEL CHRISTENSEN

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EDUCATION

UNIVERSITY OF MICHIGAN   Ann Arbor, MI
Honors College in the College of Literature, Science, and the Arts

- Bachelor of Science, Honors Mathematics and Biophysics, degree received August 2017
- relevant classes include graduate level real, complex, and functional analysis, graduate level PDE parts 1&2, graduate numerical PDE, graduate level fluid dynamics, nonlinear dynamics

UNIVERSITY OF CALIFORNIA, LOS ANGELES   Los Angeles, CA
Department of Biomathematics

- PhD in Biomathematics, program started October 2017.
- relevant classes include Introduction to computational science, fluid mechanics, solid mechanics, probability parts 1&2, stochastic and deterministic modeling of biological systems, numerical linear algebra, statistical computing

RESEARCH EXPERIENCE

Jan 2019– Current	**FOCUSING POSITIONS FOR PARTICLES IN A CHANNEL** **Faculty: Marcus Roper, UCLA Department of Mathematics and Biomathematics**

- Used image processing techniques to gather information about particles in microfluidic channels.
- Discovered new leading order solution for particle velocity in a channel
- Implemented finite element PDE solver to calculate particle dynamics in a channel of arbitrary shape.

June 2016– June 2017	**FAST TIME STEPPING FOR SIMULATIONS OF RIGID BODIES IN STOKES FLOW** **Faculty: Shravan Veerapaneni, Eduardo Corona, University of Michigan Department of Mathematics**

- Created boundary integral equation fluid flow solver with moving geometries and spectral deferred correction time stepping.

May 2015– September 2017	**MINIMUM TIME READJUSTMENT OF JET LAG** **Faculty: Daniel Forger, University of Michigan Department of Mathematics**

- Used control theory and mathematical models to study the human circadian rhythm. Research was implemented on University of Michigan iOS app 'Entrain'
- Analyzed real world data sets on circadian rhythms gathered from University of Michigan app Entrain in order to study sleep patterns of large populations.

TEACHING EXPERIENCE

Fall 2013– Spring 2015	**UNIVERSITY OF MICHIGAN** Kiluk Experiment: Linear Algebra tutor	Ann Arbor, MI
Fall 2016	**UNIVERSITY OF MICHIGAN** Grader for Math 558: Applied Nonlinear Dynamics	Ann Arbor, MI

VOLUNTEERING

- Officer for University of Michigan Math Circle
- Student volunteer for Wolverine Pathways
- Volunteer at Ann Arbor Math Olympiad Co-op.

TALKS GIVEN

- Christensen, S., Chu, R., & Roper, M. *inFocus: Fast Inertial Lift Velocity Calculation In Arbitrary Geometry* Presentation given at APS DFD 2019

AWARDS

- NSF SIB Training Grant 2017-2018, 2018-2019
- 2017 Ursula Mandel Scholarship