# Colin Roberts

Colorado State University Department of Mathematics 1874 Campus Delivery Fort Collins, CO 80523

Office: Weber 231 Colin.Roberts@rams.colostate.edu

### Education

Graduate Education Aug. 2017- Present Colorado State University GPA: 3.924

Colorado State University

Mathematics Ph.D. Program

Undergraduate Education Aug. 2017- May 2017

Colorado State University
Bachelor of Science
General Mathematics & Physics

### **Published Works**

- Brooks Adams, Henry Adams, and Colin Roberts, Sweeping Costs of Planar Domains, In Erin W Chambers, Brittany T Fasy, and Lori S Ziegelmeier, eds., Research in Computational Topology, pages 71-92, AWM Springer series, volume 13, 2018.
- 1. Jonathan Gilbert, Colin Roberts, and Jacob Roberts, Near-Resonant Light Propagation in an Absorptive Spatially Anisotropic Ultracold Gas, Journal of the Optical Society of America B, pages 718723, volume 25, number 4, 2018.

## Teaching

Instructor: Math 255, Calculus for Biological Scientists II	SP 2019
<b>Instructor</b> : Math 155, Calculus for Biological Scientists I	FA 2018
Instructor: Math 340, Introduction to Ordinary Differential Equations	SM 2018
Instructor: Math 160, Calculus for Physical Scientists I	SP 2018
Instructor: Math 161, Calculus for Physical Scientists II	FA 2017
Learning Assistant: PH 141, Physics for Scientists and Engineers I	FA 2015

## Organization and Service

Founder/Organizer of the Mathematical Physics Lab	Aug. 2018 - Present
Co-organizer for the Greenslopes graduate seminar	Jan. 2019 - May 2019
President of the Society of Physics students Chapter at Colorado State University	Aug. 2016 - May 2017
Voting member for Physics for the College Council for the College of Natural Sciences	Aug. 2015 - Dec. 2016
Tutor for the physics department at Colorado State University	Mar. 2015 - May 2016

## Research Talks

The Principle of Least Action and Variational Methods. Mathematical Physics Lab at Colorado State University, April  $23^{\rm rd}$ , 2019.

Tensors and Exterior Algebra. Greenslopes graduate student seminar at Colorado State University, March  $14^{
m th}$ , 2019.

Special Relativity. Mathematical Physics Lab at Colorado State University, January 29<sup>th</sup>, 2019.

Incompressible Fluid Flow: Arnold's Geometrical Approach. Solving Problems in Applied Mathematics Seminar at Colorado State University, November  $6^{\rm th}$ , 2018.

Introduction to Riemannian Geometry, Part 2. Mathematical Physics Lab at Colorado State University, October  $16^{\hbox{th}}$ , 2018.

Introduction to Riemannian Geometry, Part 1. Mathematical Physics Lab at Colorado State University, October  $9^{\rm th}$ , 2018.

## **Awards and Honors**

College of Natural Sciences Dean's List	Fall 2014, Fall 2015
Louis and Gladys Weber Scholarship	2016
Donovan B. and Sally S. Hicks Scholarship	2016
Colorado State Honors Scholarship	2012 - 2016
Western Undergraduate Exchange Scholarship	2012 - 2016

### **Professional Affiliations**

Member: American Mathematical Society.

Member: Society for Industrial and Applied Mathematics.

Member: American Physical Society.

Member: American Association for Physics Teachers.

Member: Sigma Pi Sigma Honors Physics Fraternity.

### Advisor

Name Clayton Shonkwiler

**Department** Colorado State Mathematics

**Position** Assistant Professor

Contact clayton.shonkwiler@colostate.edu

#### Committee

Name Henry Adams

**Department** Colorado State Mathematics

**Position** Assistant Professor

Contact henry.adams@colostate.edu

Name Wolfgang Bangerth

**Department** Colorado State Mathematics

**Position** Professor

Contact wolfgang.bangerth@colostate.edu

Name Jacob Roberts

**Department** Colorado State Physics

Position Professor, Department Chair Contact Jacob.Roberts@colostate.edu