# COLTON GRAINGER

Doctoral Student
Mathematics Department, College of Arts and Sciences
University of Colorado, Boulder

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## Education

2018–present | **Enrolled in Mathematics Ph.D. program, University of Colorado** — Boulder, CO
Completing coursework towards research in Topological Data Analysis.

2012–2016 | **B.S. in Mathematics-Physics, The College of Idaho** — Caldwell, ID
Senior Study: Galois Theory for Differential Equations.
Advised by Dr. Jonny Comes.

## Projects

Dec 2018 | **Prooflogger**
I reimplemented Paul Baumberg's Math Proof Log for use in the calculus sequence at CU. [code]

Nov 2018 | **StatOptML Seminar**
I presented Guss and Salakhutdinov's application of topological data analysis to machine learning for StatOptML. [code]

## Awards

2012–2016 | **Heritage Scholarship** — The College of Idaho
Merit scholarship for B.S. studies. Full-tuition academic support.

## Experience

2017–2018 | **Social Welfare Intern, United Way of Thurston County** — Olympia, WA
I supervised volunteers, interns, and work-studies at an overnight shelter for homeless families. I maintained a social service wiki and trained 140 community members to work at shelter. I coordinated service learning projects with the Evergreen State College and the Olympia public library. Mentored by: Lindsay Fujimoto, Abbigail Shirk. [UX, wiki development, project management]

2016–2017 | **Data Management Intern, YMCA International Services** — Houston, TX
I supported 7 staff by managing data for 240 client cases at a refugee resettlement agency. I wrote data management plans for the implementation of 3 SQL databases. I participated in the Refugee Health Working Group during the 2017 transition from state to federally funded refugee medical assistance. Mentored by: Shaoli Bhadra, Salimah Shamsuddin. [open source development, public health, SQL]

## Teaching

**MATH 1300: Calculus I** — University of Colorado
Presented recitations, wrote curriculum, graded, held office hours.

Spring 2019 | **Teaching Assistant**
Coordinated by Lee Roberson. [4 sections, 120 students.]

Fall 2018 | **Teaching Assistant**
Coordinated by Lee Roberson. [3 sections, 81 students.]

PHY-271: Analytical Physics I
Graded assignments, assisted with labs.

Fall 2016    Undergraduate course assistant
Coordinated by Kathryn Devine. [1 section, 25 students.]

## Relevant Coursework

2018–present    University of Colorado
Differential Geometry I [with Jeanne Clelland]
Modern Algebra II [with Richard Green]
Topology I [with Carla Farsi]
Modern Algebra I [with Nat Thiem]

2017–2018    University of Idaho (Engineering Outreach)
Numerical Analysis
Ordinary Differential Equations
Probability Theory

2012–2016    The College of Idaho
Topology and Geometry
Real and Complex Analysis
Algebra and Galois Theory
Electrodynamics
Thermal Physics
Mechanics