Luke Askew — Curriculum Vitae

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Education

Doctor of Philosophy : 2022 - in Progress
Mathematics, Dartmouth College

Bachelor of Science: 2019 - 2022
Mathematics, Colorado State University

Associate of Science: 2016 - 2019
Mathematics, Front Range Community College

Teaching

Dartmouth College:
- Teaching Assistant for Linear Algebra — Winter 2023
- Teaching Assistant for Calculus — Fall 2022

Front Range Community College:
- Supplemental Instructor for College Algebra — Spring 2019
- Math Help Center Tutor for College Algebra, Calculus I-III, Linear Algebra — Fall 2018, Spring 2019

Talks

Skeletons!: Fall 2022
Graduate Student Seminar — Dartmouth College

Computing Class Fields with Kummer Theory: Fall 2022
Class Field Theory Learning Seminar — Dartmouth College

Hilbert's 10th Problem for Fields: Spring 2022
Number Theory and Algebraic Geometry Seminar (SPLINTER) — Colorado State University

Introduction to Simplicial Sets: Spring 2022
Applied Category Theory Seminar (ACTS) — Colorado State University

What is a Topos?: Fall 2021
Number Theory and Algebraic Geometry Seminar (SPLINTER), Invited — Colorado State University

Elementary Topoi and Logic: Fall 2021
Applied Category Theory Seminar (ACTS) — Colorado State University

Integer Valued Matrices and Abelian Categories: Spring 2021
Applied Category Theory Seminar (ACTS) — Colorado State University

The Category of Simply Typed λ-theories and the Category of Small Cartesian Closed Categories

are Equivalent : Spring 2021
Applied Category Theory Seminar (ACTS) Colorado State University

Applications of Yoneda's Lemma and Equivalence of Categories: Fall 2020
Applied Category Theory Seminar (ACTS) Colorado State University

Computing All Polynomial Solutions to Systems of Homogeneous Linear PDEs with Gröbner Bases: Fall 2019
Undergraduate Poster Session, Cash Prize Winner Colorado State University

a Topology Driven Approach to Localization: Summer 2019
Montana State University REU Poster Session Montana State University

Dickson's Lemma: Summer 2019
Computational Topology and Geometry (CompTaG) Book Club Montana State University

Professional Activities

Grade Appeal Committee : Spring 2021
MATH 160 and MATH 141 at CSU

Other Experience

Mathematician and Software Engineer, Dark Sky Technology: December 2021 - September 2022
- Programming language translation combining type theory and machine learning
- Backend API development
- Python, C, and Rust programming

Park City Mathematics Institute Summer School : July 2022
Number Theory Informed by Computation

Computer Science REU, Montana State University : Summer 2019
Persistent Homology Based Approaches to Localization
Under Supervision of Brittany Terese Fasy, David L. Millman, and Binhai Zhu.

Mathematical Biology Highschool Internship, Colorado State University: Summer 2018
Under Supervision of Yongcheng Zhou