

Luke Askew — Curriculum Vitae

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Education

Dartmouth College :

Ph.D. in Mathematics (in Progress) Expected 2027

Colorado State University:

B.S. in Mathematics 2022

Front Range Community College:

A.S. in Mathematics 2019

Teaching

Dartmouth College:

- Reading Course Supervisor
 - Math 87 Reading Course (Applied Category Theory) Spring 2023
- Teaching Assistant
 - Math 22 Linear Algebra with Applications Winter 2022
 - Math 3 Calculus Fall 2022

Front Range Community College:

- Supplemental Instructor
 - Math 121 College Algebra Spring 2019
- Math Help Center Tutor 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

Directed Reading Program Mentor:	
○ Category Theory and Abstract Algebra	Spring 2023
Grade Appeal Committee :	Spring 2021
MATH 160 and MATH 141 at CSU	

Awards

Outstanding Graduate Student Teacher:	2023
Dartmouth Center for the Advancement of Learning	

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	