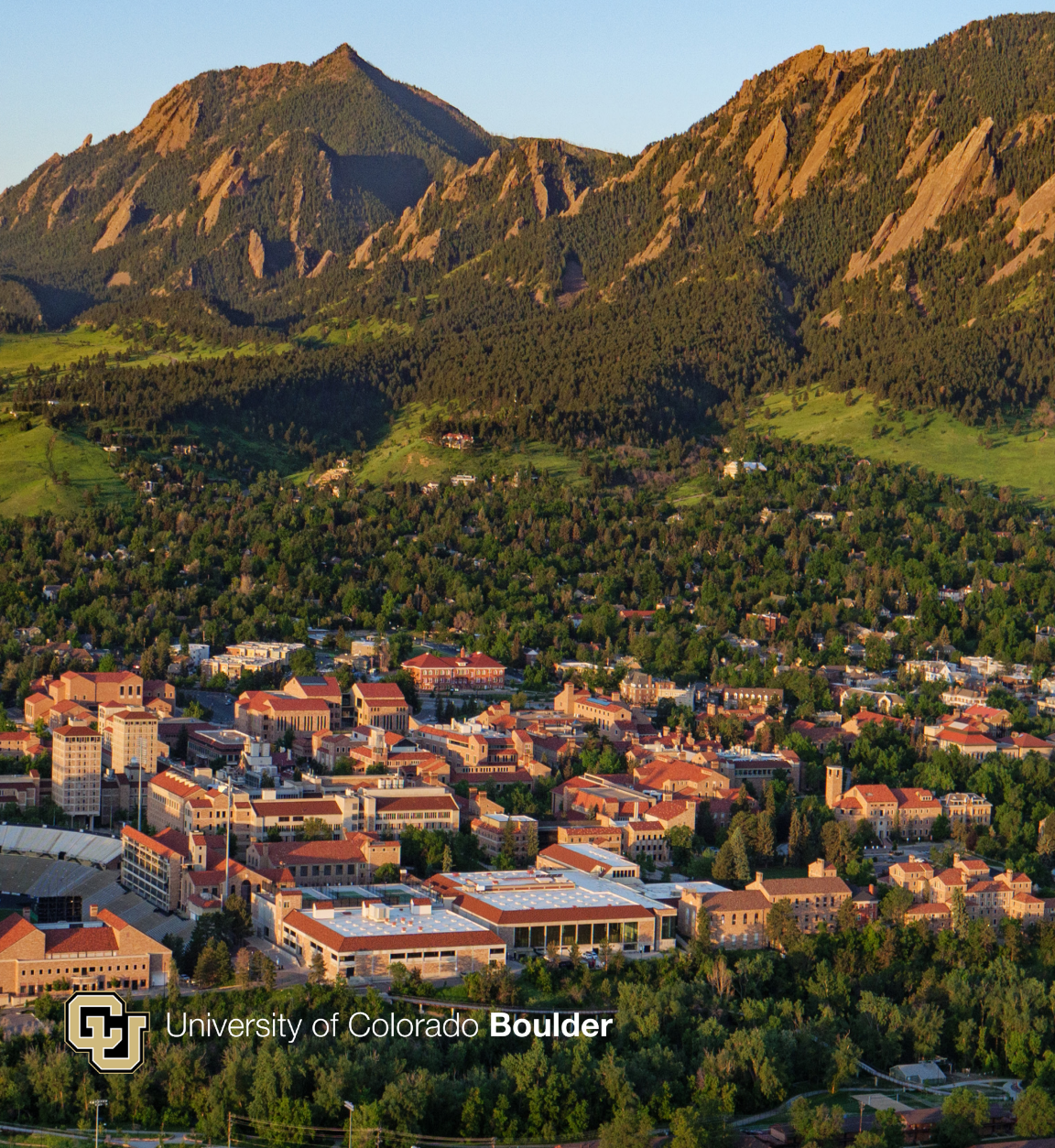



Doctor of Philosophy in

Applied Mathematics



University of Colorado **Boulder**



The Department of Applied Mathematics at CU Boulder offers a highly interdisciplinary research program dedicated to advancing modern mathematics in numerous scientific disciplines. Our inclusive community ensures all participants feel that they are contributing to diverse ideas and perspectives as we research together to advance fields in science, engineering and mathematics.



Our Program

10+ fellows across multiple professional societies

24 tenure-track faculty

38 affiliated faculty members and scientists from CU Boulder departments and research institutes

Join our program, ranked in the top 15 in the nation

(U.S. News & World Report, 2022)

[Learn more about our faculty and research.](#)

Our Environment

- Home to the Association for Women in Mathematics chapter
- Members of the QSIDE Consortium, where you can apply your mathematical skills to social justice issues
- Several of our faculty members are mentors for the Math Alliance, an organization providing opportunities for underserved U.S. students interested in the mathematical sciences

[Learn more about our values and involvement opportunities.](#)

Our doctoral alumni

- Professors and postdocs at major research universities and liberal arts colleges throughout the United States
- Scientists at national laboratories, including LANL, LBNL, LLNL, NREL and USGS
- Mathematicians and data scientists at major companies, recently including Apple, Amazon and United-Healthcare Group

[Learn more about our alumni.](#)

Program Overview

Core Research Areas

- Computational mathematics
- Mathematical biology
- Mathematical geosciences
- Applied nonlinear PDEs and dynamics
- Statistics and data science
- Stochastic processes and applications

Affiliate Program

Our Affiliate Program broadens interactions and collaborations between students and experts inside and outside the department to enrich and challenge their intellectual experience.

- Affiliate faculty include professors in science disciplines at CU Boulder and scientists from national research labs
- Affiliated faculty can be primary advisors of applied mathematics PhD students

[Learn more about the Department of Applied Mathematics.](#)

Community

CU Boulder is one of only 36 U.S. public research institutions in the Association of American Universities (AAU). This century-old association elects member universities on an invitation-only basis. AAU universities are dedicated to improving human life through education, research and discovery. Join us, and conduct research in one of the nation's most innovative and beautiful locations.

- Tier 1 research university
- 50+ years of collaboration with local national laboratories, including NREL, NCAR, NOAA, NIST and NEON
- 12 research institutes, including BioFrontiers, CIRES, INSTAAR, JILA, LASP and RASEI
- 75+ research centers associated with CU Boulder including: National Snow and Ice Data Center; Aerospace Mechanics Research Center; Center for Neuroscience
- Top 3 town for entrepreneurs and startups (Crowdspring, 2020)



PhD Student Experience

To earn the PhD in applied mathematics, students must complete 30 hours of coursework over a five-year period. Our unique program offers interdisciplinary training, where students work alongside departmental faculty and scientists from applied disciplines. Students take coursework in various disciplines to gain expertise beyond their core training in mathematics. Many of our students publish in a variety of fields, including mathematics, statistics and data science journals, and top disciplinary journals.

[Learn more about doctoral admissions.](#)

Doctoral Student Timeline

- Year 1** ► Core training in advanced mathematics
- Year 2** ► Develop interdisciplinary training and transition to research
- Year 3** ► Complete the Advisor and Mentor Research Plan
- Year 4** ► Complete comprehensive exam
- Year 5** ► Defend your thesis and graduate

[Review our PhD timeline guide.](#)

Funding Opportunities

We guarantee at least five years of funding support for the nine-month academic year

Academic year

- Teaching assistantships: Calculus I/II/III and Differential Equations
- Research assistantships: Faculty secure numerous external grants

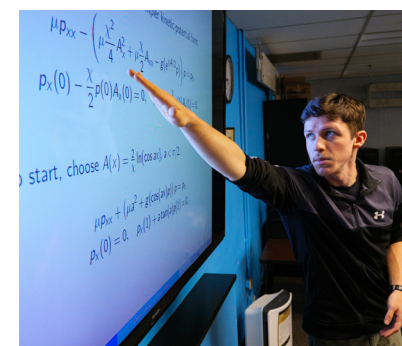
Summer

- First-year fellowships
- Graduate teaching or teaching assistantships
- On-campus research
- Internships with national laboratories and companies

Fellowship opportunities

- Rudy Horne Memorial Fellowship
- Devaney Graduate Fellowship
- Colorado Diversity Fellowships

[Connect with our graduate program coordinator.](#)





Connect with us.

