



# Applied Mathematics - CU Boulder

## Ph.D. Information Session

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[www.colorado.edu/amath](http://www.colorado.edu/amath)



University of Colorado **Boulder**

- APPM 14th in nation (US News and World Report)
- 23 Tenure-track faculty
- Research areas:
  - Computational mathematics
  - Mathematical biology
  - Mathematical geosciences
  - Applied nonlinear PDEs and dynamics
  - Statistics and data science
  - Stochastic processes and applications
- Affiliate program
  - 38 faculty members and scientists
  - AERO, ATOC, CEAE, CHEM, CS, ECEE, ECON, GEOG, MATH, MECH, PHYS, etc.





# What makes CU special?



- Big R1 university
  - Interdisciplinary collaborations across departments and colleges
- National laboratories in and near Boulder
  - National Renewable Energy Laboratory
  - National Center for Atmospheric Research
  - National Oceanic and Atmospheric Administration
  - National Institute of Standards and Technology
  - National Ecological Observation Network



# APPM graduate students

- PhD and PMD (and inward-facing Master's)
- 144 total APPM grad students
- 65 PhD students
  - 11 international
  - 42% female
- PhD students by the numbers:
  - 1<sup>st</sup> year: 14 (5 female / 9 male)
  - 2<sup>nd</sup> year: 16 (8 female / 8 male)
  - 3<sup>rd</sup> year: 8 (4 female / 4 male)
  - 4<sup>th</sup> year: 13 (6 female / 7 male)
  - 5<sup>th</sup> year: 8 (2 female / 6 male)
  - 6<sup>th</sup> year: 6 (2 female / 4 male)



# Inclusion, Diversity and Equity efforts



- Creating inclusive community for graduate students and department
  - Graduate student mentorship
  - Tea times
  - Game and trivia nights
  - Association for Women in Mathematics (AWM) Chapter
  - QSIDE Consortium (Institute for the Quantitative Study of Inclusion, Diversity and Equity)
- Financial support for underrepresented populations
  - Rudy Horne Memorial Fellowship
  - Devaney Graduate Fellowship
- Growing and supporting diverse faculty and student body
  - Welcoming community
  - 7 faculty of color, 4 female faculty
  - Math Alliance departmental membership and mentoring



# PhD program overview

- 30 hours of coursework
  - Out of department sequence
- 3 prelims (by end of 2nd year)
  - Numerical analysis (required)
  - Applied analysis (required)
  - Probability and statistics (option)
  - PDEs (option)
  - P/RP rate 83% in past 2 years
- Advisor, mentor, research plan (3rd year)
- Comprehensive exam (4th year)
- Defense and graduation (5th year)



# Funding

- Department guarantees 6 years AY support
- Teaching assistantships (~years 1-2)
- Research assistantships (~years 3-5)
- Faculty funded by grants from all over
  - More than \$5 million in new awards last year
- Summer funding
  - First year fellowships
  - Graduate teaching/TA
  - Research on campus
  - Internships
    - National laboratories
    - Companies in the Front Range
- More than \$160,000 in fellowships last year



# Questions

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