

GRADUATE PROGRAMS

# COMPUTING & MATHEMATICAL SCIENCES



The mission of Computing + Mathematical Sciences (CMS) at Caltech is to address the most challenging and fundamental problems in the science and technology of computation and information, while providing a first-rate education for future scientists and engineers.

Consistently ranked among the top programs in the US, CMS cuts across the traditional discipline boundaries, covering computer science, applied mathematics, communication and networks, control and dynamical systems, and computational science—to name a few.

[www.cms.caltech.edu](http://www.cms.caltech.edu)

All applications must be submitted online through the Graduate Admissions website. If you're unsure about which program within CMS is best for you, please feel free to apply to multiple programs. All qualified applicants will be considered. Women and members of minority groups are especially encouraged to apply. Financial assistance for application fees is available for those who qualify.

## GRADUATE DEGREE PROGRAMS

[Applied + Computational Mathematics](#)

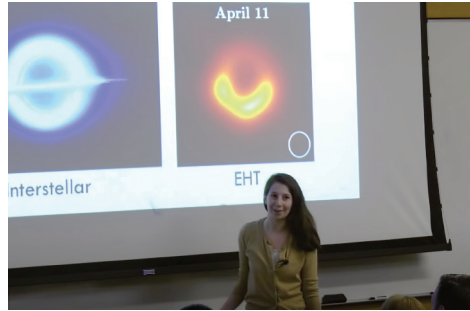
[Computer Science](#)

[Computing + Mathematical Sciences](#)

[Control + Dynamical Systems](#)

## ADMISSIONS INFORMATION

[www.gradoffice.caltech.edu](http://www.gradoffice.caltech.edu)



## OUR FOCUS

The CMS graduate program is designed to provide basic foundations and to foster the development of logical, analytical, and computational thinking for students who seek careers in the forefront of computing, be it in computing systems, theory of computer science, and/or mathematical computing. Our program concentrates on both the practical and theoretical aspects of computing sciences such as numerical computing, dynamical systems, algorithms, complexity, coding theory, and graph theory.

Our department is structured and functions quite differently from many other computing-related departments for it shares Caltech's special characteristics: small size (around twenty core faculty members), broad interdisciplinary reach (from quantum computation to social information systems), and an overall emphasis on scientific foundations.

## RESEARCH AREAS

- Algorithms & Complexity Theory
- Applied Probability & Stochastic Analysis
- Computational Neuroscience & Neural Engineering
- Formal Methods & Verification
- Graphics & Geometry
- Information Theory & Signal Processing
- Molecular Programming & Synthetic Biology
- Networked & Distributed Systems
- Optimization & Control
- Quantum Information & Computation
- Robotics & Autonomous Control
- Scientific Computing & Numerical Analysis
- Social & Information Sciences
- Statistics & Machine Learning

## OPTIONS MANAGER

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