

# GRADUATE PROGRAMS MECHANICAL & CIVIL ENGINEERING



## MCE MISSION

Mechanical and civil engineers shape our physical environment, from the cities we live in, the machines we use, and the energy that powers these, to delivering the water we need.

The Mechanical and Civil Engineering (MCE) Department at Caltech aims to:

- address fundamental scientific problems and critical technological challenges of the day,
- create sustainable, resilient, and autonomous machines and infrastructure,
- attract the best people and provide an inspiring atmosphere for research and education, and
- increase and promote diversity.

All applications must be submitted online through the Graduate Admissions website. The MCE program is focused on PhD-level research and does not typically accept students for a Masters-only program. 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

### Mechanical Engineering

Ph.D. (M.S. earned on the way)

### Civil Engineering

Ph.D. (M.S. earned on the way)

### Applied Mechanics

Ph.D. (M.S. earned on the way)

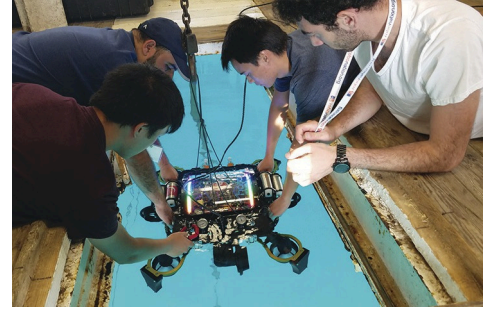
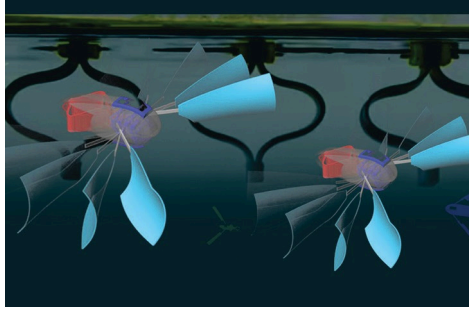
## ADMISSIONS INFORMATION

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

## OPTIONS MANAGER

Jenni Campbell  
[jenni@caltech.edu](mailto:jenni@caltech.edu)

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

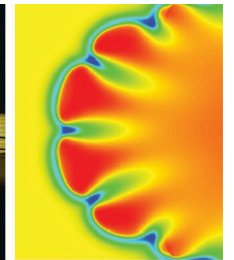
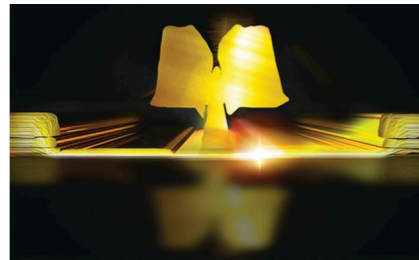


## OUR FOCUS

The core goal of the MCE graduate programs is to train the leaders of tomorrow and conduct fundamental research to address major technological roadblocks. Our research is often interdisciplinary, with projects ranging from focused individual studies to collaborations within large centers. The MCE students and faculty are actively involved with the Resnick Sustainability Institute (RSI), Jet Propulsion Laboratory (JPL), Center for Autonomous Systems and Technologies (CAST), Center for Bioinspired Engineering (CBE), Keck Institute for Space Studies (KISS), Terrestrial Hazard Observation and Reporting (THOR), and other research initiatives both in and outside Caltech.

## RESEARCH AREAS

- Energy and Sustainability
- Mechanics and Materials
- Resilient Infrastructure
- Robotic and Autonomous Systems



## SELECTED RESEARCH PROJECTS

- Solar Thermal Energy
- Active Materials
- Closed-loop Flow Control for Micro Air Vehicles
- Spinal Cord Stimulation
- Robotic Exoskeletons
- "Living" materials
- Computational Geomechanics
- Turbulent Buoyant Flows
- Nucleation of Earthquakes
- Quantum Mechanics at the Macroscopic Scale
- Shock Waves in Multiphase Flow
- Distributed Sensing Systems

