



## Department of Civil Engineering and Engineering Mechanics

**The Bachelor of Science degree in Civil Engineering was authorized by the Board of Regents and faculty in 1905,**

### Degrees Offered

BS in Civil Engineering  
MS and PhD in Civil Engineering and Engineering Mechanics

### Number of Students

165 undergraduates  
64 MS and PhD

### Regents Professor

Chandrakant Desai

### NSF Career Awardees

Jennifer Duan  
Robert Fleischman  
Mark Hickman

### Presidential Young Investigator Awardees

George Frantziskonis  
Achintya Haldar  
Hamid Saadatmanesh

### Student Groups

- Society of Civil Engineers
- Institute of Transportation Engineers
- Chi Epsilon

### Department Head

Professor Kevin Lansey

and the College of Engineering and Mines was created in 1914. The Civil Engineering building was completed in 1965, and in 2005 we celebrated our centennial with the “100 Years of Building our Foundation” gala. In 2009 we joined with four other engineering departments to become the School of Sustainable Engineered Systems.

### Flagship Research Grants and Projects

Professor Kevin Lansey is the principal investigator for Emerging Frontiers In Research and Innovation, and for Resilient & Sustainable Infrastructures. He is working to advance scientific and engineering understanding and methods for integrated water and wastewater infrastructure planning in the presence of complex, competing objectives using mathematical modeling, uncertainty analysis, and optimization.

Associate professor Robert Fleischman conducts research for the NSF’s Network for Earthquake Engineering Simulation program, and leads a team of researchers from Lehigh, San Diego State, and UA. He has made significant progress in seismic-resistant design of building structures using the shake table at San Diego State University.

Assistant professor Jennifer Duan has been awarded an NSF Career award of more than \$400,000 to study the complex forces that determine how sediment is deposited in river channels.

**The ATLAS Project.** Atlas is a center of excellence established by the University of Arizona for research and development of algorithms and software in traffic and logistics management. The center consolidates and enhances related research, assists in transfer of intelligent transportation systems technology, and facilitates advanced educational programs in these areas for students, practicing engineers, managers and researchers.

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## Department of Civil Engineering and Engineering Mechanics

*UA civil engineering students have built and raced concrete canoes (left) for several years in the American Society of Civil Engineers Western Regional Conference.*

### Research Areas

- Structures
- Hydraulics and Hydrology
- Transportation
- Engineering Mechanics
- Geomechanics and Geotechnical Engineering

### Faculty

Muniram Budhu  
 Yi-Chang Chiu  
 Chandrakant Desai  
 Jennifer Duan  
 Robert Fleischman  
 George Frantziskonis  
 Achintya Haldar  
 Mark Hickman  
 Tribikram Kundu  
 Kevin Lansey  
 Hamid Saadatmanesh  
 Lianyang Zhang

### Key Philanthropy Areas

- **Endowed faculty chairs:** to recruit and retain the best educators.
- **Graduate student fellowships:** to recruit the best graduate students.

### E-mail

ceem@engr.arizona.edu

**DynusT Lab.** The Dynamic Urban Systems in Transportation Lab is a research unit within the Department of Civil Engineering and Engineering Mechanics focusing on research in the areas of urban transportation system dynamic modeling and management. Researchers from the lab are currently conducting research in mesoscopic traffic flow theory and simulation; intermodal (highway and transit) dynamic traffic simulation and assignment; transit modeling; integrated land use, activity-based model, and traffic simulation modeling; remote sensing and modeling; and mega-scale cluster-computing-based dynamic traffic simulation and assignment.

### Accomplishments

- Mark Hickman, associate professor of transportation engineering, was awarded Southern Arizona Educator of the Year by the Arizona Society of Professional Engineers.
- Robert Fleischman received the Delbert R. Lewis Distinguished Professor Award for 2008-2011.
- Tribikram Kundu received the 2008 Structural Health Monitoring Person of the Year Award.
- In 2009 the National Council of Examiners for Engineering and Surveying Engineering honored the department with the Connecting Professional Practice and Education award. Professional engineers partnered with faculty to develop communication and surveying courses and participated in a senior design sequence.

- Regents' Professor Chandra Desai was awarded the 2009 Nathan M. Newmark Medal by the Structural Engineering and Engineering Mechanics Institutes of the American Society of Civil Engineers. In 2008, Desai was selected by the SCE's Geo-Institute to receive the 2007 Karl Terzaghi Award. Desai has the unique honor of receiving both awards, which are among the most prestigious at the ASCE. These awards reflect the multidisciplinary nature of Desai's outstanding and seminal work and its application in the fields of geomechanics, and structural and engineering mechanics.

### Funding

We have accepted grants from the following agencies: NSF, FHA, AFOSR, ARO, ASU, NUSDA, Petroleum Research Fund, PPCI, Texas A&M, Acellent.