We are growing our faculty to 280 and broadening and strengthening our research in the areas necessary to invent the Digital Future – a future where humans and intelligent machines use real-time data to make decisions and act with speed, safety and precision.

To accommodate our growth in research and education, we are building a new kind of facility designed for innovation through academic-industry collaborations.

The Digital Future: Applications
- Context-aware robotics and autonomy
- Secure and resilient cyber and physical systems
- Low-carbon energy and transportation systems
- Cost-effective health care and public health
- Wearable sensing, diagnostics and treatments via secure 5G wireless systems

We Transfer our Innovations to Society
Research partnerships • Entrepreneurship mentoring
Commercialization accelerators • Access to capital

UC San Diego by the numbers

<table>
<thead>
<tr>
<th>Research Enterprise</th>
<th>$1.07 Billion</th>
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<tbody>
<tr>
<td>5th in USA</td>
<td>For Federal R&amp;D Expenditures</td>
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<table>
<thead>
<tr>
<th>UC San Diego Faculty</th>
<th>1,722</th>
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<tbody>
<tr>
<td>Undergraduates (Fall 2016)</td>
<td></td>
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<table>
<thead>
<tr>
<th>Graduate Students (Fall 2016)</th>
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<tr>
<td>28,127</td>
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<tr>
<td>7,689</td>
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</table>
### Academic Departments

#### Mechanical & Aerospace Engineering
- Biomaterials / Biomimetics
- Cell / Membrane Mechanics
- Control, Estimation and Optimization
- Energy Technologies
- Environmental Technologies
- Hard Disk Drive Tribology
- High-Energy Materials Processing
- Materials for Extreme Conditions
- Medical Device Technology
- MEMS for Extreme and Biological Environments
- Metamaterials
- Robotics / Networked Systems
- Solid and Soft Matter
- Turbulence, Geophysical Flows, Macro/Microfluidic Flows

#### Computer Science & Engineering
- Bioinformatics
- Computer Architecture
- Computer Science Pedagogy
- Databases
- Embedded Systems & Design
- Graphics and Vision
- Human-Computer Interaction
- Machine Learning / Artificial Intelligence
- Programming Languages
- Robotics
- Security / Cryptography
- Software Engineering
- Systems and Networking
- Theoretical Computer Science

#### Electrical & Computer Engineering
- Bioinformatics / Bionanotech
- Brain Imaging / Mapping
- Cyber-Physical Sys. Security
- Electromagnetics
- Electronic Circuits and Systems
- Embedded Systems
- Info Tech / Communications
- Intelligent Systems / Robotics
- Machine Learning
- Magnetic and Optical Storage
- Medical Devices and Robotics
- Nanoelectronics
- Network Infrastructure
- Neural Interfaces
- Photonics / Nanophotonics
- Signal/Image/Video Processing
- Systems Energy Engineering
- Wearable Sensors

#### Structural Engineering
- Aerospace Structures / Aviation Safety
- Biomechanics / Geomechanics
- Composites / Nanomaterials
- Computational Fluid-Structure Interaction Analysis
- Computational Mechanics for Extreme Events Damage Prediction
- Earthquake Engineering and Infrastructure Renewal
- Geotechnical Engineering
- Large-Scale Experimental Research
- Multi-Hazard Mitigation for Earthquakes, Blasts and More
- Risk Analysis / Visualization / Optimization
- Structural Health Monitoring / Nondestructive Evaluation

#### Bioengineering
- Autodigestion
- Bioinformatics / Genomics
- Biomaterials / Biomechanics
- Cell / Tissue Mechanics
- Biophotonics / Biosensors
- Cardiac Mechanics
- Cardiovascular Engineering and Imaging
- Cartilage / Tissue Engineering
- Genomic Engineering
- Metabolic Bioengineering
- Microcirculation / Transfusion Medicine
- Molecular / Cellular Bioengineering
- Nanotechnology
- Neuroengineering
- Stem Cells / Regenerative Medicine
- Systems Biology
- Translational Bioengineering

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#### Biological Engineering
- Autodigestion
- Bioinformatics / Genomics
- Biomaterials / Biomechanics
- Cell / Tissue Mechanics
- Biophotonics / Biosensors
- Cardiac Mechanics
- Cardiovascular Engineering and Imaging
- Cartilage / Tissue Engineering
- Genomic Engineering
- Metabolic Bioengineering
- Microcirculation / Transfusion Medicine
- Molecular / Cellular Bioengineering
- Nanotechnology
- Neuroengineering
- Stem Cells / Regenerative Medicine
- Systems Biology
- Translational Bioengineering

#### Nanoengineering
- Advanced Nanomaterials
- Computational Materials Science
- Nanobiotechnology
- Nanomanufacturing
- Nanomedicine
- Nanophotonics
- Nanorobotics
- Nanosensors
- Nanotechnologies for Energy Storage and Conversion
- Stretchable Electronics

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