26 PROFESSORS JOIN THE JACOBS SCHOOL OF ENGINEERING IN 2017
The Jacobs School of Engineering is the largest engineering school in California.

In the last four years alone, we’ve hired 75+ new professors to meet intense educational, research and technical workforce demands.

The Jacobs School is growing with a purpose: we are reinventing undergraduate education, expanding our graduate programs, and doubling down on our work to build the Digital Future in San Diego.

The Digital Future is an optimistic future. It’s a future in which we finally empower both humans and intelligent machines to seamlessly and securely leverage real-time analysis of data streams from all domains.

The Digital Future is about making the best decisions, and taking the smartest actions – across all sectors of society.

The Jacobs School is Building the Digital Future

To create the Digital Future, and to accommodate our growth in faculty and students, we are building a new research and teaching facility at the Jacobs School.

The facility is being designed to support and facilitate the unprecedented academic-industry collaborations that are necessary for solving engineering grand challenges for the global good.
MICHAEL FRAZIER  
Assistant Professor  
Ph.D. University of Colorado Boulder  
Frazier combines structural engineering and materials science to create new materials for applications such as long-distance signal transmission and enhanced vibration suppression. By employing theoretical approaches and experimental collaborations, he designs small-scale features of materials in order to control their responses at larger scales.  
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SICUN GAO  
Assistant Professor  
Ph.D. Carnegie Mellon University  
Gao develops design automation techniques for cyber-physical systems, such as autonomous cars and cardiac pacemakers. He leads the development of dReal, an automated reasoning tool capable of verifying and synthesizing complex cyber-physical system designs. The tool has been used by many groups, including the Toyota Research Institute, NASA, and the Royal Victoria Infirmary in the UK.  
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KEVIN KING  
Assistant Professor  
Ph.D. MIT/M.D. Harvard Medical School  
The King Lab studies diseases in which the immune system becomes activated even though there is no infection, such as heart attacks, metabolic disease, autoimmunity, or cancer. He combines conventional biological methods with novel bioengineering techniques to develop therapies that limit organ dysfunction and promote healing, repair and regeneration.  
krking@ucsd.edu

ESTER KWON  
Assistant Professor  
Ph.D. University of Washington  
Kwon engineers nanoscale materials that interact with biological systems. Inspired by nature and guided by engineering principles, she is interested in using the unique properties that occur at nanometer length scales to build new tools to study, diagnose, and treat diseases of the central nervous system, particularly traumatic brain injury.  
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ANDREW (DREW) LUCAS  
Assistant Professor  
Ph.D. UC San Diego  
Lucas is a technologist and sea-going oceanographer who develops marine measurement systems. He uses these cutting-edge observations to study atmosphere-ocean interaction, ocean ecosystem structure and function, and environmental fluid mechanics. His research establishes a framework to assess the impact of projected changes in the ocean on its small-scale dynamics.  
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SANDRINE MILLER MONTGOMERY  
Professor of Practice  
Pharm.D., Ph.D. Bordeaux University, France  
Miller-Montgomery is executive director of the UC San Diego Center for Microbiome Innovation. She leads a team focused on expanding industry and academic collaborations in microbiome research. She has worked in large biotech and multinational companies as well as start-ups. Most recently, she led a biotech focused on nucleic acid purification.  
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“We are building an ever more diverse faculty at the Jacobs School. One third of the 75+ faculty we have hired in the last four years are women and men who are traditionally underrepresented in engineering.”  
Albert P. Pisano  
Dean, Jacobs School of Engineering
TOD A. PASCAL  
**Assistant Professor**  
**Ph.D. California Institute of Technology**  
Pascal develops and employs first principles electronic structure calculations and simulations to study the chemical physics of energy-related systems at the nanoscale. He is particularly interested in the molecular structure and dynamics of batteries, fuel cells and capacitors, disorder in condensed phase systems, and spectroscopy at interfaces.  
tpascal@ucsd.edu  
Previously: Project Scientist, Lawrence Berkeley National Laboratory

NADIA POLIKARPOVA  
**Assistant Professor**  
**Ph.D. ETH Zurich**  
Polikarpova’s goal is to build practical tools and techniques that make it easier for programmers to construct secure and reliable software. Her research focuses on software security, automatic debugging, and automatically generating programs that meet high-level specifications.  
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Previously: Postdoctoral Researcher, Massachusetts Institute of Technology

CURT SCHURGERS  
**Teaching Professor**  
**Ph.D. UCLA**  
Schurgers’ research and teaching expertise is in embedded systems. He develops undergraduate courses focused on active learning and hands-on project classes for undergraduate as well as high school students. He also co-directs Engineers for Exploration, a program in which undergraduates work with other scientists to create real-world technologies.  
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Previously: Course Instructor, UC San Diego

NAMBI SESHADRI  
**Professor of Practice**  
**Ph.D. Rensselaer Polytechnic Institute**  
Seshadri’s interests are in wireless communication systems, health and wellness technologies and massive online education. He worked at AT&T first as a member of the technical staff and then later as head of communications research. Later, he joined Broadcom to develop the company’s wireless strategy and served as Mobile and Wireless CTO until 2016.  
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Previously: Senior Vice President and CTO, Broadcom Corporation

NISARG SHAH  
**Assistant Professor**  
**Ph.D. Massachusetts Institute of Technology**  
Shah develops polymeric biomaterials that can regulate molecular interactions at the nanoscale. His research focuses on understanding how these interactions can be used to guide the behavior of blood and immune cells in the body, with the aim of developing new therapeutic approaches for tissue repair, cancer and autoimmune diseases.  
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Previously: Postdoctoral Fellow, Harvard University

HAO SU  
**Assistant Professor**  
**Ph.D. Stanford University**  
Su is interested in artificial intelligence disciplines, including machine learning, computer vision, computer graphics, robotics and smart manufacturing. He focuses on deep learning for 3D data understanding and interconnecting 3D data with images, texts, etc. Applications include robotics, autonomous driving, virtual/augmented reality, smart manufacturing and more.  
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Previously: Ph.D. Candidate, Stanford University

INGRID TOMAC  
**Assistant Professor**  
**Ph.D. Colorado School of Mines**  
Tomac’s research focuses on exploring and building the civil engineering infrastructure to support renewable and sustainable energy resources. Her research interests revolve around soil and rock mechanics, hydraulic fracturing, geo-reservoirs and carbon dioxide sequestration. She is actively involved in geotechnical engineering practices in Europe and the United States.  
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Previously: Assistant Research Scientist, UC San Diego

BEHROUZ TOURI  
**Assistant Professor**  
**Ph.D. University of Illinois at Urbana-Champaign**  
Touri’s research focuses on the theoretical aspects of computation, optimization, and control over networks. His work can be used to analyze opinion formation in social networks; to study the formation of networks in robotic systems; and to design mechanisms for efficient power grids.  
btouri@ucsd.edu  
Previously: Assistant Professor, University of Colorado Boulder
DANIELA VALDEZ-JASSO
Assistant Professor
Ph.D. North Carolina State University
Valdez-Jasso studies the biomechanics of soft tissues and constructs multi-scale mathematical models of organ and tissue function. Her research particularly focuses on modeling the heart and pulmonary arteries to better understand the changes during pulmonary arterial hypertension. dvaldezj@ucsd.edu

Previously: Assistant Professor, University of Illinois at Chicago

JISHEN ZHAO
Assistant Professor
Ph.D. Penn State
Zhao's research connects computer architecture and system software, with an emphasis on memory and storage systems, acceleration mechanisms, and high-performance computing. Her research is driven by emerging technologies such as 3D integration and nonvolatile memories, and modern applications like big-data analytics, machine learning and scientific computing. jzhao@ucsd.edu

Previously: Assistant Professor, UC Santa Cruz

XINYU ZHANG
Associate Professor
Ph.D. University of Michigan
Zhang focuses on wireless systems and ubiquitous computing, which have applications for the Internet of Things. He designs wireless network protocols that can achieve wire-speed connectivity anytime, anywhere. He also develops systems that repurpose commodity wireless devices to sense human activity and location with near-vision precision. xyzhang@ucsd.edu

Previously: Assistant Professor, University of Wisconsin-Madison

The Jacobs School of Engineering works closely with UC San Diego's world-renowned Rady School of Management to prepare engineers – and their innovations – for success in the marketplace.

Institute for the Global Entrepreneur: where engineering meets business

- MBA and engineering graduate students collaborate in project-based courses
- Entrepreneurship mentoring
- Business accelerators
- Technology accelerators
- Access to capital

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