

UC San Diego

JACOBS SCHOOL OF ENGINEERING



2023 NEW FACULTY

We hire faculty with clear-eyed determination, technical smarts and creativity.

Our faculty have the vision to cross disciplines. That's how we innovate for the public good.

At the Jacobs School of Engineering, we have the courage to solve humanity's toughest challenges.

● We make **bold** possible.





CLAIRE ACEVEDO

Assistant Professor

PhD: École Polytechnique Fédérale de Lausanne, CH

Acevedo investigates mechanisms of deformation, fracture and biological response in skeletal tissues and biomaterials from the molecular level to macro scales. She works to unravel the origins of bone fragility, skeletal disease and to inform design principles of biomaterials—bringing together materials mechanics, biology and experimental high-energy X-ray physics.

@LabAcevedo | csacevedo@ucsd.edu

MECHANICAL & AEROSPACE ENGINEERING

Previously: Assistant Professor, University of Utah



KIANA ARAN

Associate Professor

PhD: Rutgers University

Aran develops bioelectronics for multi-omics studies, targeted drug delivery, and studying the mechanisms of aging. She pioneers approaches to fuse CRISPR and electronics to improve the quality of genotyping and gene editing. She is a founder of two San Diego biotechnology companies and holds a joint appointment with UC San Diego School of Medicine.

Kiana_Aran@kgi.edu

BIOENGINEERING

Previously: Associate Professor, Keck Graduate Institute



FANNY CHAPELIN

Assistant Professor

PhD: University of California San Diego

Chapelin develops non-invasive MRI methods to track immune cell migration to foci of inflammation in different conditions. Study areas include cell therapy distribution, fate and efficacy in preclinical studies; inflammation processes in tumor progression; stem cell transplant and graft vs host disease; and cell interactions in vivo. She has a joint appointment with the UC San Diego Department of Radiology.

fachapelin@ucsd.edu

BIOENGINEERING

Previously: Assistant Professor, University of Kentucky



YUFEI DING

Associate Professor

PhD: North Carolina State University

Ding specializes in programming systems, influencing realms from machine learning to quantum computing. As a leader in intelligent programming, her work delves deeply into domain-specific language innovations, GPU-optimized library development, and cutting-edge compiler and architecture designs.

yufeiding@ucsd.edu

COMPUTER SCIENCE & ENGINEERING

Previously: Associate Professor, UC Santa Barbara



WANLU LI

Assistant Professor

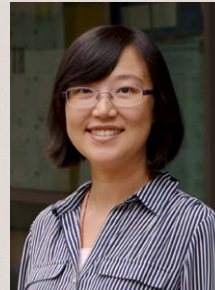
PhD: Tsinghua University, China

Li drives eco-friendly innovation by designing catalysts and materials for sustainable energy applications using quantum mechanics, molecular dynamics and machine learning. As a foundation for this work, Li's research focuses on investigating the electronic structure, chemical bonding and environmental effects of nanoclusters and condensed phases.

wal019@ucsd.edu

NANOENGINEERING

Previously: Postdoctoral Researcher, UC Berkeley



YANRAN LI

Associate Professor

PhD: UCLA

Li, a synthetic biologist, blends chemistry and biology to study plants using engineering techniques. Li's group creates microbial cell factories to gain insights into plant metabolism and immunity. The goal is to cultivate sturdier plants that are better equipped to withstand a range of challenges, from pests to changing environmental conditions.

yal152@ucsd.edu

NANOENGINEERING

Previously: Associate Professor, UC Riverside



QIPENG LIU

Assistant Professor

PhD: Princeton University

Liu focuses on quantum computing, quantum information and cryptography in a quantum world. His research includes analyzing and understanding how safe existing cryptographic systems will be once quantum computing becomes widely available. He also works to build cryptography powered by quantum computing and information.

qipengliu@ucsd.edu

COMPUTER SCIENCE & ENGINEERING

Previously: Quantum Postdoc Fellow at Simons Inst. for the Theory of Computing



HAIWEN LUAN

Assistant Professor

PhD: Northwestern University

Luan merges intelligent electronics and microfluidics into living systems to create bio-integrated, multifunctional microsystems that can be used to address medical challenges. These systems mimic living tissues, possess complex 3D geometries, respond to mechanical input, and improve our ability to sense and regulate processes in biological systems.

@HaiwenLuan | haiwenluan@u.northwestern.edu

MECHANICAL & AEROSPACE ENGINEERING

Previously: Postdoctoral Scholar, Northwestern University



ALESSANDRO MARINONI

Assistant Professor

PhD: École Polytechnique Fédérale de Lausanne, CH

Marinoni primarily studies magnetically controlled nuclear fusion. His research focuses on understanding plasma turbulence and ways to control it. This involves developing innovative diagnostic systems for nuclear fusion devices, designing experiments within them, and using advanced modeling tools for data analysis.

amarinoni@ucsd.edu

MECHANICAL & AEROSPACE ENGINEERING

Previously: Research Scientist, Massachusetts Institute of Technology



PARINAZ NAGHIZADEH

Assistant Professor

PhD: University of Michigan

Naghizadeh develops mathematical models and analytical tools to predict and influence human and/or algorithmic behavior in complex networks. Applications include enhancing the security of cyber-physical systems and designing ethical AI algorithms for systems involving human interaction, such as in hiring, banking and school admissions.

pnaghizadeh@ucsd.edu

ELECTRICAL & COMPUTER ENGINEERING

Previously: Assistant Professor, The Ohio State University



ABDOULAYE NDAO

Assistant Professor

PhD: Université de Franche-Comté, France

Ndao's research merges theory, simulations, nanofabrication and device integration to develop smaller, lighter, more efficient optical devices without compromising on functionality. Applications include sensors that can detect biological activity at single-cell resolution and components for building photonic quantum circuits.

a1ndao@ucsd.edu

ELECTRICAL & COMPUTER ENGINEERING

Previously: Assistant Professor, Boston University



ALESSANDRO PALERMO

Professor

PhD: Politecnico di Milano, Italy

Palermo's world-leading expertise covers design-oriented resilient and sustainable engineering solutions for earthquake damage protection. He intends to continue researching on novel low-carbon concrete technologies and advanced engineered timber. Palermo's research will cover modern construction methods for timber buildings and concrete bridges including the use of digital construction techniques.

alpalermo@ucsd.edu

STRUCTURAL ENGINEERING

Previously: Professor, University of Canterbury, Christchurch, New Zealand



ZAHRA SADEGHIZADEH

Assistant Teaching Professor

PhD: Missouri University of Science and Technology

Sadeghizadeh aims to create and promote evidence-based teaching approaches that can advance engineering curriculum, particularly in aerospace engineering. Her pedagogical methods foster active and hands-on learning; deep understanding of complex concepts; and essential problem-solving skills, enhancing students' success in their academic and professional paths.

zsadeghizadeh@ucsd.edu

MECHANICAL & AEROSPACE ENGINEERING

Previously: Assistant Professor of Teaching, UC Davis



RAJEEV SAHAY

Assistant Teaching Professor

PhD: Purdue University

Sahay's research lies at the intersection of machine learning and networking. This work focuses on two main areas: cellular networks, with the goal of improving communication efficiency in congested networks, and social learning networks, which are deployed in the classroom to foster student interaction and aid effective learning.

r2sahay@ucsd.edu

ELECTRICAL & COMPUTER ENGINEERING

Previously: Senior Machine Learning Software Engineer, Saab, Inc.



JUN-KUN WANG

Assistant Professor

PhD: Georgia Institute of Technology

Wang specializes in optimization and machine learning. His research aims to make algorithms faster; build robust theoretical foundations; and overcome issues such as model mis-specification or distribution shifts that arise during real-world deployment of machine learning methods. He holds a joint appointment with the Halicioğlu Data Science Institute.

jkw005@ucsd.edu

ELECTRICAL & COMPUTER ENGINEERING

Previously: Postdoctoral Researcher, Yale University



9500 Gilman Drive, Dept. 0403
La Jolla, CA 92093-0403



CELEBRATING 25 YEARS OF THE JACOBS SCHOOL OF ENGINEERING AT UC SAN DIEGO

25 years ago, Irwin and Joan Jacobs set their name on the School of Engineering at UC San Diego. By entrusting us with their name, they put the School on a new course that changed everything – for the better. Their gift engaged a process of rising, growth, research broadening and positive impact. I'm grateful for the momentum that Irwin and Joan imparted to the School. Each and every day, I see the artifacts of that continued momentum as we advance engineering and computer science for the public good.

Recently, we celebrated the 25th anniversary of the naming of the Irwin and Joan Jacobs School of Engineering. Seeing Irwin and Joan at the center of a wonderful collection of dedicated people who all worked together to build the foundations and launch the Jacobs School gave me great pause. It compelled me both to look back and to look forward. As I look back, I am proud to say that the Jacobs School of Engineering has arrived. And as I look forward, I see that we will be rising still.

Albert P. Pisano

Dean of the Jacobs School of Engineering
UC San Diego