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# AROUND CSE

News and highlights from your  
Computer Science and Engineering Department  
at the University of California San Diego

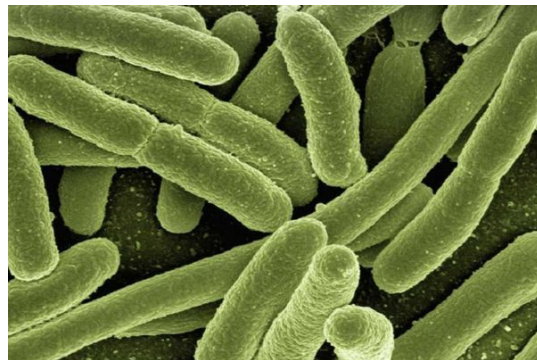
VOLUME 6 | February 2024

## CSE NEWS



### Microbiome Pioneer Elected to the National Academy of Engineering

Professor **Rob Knight** has received the highest professional recognition afforded to engineers and computer scientists for his pioneering research into the roles microbes play in human health and disease and the functioning of ecosystems. [Read More](#)



### New Technology Unscrambles the Chatter of Microbes

Using a database of over 60,000 microorganisms curated by scientists from across the globe, UC San Diego researchers have developed a new search tool to illuminate the complex interaction between microbes and humans. [Read More](#)

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## Spotlight on Research and Discovery at CSE's 5th Annual Research Open House

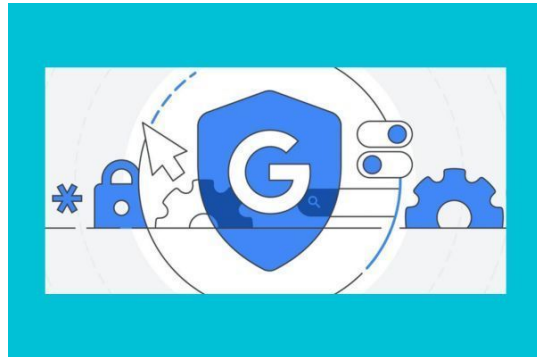
Robots to help in healthcare settings, self-driving vehicles, engineers exploring mangroves and oceans – CSE faculty and students demonstrate a broad range of research interests at the fifth-annual Research Open House.

[Read More](#)



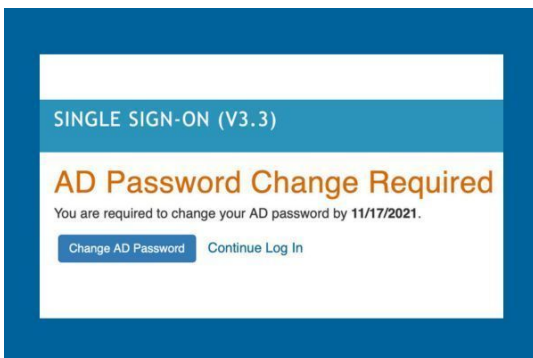
## Real-world Sensors and VR Improve Building Maintenance

Professor **Rajesh Gupta** introduces BRICK, a real-world sensing and virtual reality system that helps building personnel monitor temperature, CO2, and airflow and fix issues. [Read More](#)



## Google's First Trust & Safety Research Award Winners

CSE's Associate Professor **Taylor Berg-Kirkpatrick**, Professor **Stefan Savage**, and Assistant Professor **Kristen Vaccaro** are among the inaugural recipients of Google's Trust & Safety Research Award. [Read More](#)



## How to Run a Password Update Campaign Efficiently

Computer scientists at UC San Diego partnered with the campus' Information Technology Services to conduct an empirical



## All Together Now (published in the UC San Diego Magazine)

**Naba Rizvi**, a neurodiverse doctoral student in computer science, is challenging AI to be more inclusive by designing apps that consider the perspectives and unique needs of autistic users. [Read More](#)

analysis of a mandatory password update at a large scale and in the wild. [Read More](#)

## NOTEWORTHY



UC San Diego's team Triton LLC and their mentors.

### Student Highlights

A team of undergraduate students from CSE, the Jacobs School of Engineering, and SDSC – dubbed [Triton LLC](#) – placed 3rd at the 2023 Supercomputing Student Cluster Competition, earning UC San Diego a top spot for the second consecutive year.

PhD student **Keegan Ryan** and his advisor, Professor **Nadia Heninger**, were featured in [WIRED](#) and [Quanta magazine](#) for their paper, [Fast Practical Lattice Reduction through Iterated Compression](#), which won the [Best Paper award](#) at the [2023 International Cryptology Conference](#).

CSE's **Peter Eckmann** was named a finalist for the Computing Research Association's Undergraduate Researcher Award. **Daniel Ji**, **Mark Barbone**, and **Venkataram Sivaram** received honorable mentions.

### Award-Winning Research

Four CSE early-career faculty – **Sicun Gao**, **Kristen Vaccaro**, **Jingbo Shang**, and **Tzu-Mao Li** – have been [awarded funding](#) by the Jacobs School's Accelerating Interdisciplinary Research Collaborations for Early-Career Faculty [pilot project](#).

### Faculty in the News

Congratulations to CSE Professor **Vineet Bafna**, who was named a 2023 Fellow by the Association for Computing Machinery. One of [68 ACM Fellows](#) inducted this year world-wide, Bafna was honored for his transformative contributions to the theory, design, and implementation of bioinformatics algorithms.

A new book by Professor **Leo Porter** and Daniel Zingaro (University of Toronto), "Learn AI-assisted Python Programming: With GitHub Copilot and ChatGPT," is now available for ACM Members.

[The Conversation U.S.](#) highlighted Professor **Leo Porter** in the series "Uncommon Courses," sharing his unconventional approach to teaching computing programming – one that embraces generative AI tools to handle more of the low-level syntax issues.

## CSE EVENTS



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Professor Tadayoshi Kohno (University of Washington) gives keynote address.



Distinguished Alumni Award winner, David Loo (BS '91), mingles with CSE students.



Assistant Professor Melissa Gymrek is one of 8 faculty to present at the open house.



CSE students showcase diverse projects through poster presentations and live demos.

## RESEARCH CENTERS & INSTITUTES



CSE Professor Barna Saha welcomes attendees to the NSF TRIPODS Workshop.

### CSE Hosts Diverse Research Teams at NSF TRIPODS Workshop

UC San Diego's Department of Computer Science and Engineering (CSE) and the [Halicioğlu Data Science Institute](#) (HDSI) hosted a two-day National Science Foundation (NSF) TRIPODS Workshop in early February.

The workshop brought together a diverse team of researchers from each of the Transdisciplinary Research In Principles Of Data Science, or TRIPODS, centers: EnCORE, FODSI, IDEAL, and IFDS. Throughout the event there were talks focused on the contributions of each center's work along with panel discussions, poster presentations, and mentoring for students.

The aim of TRIPODS is to connect the statistics, mathematics, and theoretical computer science communities to develop the theoretical foundations of data science through integrated research and training activities. EnCORE, [The Institute for Emerging CORE Methods in Data Science](#) is a \$10 million NSF initiative housed at UC San Diego and led by CSE Professor **Barna Saha**.



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