UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

Welcome
CAP Executive Board
June 4, 2025

CAP Chair and Vice Chair

Magaly Drant

Vice President, Developer Productivity
ServiceNow

Shariqa Dowla

Director, Software Engineering
Cubic Transportation Systems

Welcome

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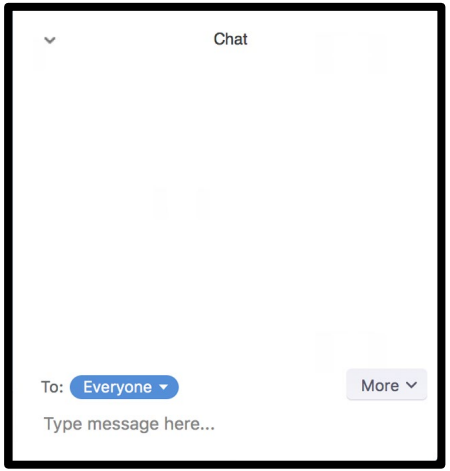
Virtual Attendee Protocol

➔ We will be recording this meeting

➔ You will be muted; Use chat box for questions & comments

➔ We will create a Zoom room for the discussion portion of the meeting, please turn on your cameras at that time.

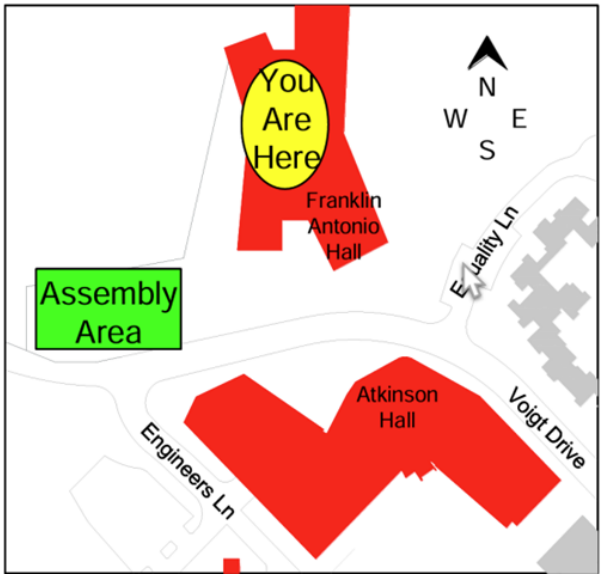


Safety Protocols

➔Please note the exit doors

➔Evacuation area is the Warren Mall

➔Find a UC San Diego staff or faculty



Agenda

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5:00-5:10pm	**CAP Executive Board Vice Chair Welcome**
	Shariqa Dowla, Director of Software Engineering, Cubic Transportation Systems
5:10-5:30pm	**Dean's Report**
	Al Pisano, Dean, Jacobs School of Engineering; Special Adviser to the Chancellor
5:30-5:45pm	**Institute for Healthcare Engineering**
	Patrick Mercier, Professor and Vice Chair, Electrical and Computer Engineering
5:45-5:55pm	**Career Readiness Initiatives in the Era of AI**
	Nik Devereaux, Director of Software Engineering, Viasat
	Ruanqianqian (Lisa) Huang, Graduate student, Computer Science & Engineering
5:55-6:20pm	**CAP Executive Input**
6:20-6:30pm	**CAP Business**
	Wil Dyer, Director, Corporate Affiliates Program
6:30pm	**Adjournment**

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Welcome New CAP Partners

Jan Filip
CEO

Rick Johnson
General Partner

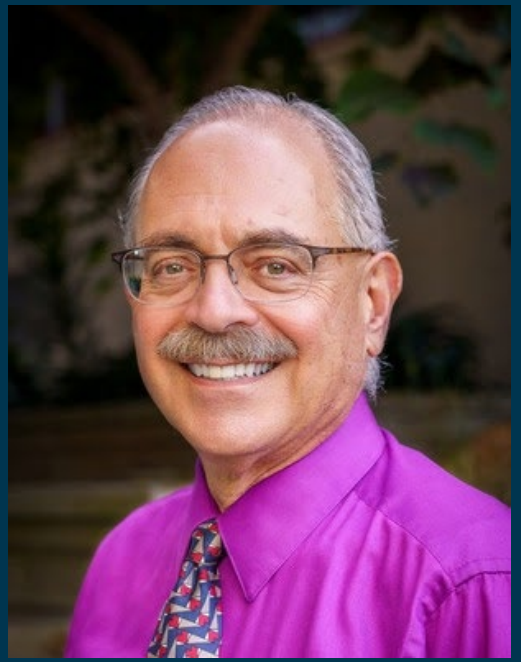
Takeshi Nakano
President

Christopher Barngrover
Technical Fellow

Welcome Guests

Agilent
Analog Devices
Booz Allen Hamilton
Nordic Semiconductor

Dean’s Report



Albert P. Pisano

Dean, Jacobs School of Engineering
Special Adviser to the Chancellor

Ready for the Storm

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THE JACOBS SCHOOL RANKED TOP 10 YET AGAIN!

*US NEWS & WORLD REPORT RANKINGS OF BEST ENGINEERING SCHOOLS 2025

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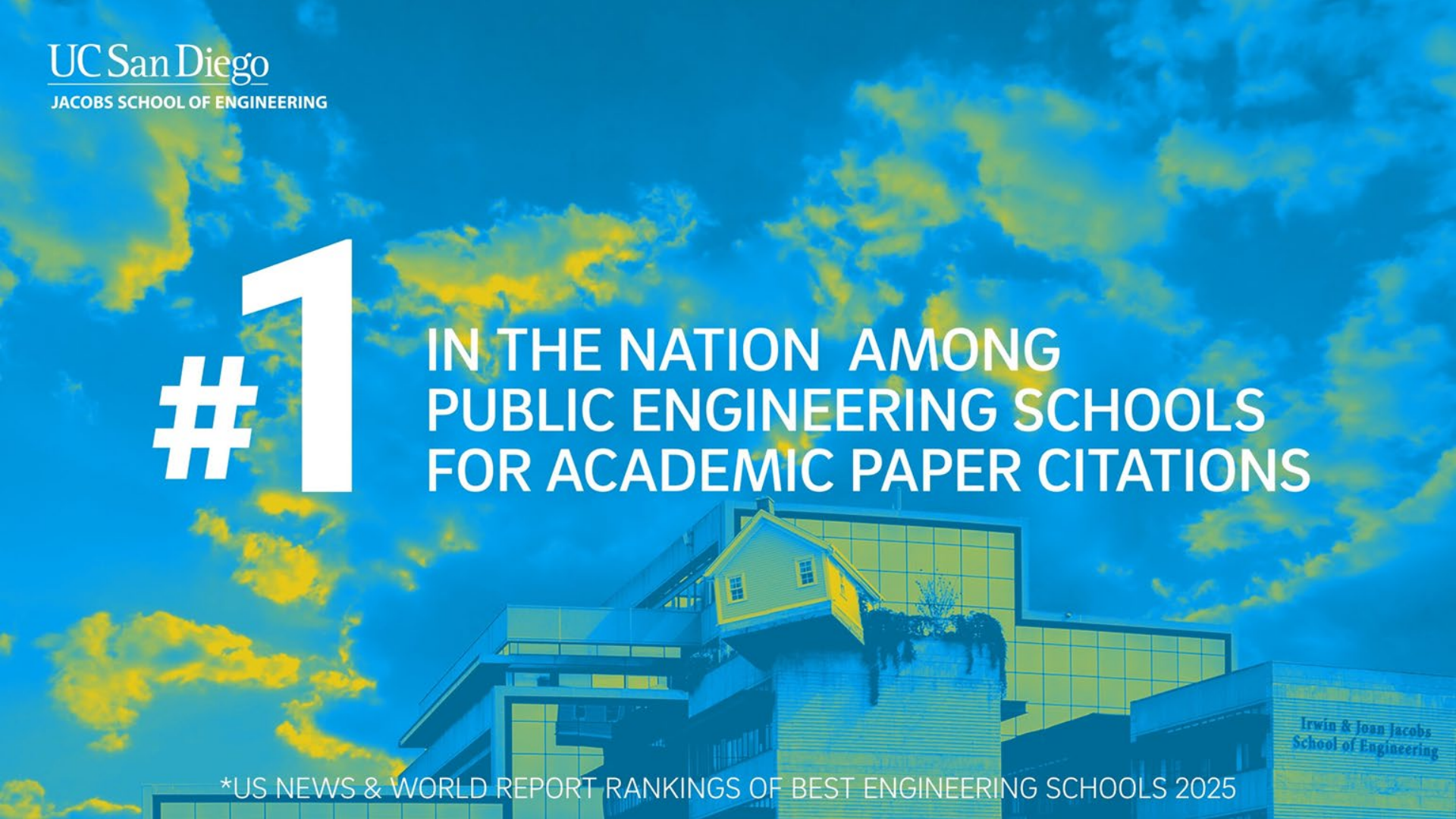
#1 IN THE NATION AMONG PUBLIC ENGINEERING SCHOOLS FOR ACADEMIC PAPER CITATIONS



*US NEWS & WORLD REPORT RANKINGS OF BEST ENGINEERING SCHOOLS 2025

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#2

ENGINEERING SCHOOL FOR RESEARCH EXPENDITURES PER FACULTY MEMBER

*US NEWS & WORLD REPORT RANKINGS OF BEST ENGINEERING SCHOOLS 2025

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$316 MILLION
IN RESEARCH EXPENDITURES
UP 23% FROM LAST YEAR

*US NEWS & WORLD REPORT RANKINGS OF BEST ENGINEERING SCHOOLS 2025

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GRADUATE PROGRAM RANKINGS

BIOENGINEERING
#8 IN THE NATION

COMPUTER ENGINEERING
#12 IN THE NATION

ELECTRICAL ENGINEERING
#14 IN THE NATION

AEROSPACE ENGINEERING
#18 IN THE NATION

CIVIL ENGINEERING
#20 IN THE NATION

MECHANICAL ENGINEERING
#22 IN THE NATION

*US NEWS & WORLD REPORT RANKINGS OF BEST ENGINEERING SCHOOLS 2025

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COMPUTER SCIENCE RANKS #13 IN THE NATION

SYSTEMS
#10 IN THE NATION

ARTIFICIAL INTELLIGENCE
#11 IN THE NATION

PROGRAMMING LANGUAGES
#11 IN THE NATION

THEORY
#14 IN THE NATION

*US NEWS & WORLD REPORT RANKINGS OF BEST ENGINEERING SCHOOLS 2025

10 Story Cold-form Steel Building Shake

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- Is it safe to increase height limits for cold-formed steel buildings?
- How does the building and its components perform in a fire?
- …and many other safety questions to be studied via upcoming shake tests in June 2025
- Industry & Media day late June; Contact CAP Team if interested

A Single Timed-Release Capsule to Replace Multiple Pills?

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- A capsule that can be **packed with multiple medications** and **release them at designated times** throughout the day.
- Tested with Parkinson's Disease drug, potential for Cardiovascular disease therapies
- **All materials used to make the capsule are FDA approved**, making it an easier translation to market

What's Causing Bowel Cancer in People under 50?

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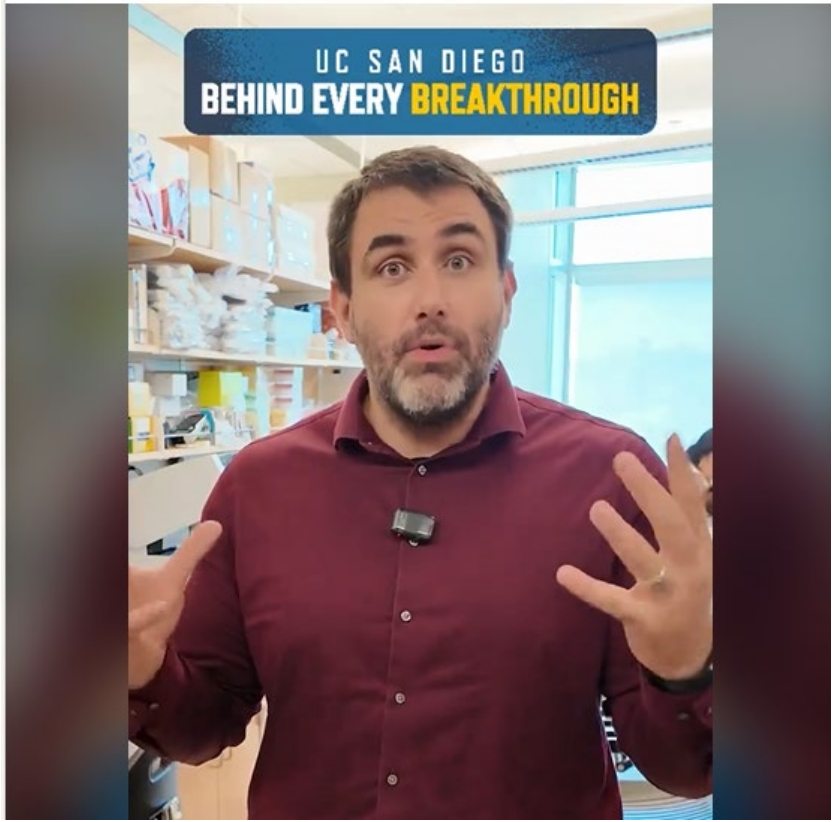
- It could be a **bacterial toxin** in the colon called **colibactin**
- *Nature* paper made headlines around the country and world
- A test to screen for telltale genetic mutations is a goal
- Lead author is **bioengineering professor Ludmil Alexandrov** (joint appointment in School of Medicine)



Our 5 Strategic Programs

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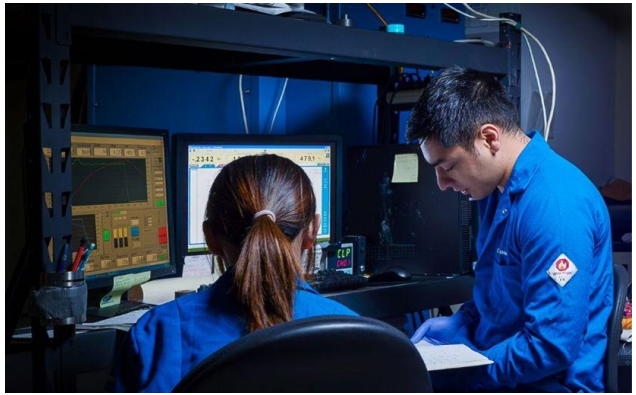
1. **TODAY: The Institute for Healthcare Engineering**
2. Carbon Utilization & Recycling Engines (CURE) Center
3. Fusion Engineering Institute
4. **Laboratory for Emerging Intelligence - Demo Today**
5. Heterogeneous Integration of Semiconductors / CHIPS Act

NEW at the Fusion Engineering Institute at UC San Diego

Fusion Data Science and Digital Engineering Center

- General Atomics / UC San Diego project
- Focus: AI, data science, and high-performance computing for fusion
- San Diego Supercomputer Center is lead for us
- NVIDIA and Ansys are industry partners



NEW at the Lab for Emerging Intelligence: AI Tutor Platform has Traction - **Demo Today!**

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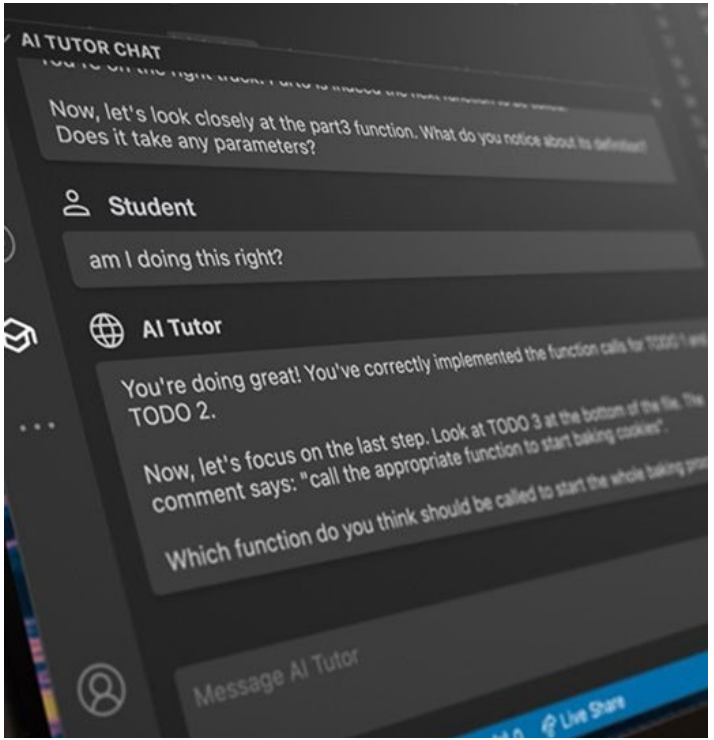
Leadership through innovation
Our faculty taking the “chat gpt in education” challenge head on

$1.5M grant from California to keep improving the AI Tutor

Platform Technology: we are building a platform that any faculty member can leverage to create custom AI tutors for their courses.



NEW in Heterogeneous Integration of Semiconductors - projects are transitioning to commercialization!

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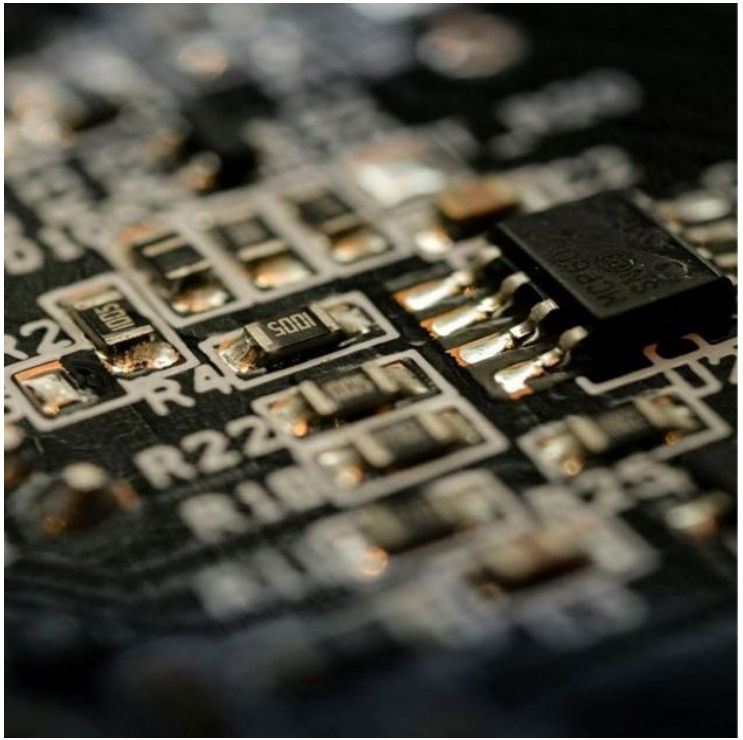
Made significant strides in **bringing novel semiconductor technologies** from possibility **to prototype and beyond** in year two!

30% of projects **transitioning to commercialization** at our Nano3 nanofabrication facility

Example: novel **energy-efficient hardware** that enhances edge computing capabilities with **new processing and fabrication** techniques (PI: Duygu Kuzum)



What Keeps Me Up at Night

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How do we maintain our equilibrium between fundamental and applied research in the face of federal funding cuts?

How do we strengthen our capacity to develop tomorrow's technology workforce?

Next up: Our budget realignment in light of government funding headwinds.

Right now: the Jacobs School is in the process of implementing a new **4.5% budget cut**.

This is **on top of 5 years of cuts** that began with the Covid-19 pandemic.

We are modeling for wider range of budget cuts, if needed

Fiscal uncertainties I will navigate:

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- **FY 2025 Federal Grants**
  - Delays / stop orders / cancellations
- **FY 2026 Federal Grants**
  - Cuts to funding across agencies
  - Delays / stop orders / cancellations of previous awards
- Unilateral adjustments to **Indirect Cost (IDC)** recovery rates from federal grants
- **Reductions in funding** from the **State of California** to the UC and UC San Diego

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Our mission and guiding principles remain steadfast despite budget realignments.

I will make extraordinary efforts to **protect the quality and cachet** of the Jacobs School of Engineering and **safeguard our faculty, students, and staff** to the fullest extent possible.

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I am **not** looking for industry, foundations or philanthropists to backfill **specific federal funding gaps**

Instead, I am:

- Doubling down on our efforts to be relevant to industry, foundations and philanthropists
- Staying true to our Jacobs School missions in education and research

Together we can:

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- Protect the **virtuous research cycles** that link **fundamental and applied research** at the Jacobs School.
- Accelerate positive impact through **relevant, collaborative research**
- Drive regional and national **economic strength** and **global competitiveness**

The good news:

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We are going into these budget realignments with great momentum.

- **47% Research funding from industry** in 2024; $316M overall.
- **Top-10 engineering school** in the country, offering external recognition of our rising relevance and impact.

We have powerful machines for industry engagement

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- Corporate Affiliates Program (CAP)
- Agile Research Center / Institutes Program
- Master's programs ripe for deeper industry collaborations

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What do we do with this momentum?

We must set our strategic assets into motion to scale up relevance and positive impact.

Topics for this Board Meeting

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Research Topic: Healthcare Engineering

A narrower and deeper dive into hardware for Healthcare Engineering

Discussion Topic: Career Readiness in the era of AI

This discussion is about maintaining relevance to as industries evolve, and adapt to AI

Questions/Comments/Input?

Next up: Healthcare Engineering, followed by Career Readiness Discussion

Faculty Presentation

Patrick Mercier

Professor & Vice Chair
Electrical & Computer Engineering

Institute for Healthcare Engineering

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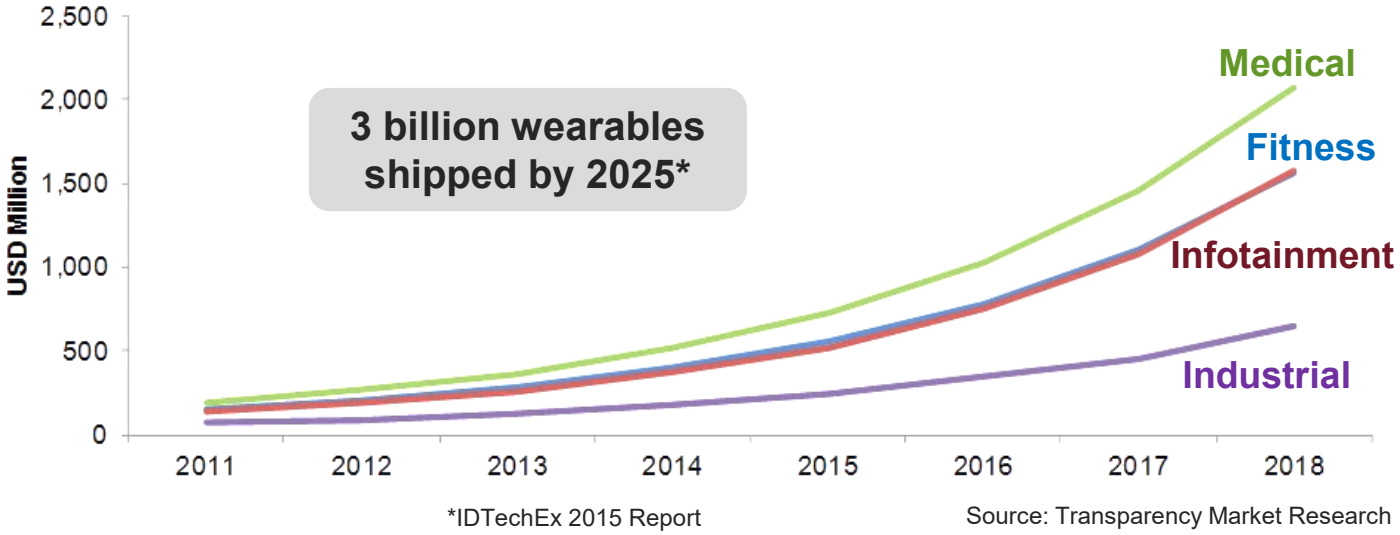
Institute for Healthcare Engineering

Patrick Mercier
Vice Chair, Electrical and Computer Engineering
Co-Director, Center for Wearable Sensors
Site Director, Power Management Integration Center

Wearables:
an exciting high-growth market



*IDTechEx 2015 Report

Source: Transparency Market Research

Center for Wearable Sensors

Why aren't we there now?

Size & Usability:

Need to develop sensors that are small & seamlessly integrated into daily life

Battery Life:

Need ultra-low-power and/or energy harvesting to minimize re-charging

Utility:

Need to develop sensors that are actually useful

Mission:

Address these issues through innovative transdisciplinary research

Center for Wearable Sensors

Why UCSD:
Our Defining Unique Capabilities

New & unique wearable biosensors

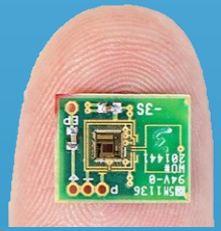
e.g., non-invasive electrochemical glucose sensors

Anatomically compliant electronics

e.g., flexible & stretchable sensors

Ultra-low-power bioelectronics

e.g., world-record lowest-power wireless biosensors (<1nW)



Best-in-class bioenergy harvesting

e.g., biofuel cells operating from human perspiratio

Center for Wearable Sensors

Why San Diego?

San Diego is a hub for wireless, biotech, and healthcare

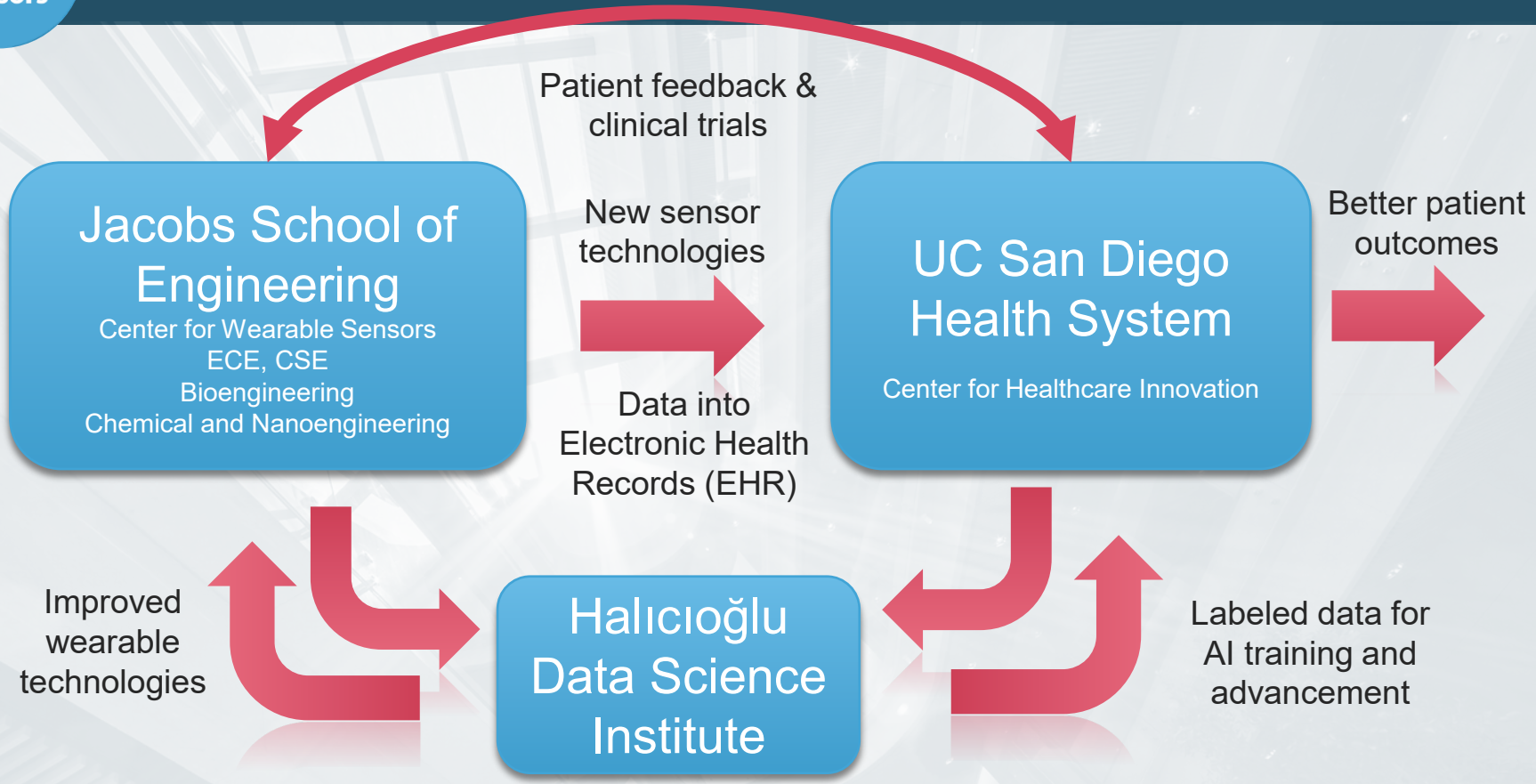
UCSD is top-ranked in:

Engineering | Medicine | Visual Arts & Design

We already have the right mix of ingredients…
Let's take wearable technologies to the next level

Center for Wearable Sensors

Institute for Healthcare Engineering: Vision



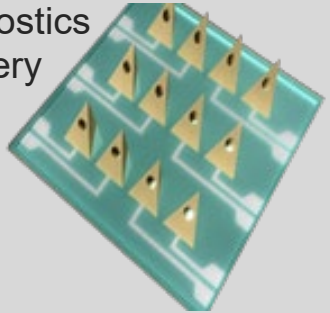
Center for Wearable Sensors Grand Challenges

NON-INVASIVE LAB-ON-A-BODY

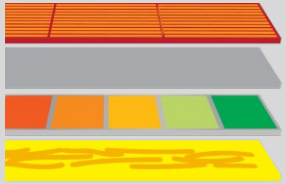
Strain
ECG
pH/Na+/K+
Alcohol
Lactate
Glucose

NANO-PHARMACY ON-A-CHIP

Detailed diagnostics and drug delivery under the skin



SELF-POWERED SENSORS

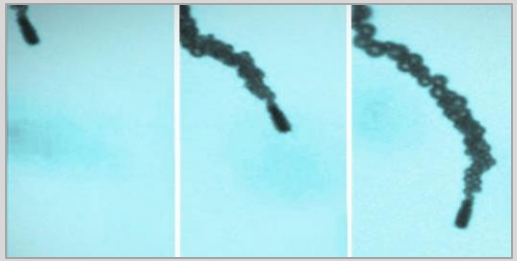


- Photovoltaic
- Thermoelectric
- Battery
- Biofuel Cell

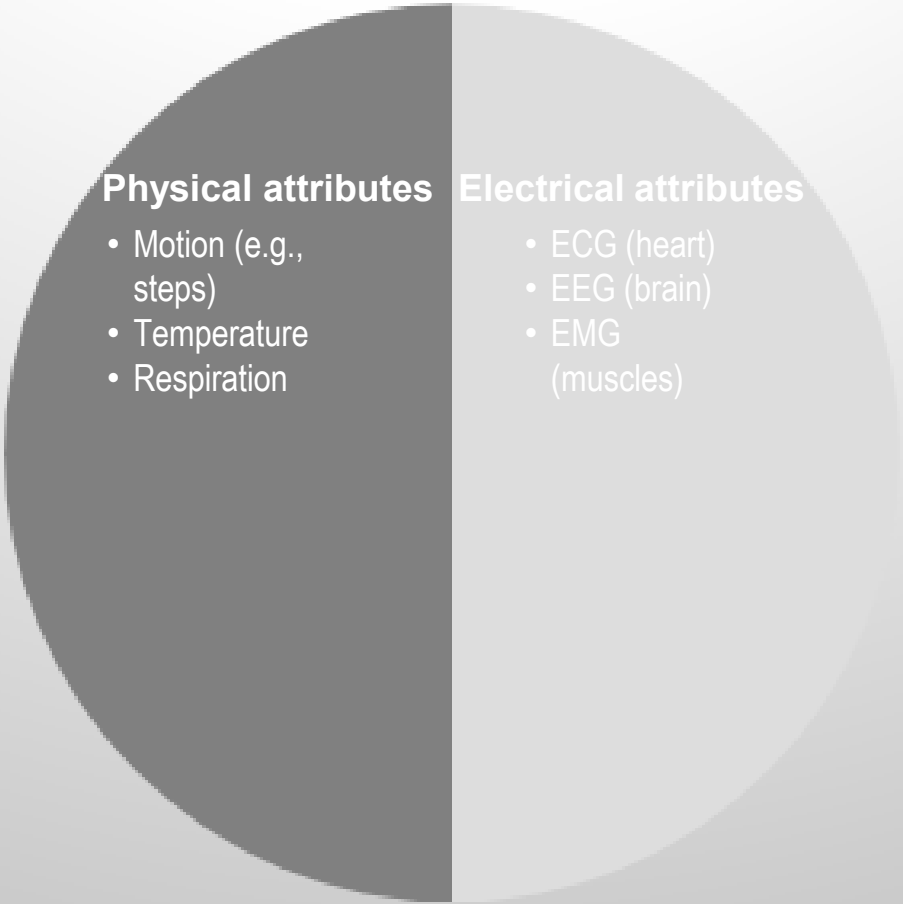
- Integrated epidermal energy harvesting

SELF-PROPELLED MICROLABS

Micromachine-based platforms

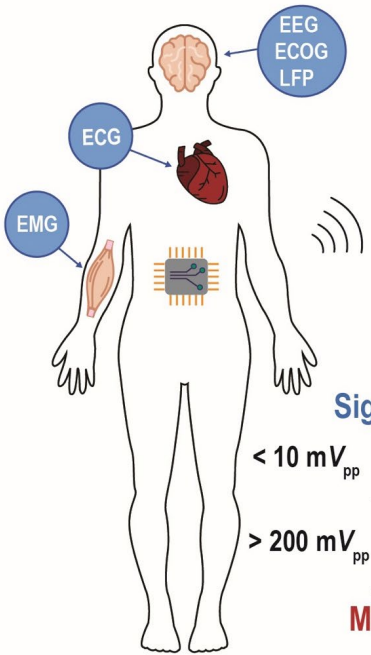


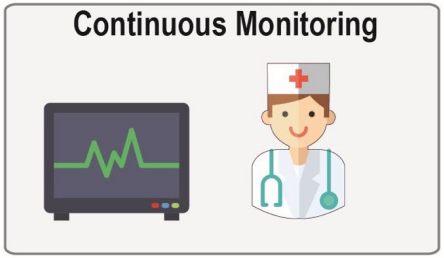
Wearable sensing opportunities

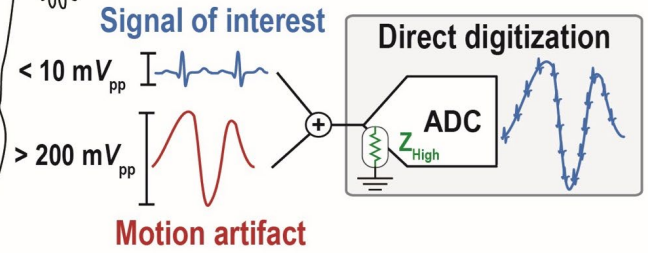


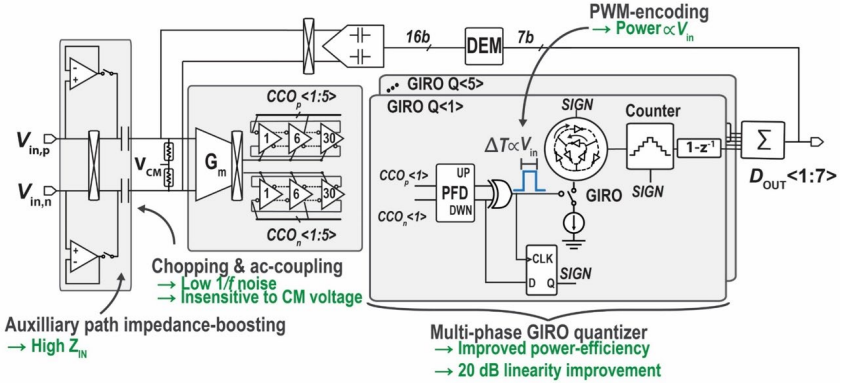
Ultra-Low Power ExG Monitoring with Motion Artifact Tolerance

Patrick Mercier & Drew A. Hall

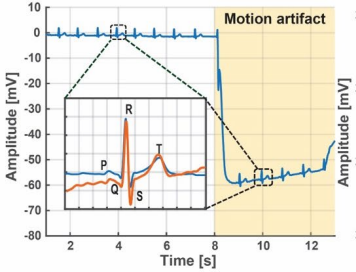




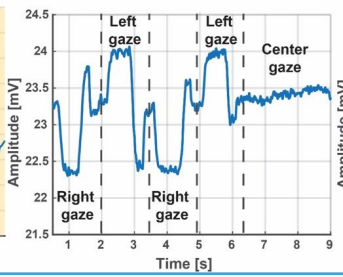




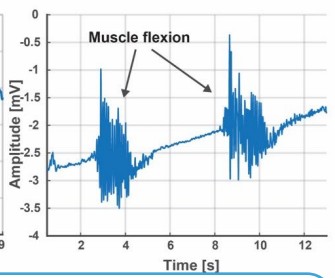
Electrocardiogram (ECG) + Motion artifact



Electrooculogram (EOG)



Electromyogram (EMG)



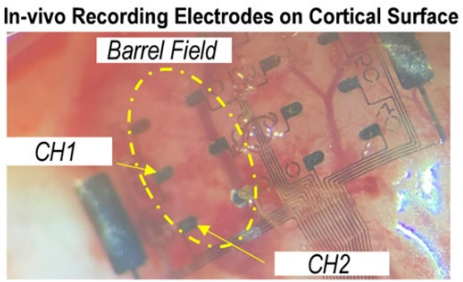
Continuous wearable physiological monitoring can:
- Improve health monitoring outside a clinic
- Sport performance monitoring
- Enable rare event (anomaly) detection

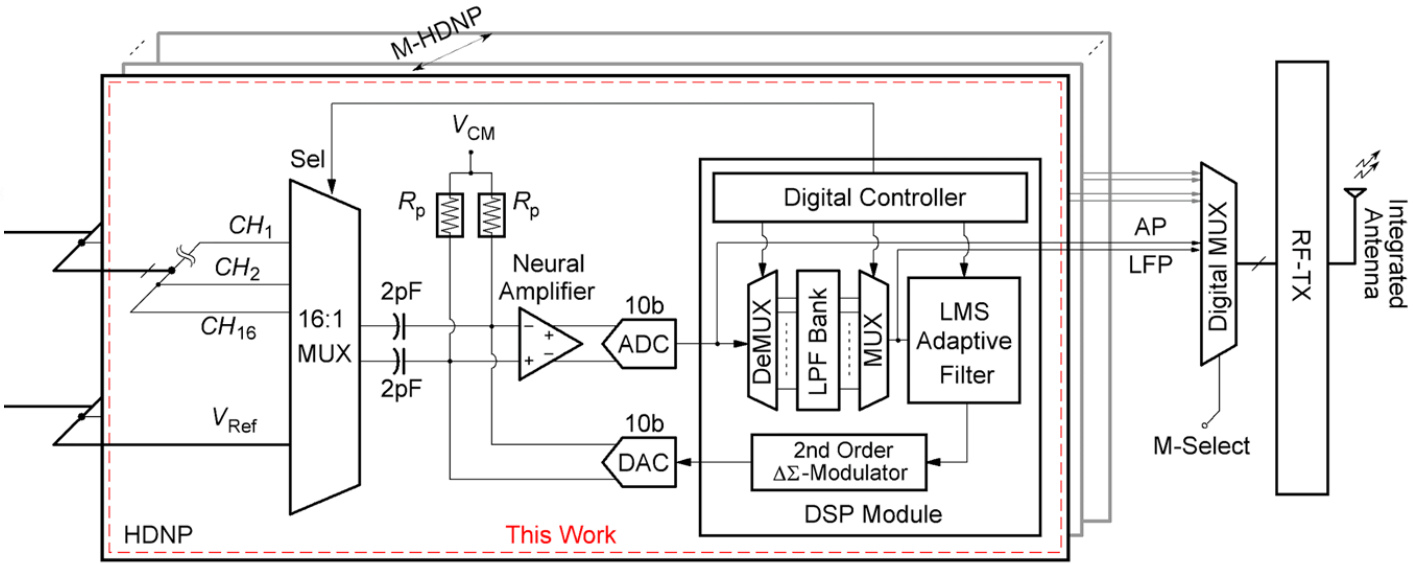
Key results:
- Activity-dependent power scaling, 4.25-5.8 µW
- Direct digitization architecture with high dynamic range (92 dB)
- High input impedance for wet and dry electrodes

Corentin Pochet, et al., "A 174.7-dB FoM, 2nd-order VCO-based ExG-to-Digital Front-End Using a Multi-phase Gated-Inverted Ring Oscillator Quantizer," *IEEE TBioCAS*, vol. 15, no. 6, Dec 2021.

High Density Neural Recording Electronic Front-End

Patrick Mercier & Shadi Dayeh





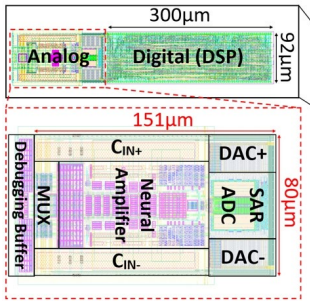
Spec highlights:

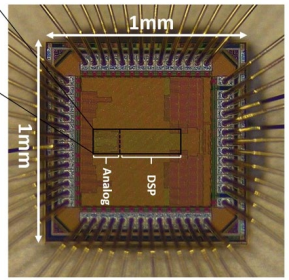
0.00248mm^2/channel □ **world record!**

2.6μV_{rms} input noise over 10kHz BW

3.38μW per channel

1.83 Noise Efficiency Factor

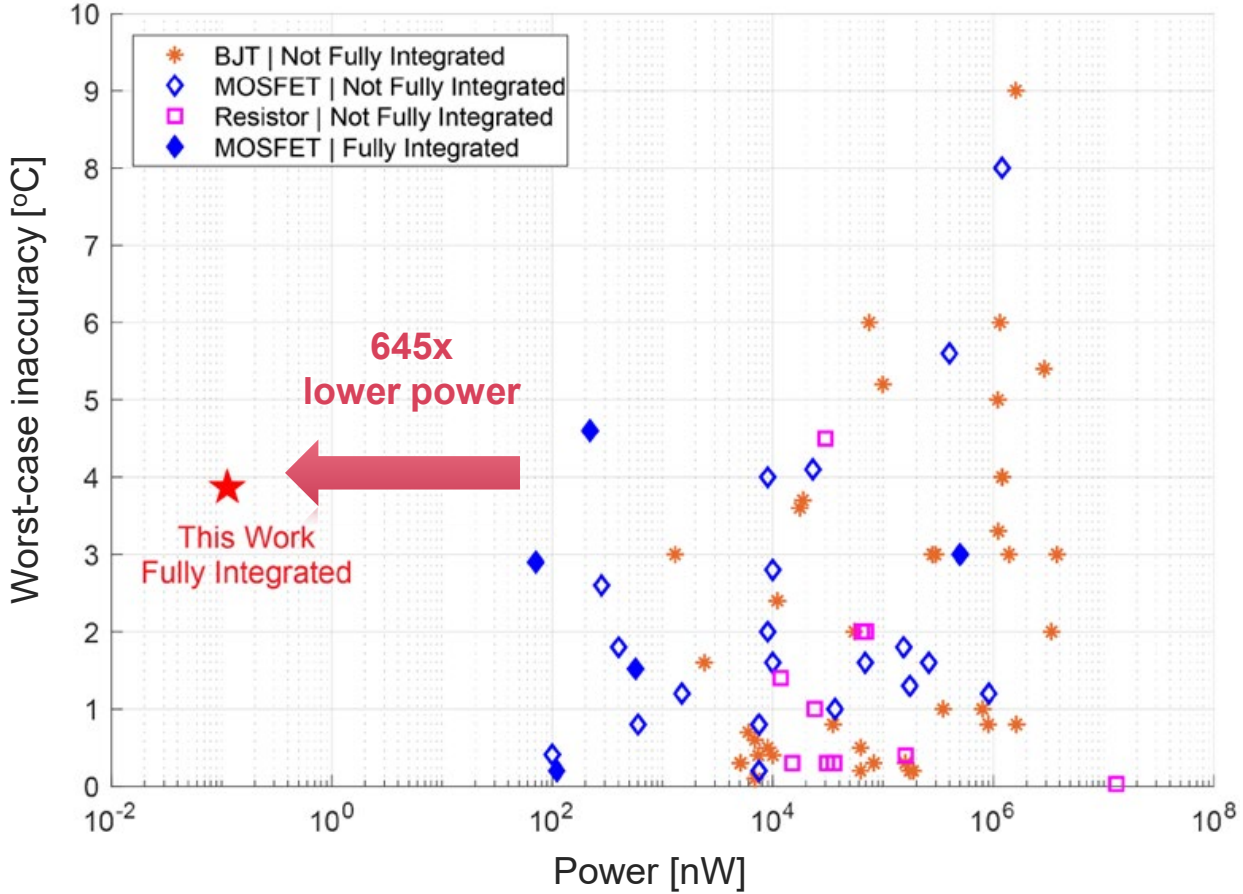




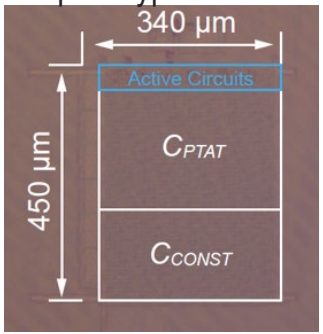
N. Fathy et al., JSSC'22

Temperature sensor measurement results

Patrick Mercier



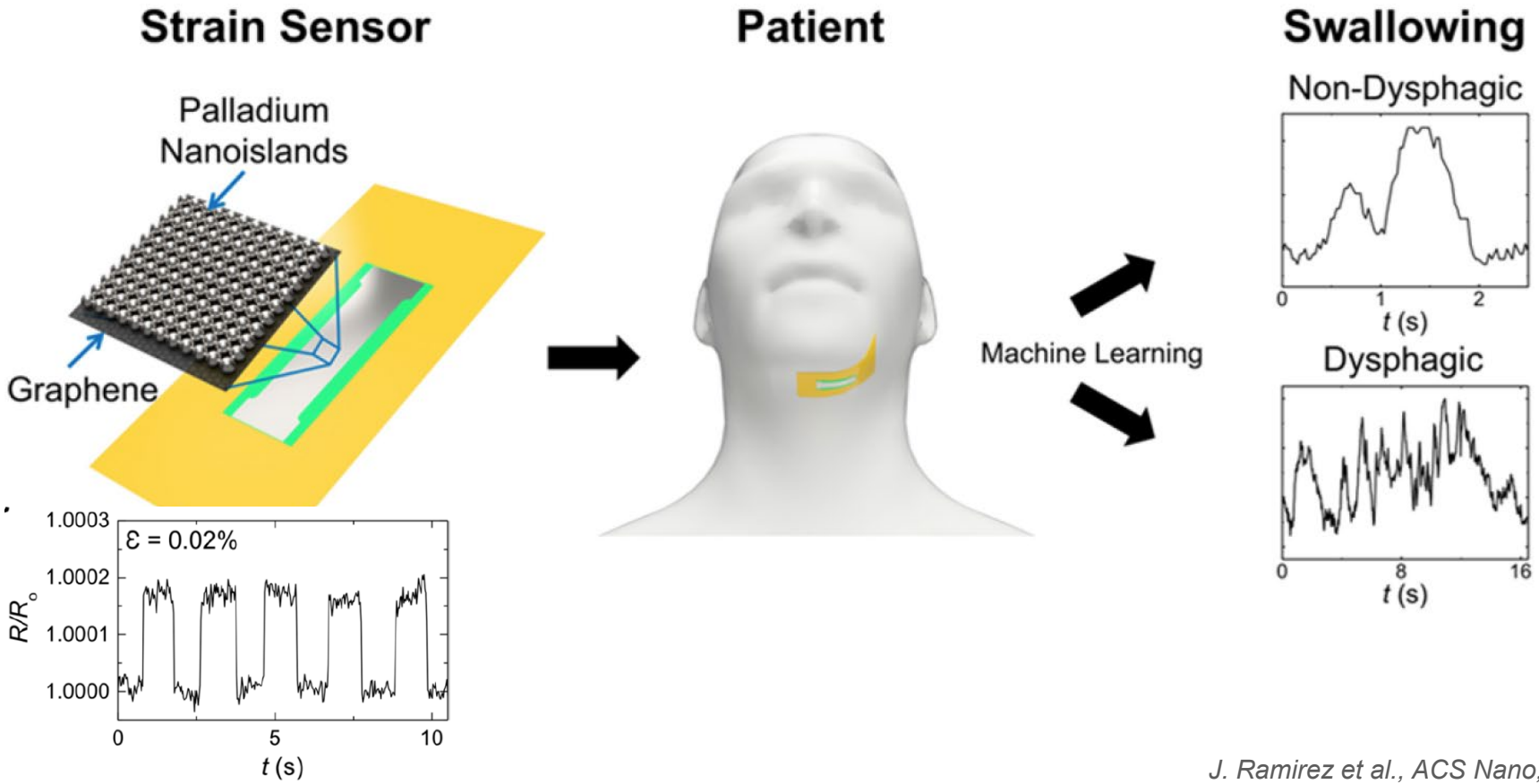
65nm prototype



Consumes only 110pW with +/- 1.9°C inaccuracy

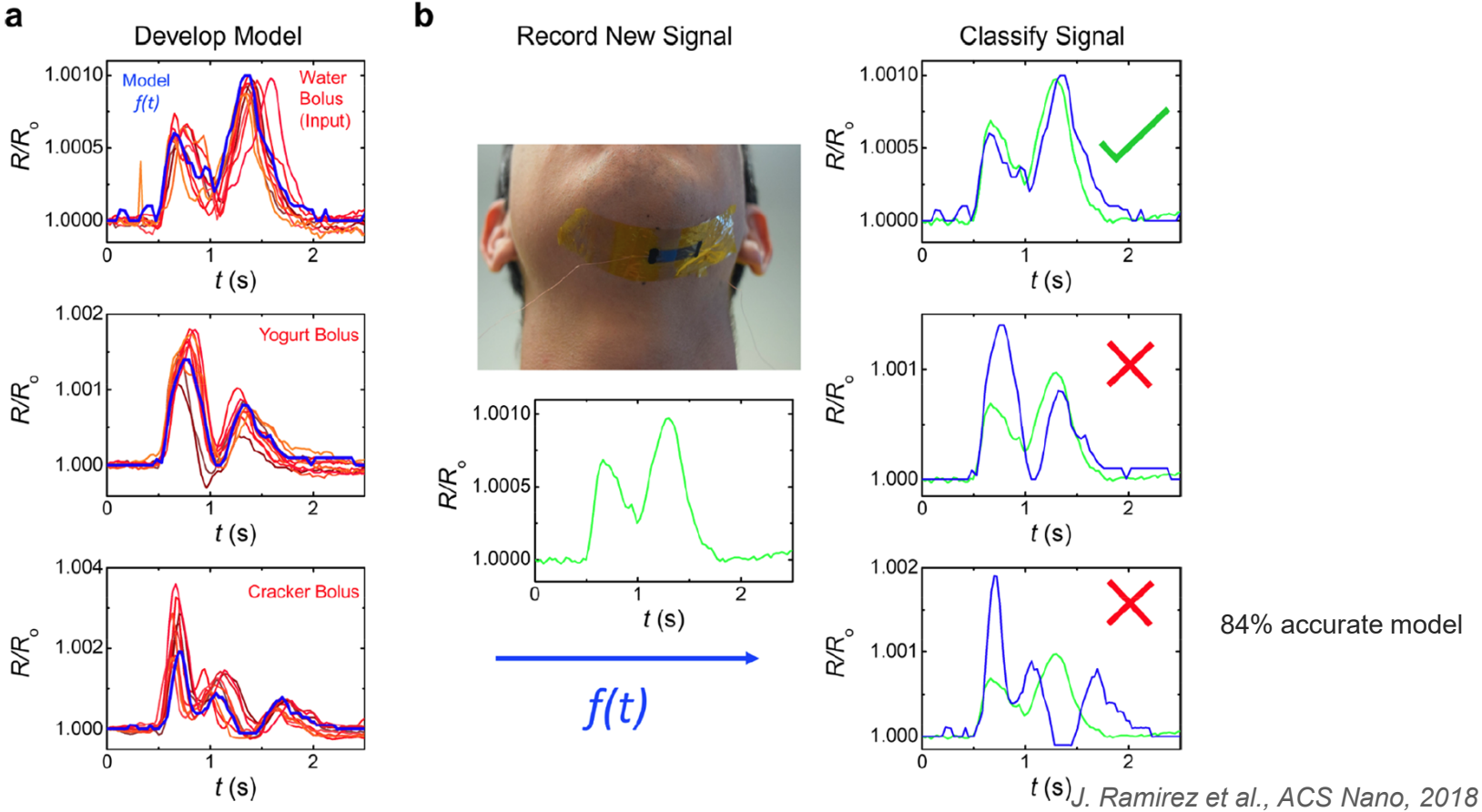
H. Wang et al., Sci. Rep.'17

Strain sensing for detecting risk of fibrosis in head+neck cancer patients



J. Ramirez et al., ACS Nano, 2018

Machine learning for classification



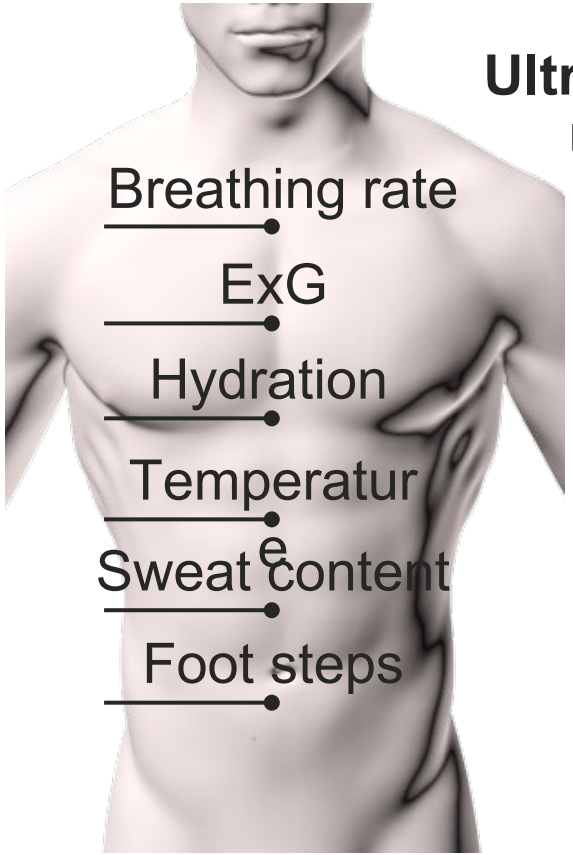
84% accurate model

J. Ramirez et al., ACS Nano, 2018

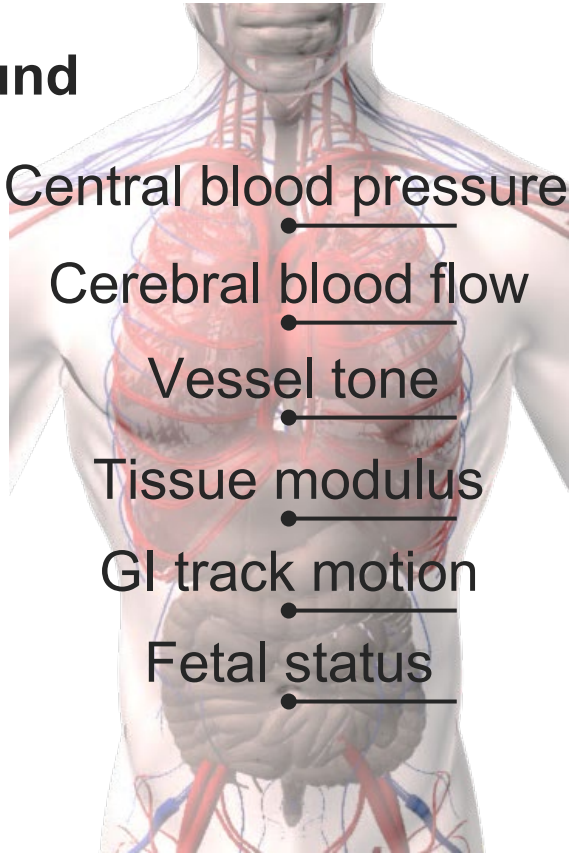
Wearable ultrasound: Adding a new sensing dimension

Sheng Xu

Center for Wearable Sensors



Ultrasound



Top 2023 story

NIBIB: Year in Review

Wireless wonder: wearable ultrasound patch goes completely cable-free

nature electronics

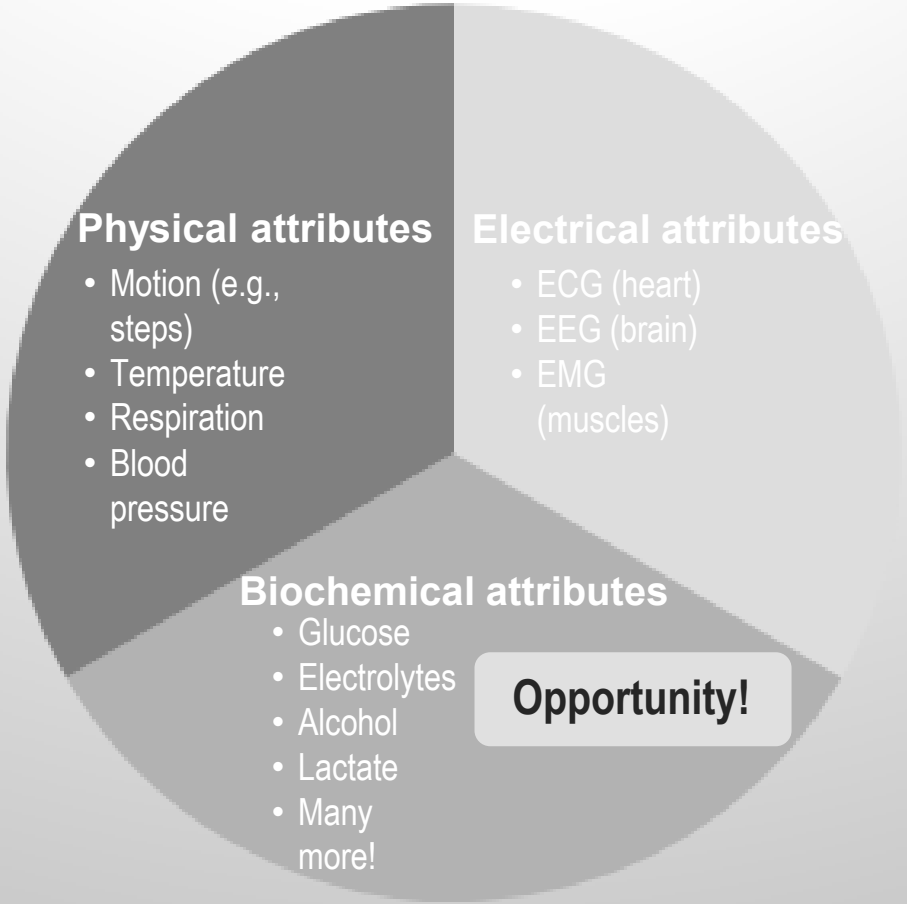
A 3D twist on stretchable electronics

nature biomedical engineering

A wearable ultrasonic sensor of blood pressure

Hu H.J., Huang H., Li M.H., Gao X.X. et al., Nature, 613, 677 **2023**

Wearable sensing opportunities



Most of the wearables market today

Biochemical Sensing Today

Conventional lab testing

- Expensive, painful, time consuming/inconvenient
- Very infrequent spot measurements



Point-of-care devices

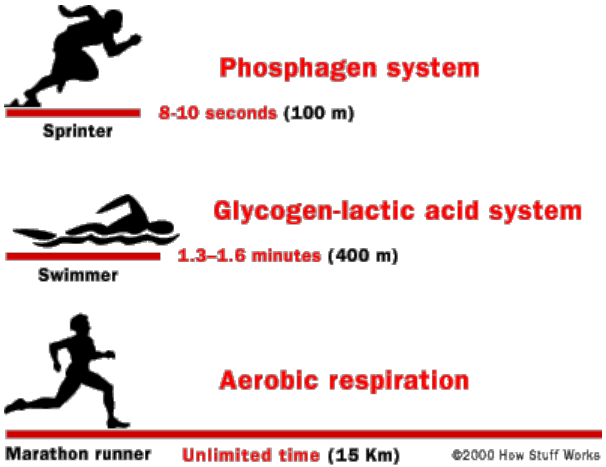
- Often still needs access to blood (invasive)
- Infrequent spot measurements (subsampling)



Research need: non-invasive, continuous measurement devices

Example: lactate monitoring for athletes

Staying below the “lactate threshold” important for endurance training

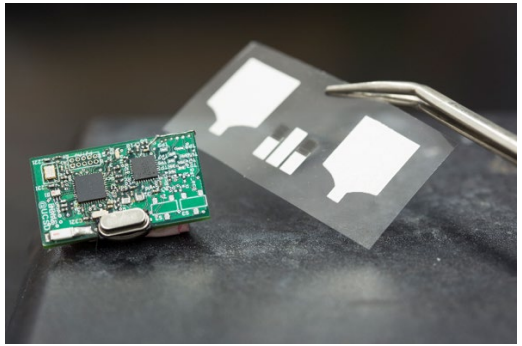


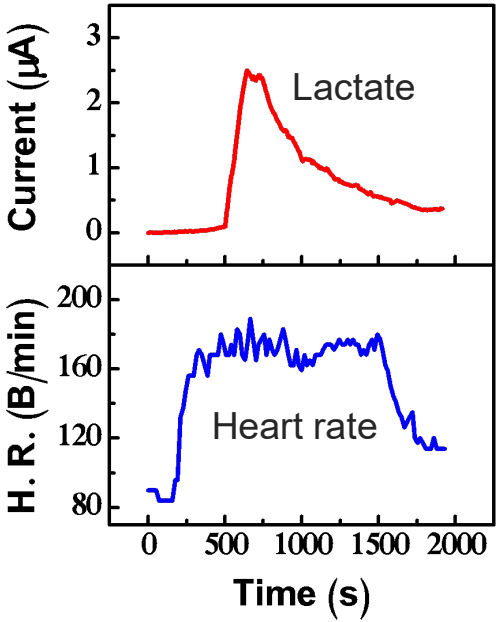
Current state-of-the-art testing method:

Non-invasive and/or continuous sensing is required

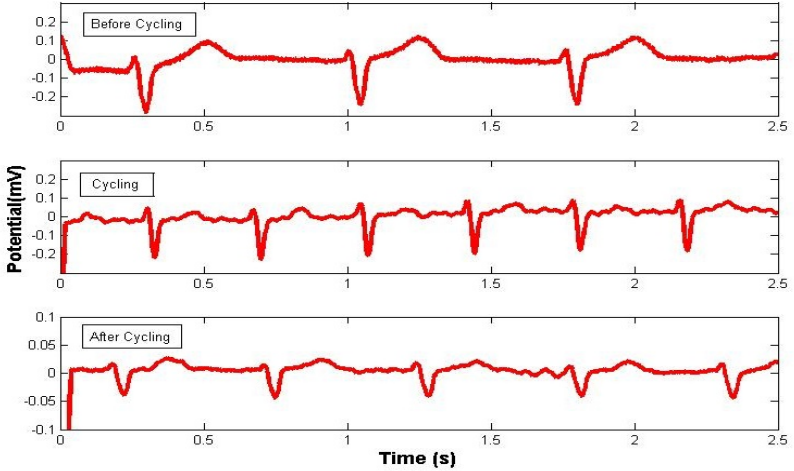
Hybrid physiochemical & electrophysiological sensing

Patrick Mercier & Joseph Wang





ECG



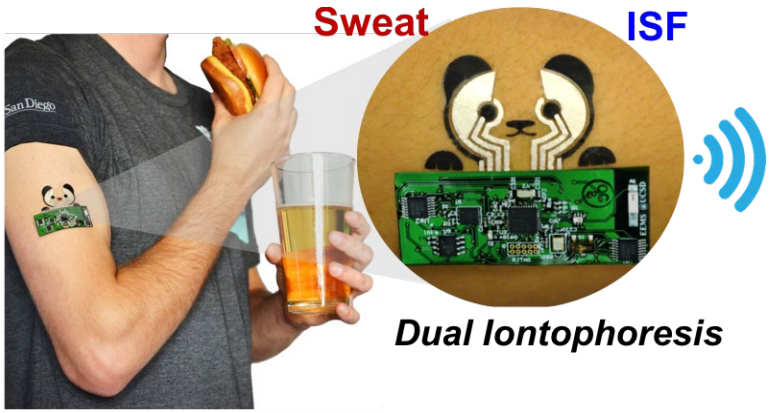
Opportunities for data analytics!

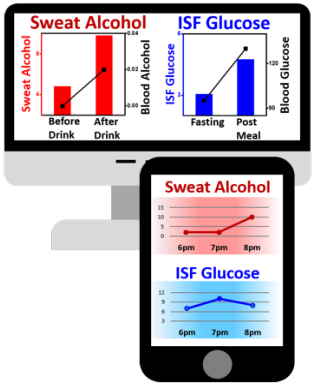
First demonstration of simultaneous chemical+electrophysiological sensing in a wearable patch

S. Imani et al., Nature Communications, 2016

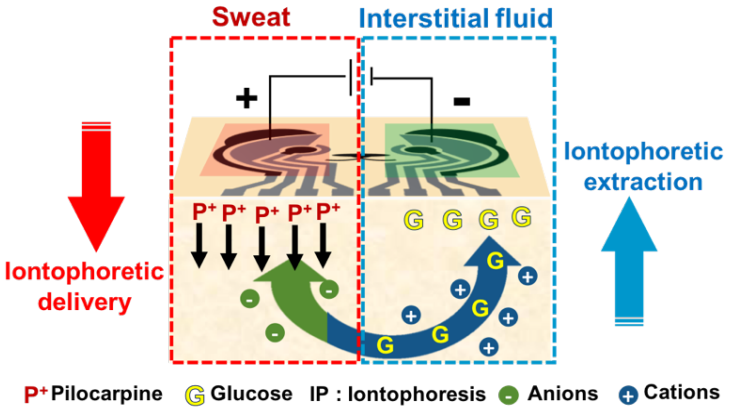
Non-invasive dual-fluid glucose/alcohol sensing

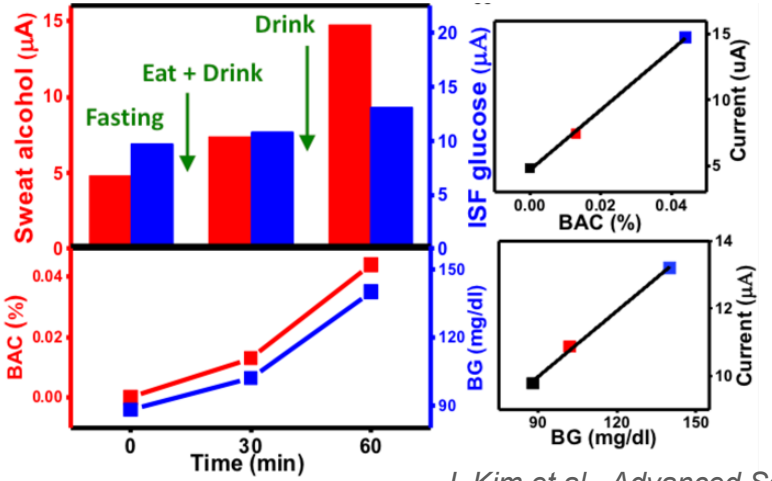
Joseph Wang & Patrick Mercier





A wireless "glucohol" sensing platform

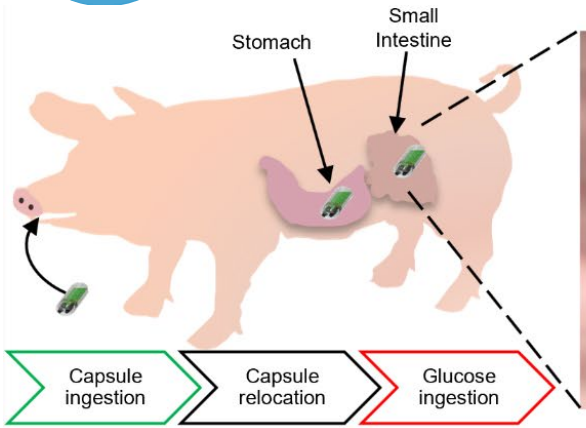


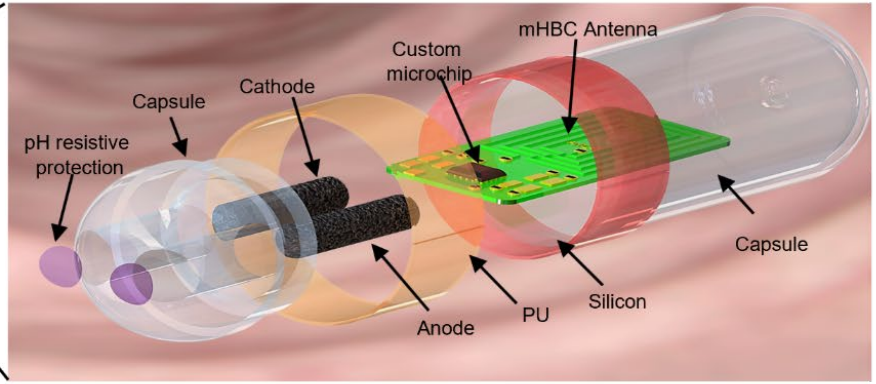


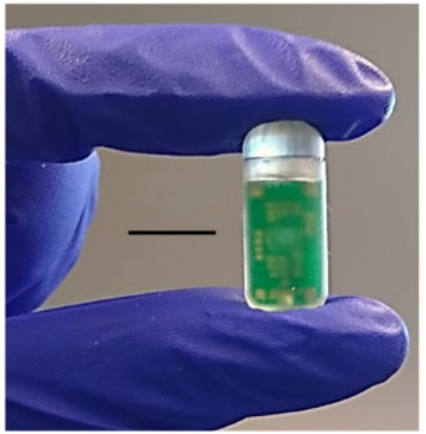
J. Kim et al., Advanced Science, 2018

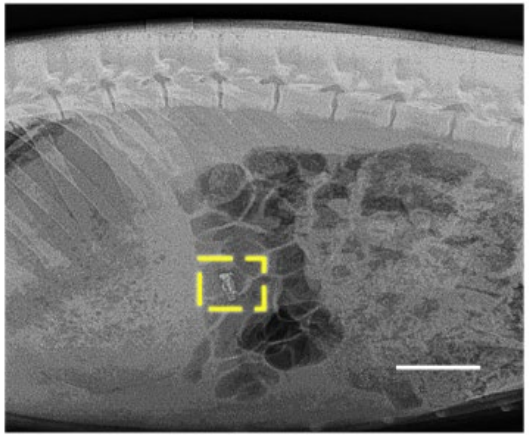
Smart Ingestibles

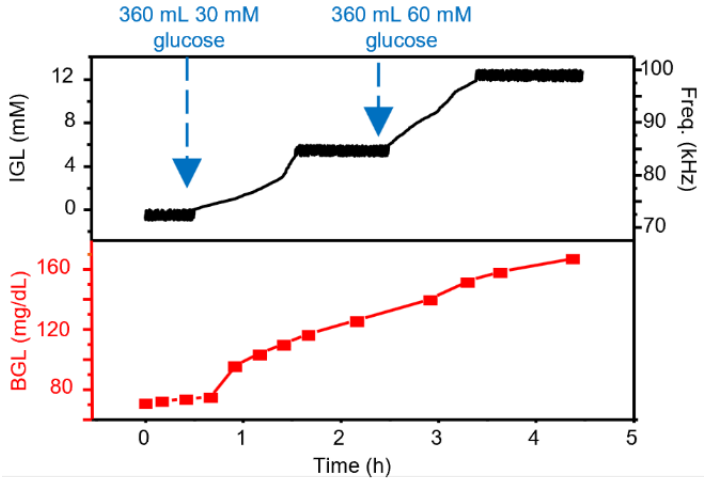
Patrick Mercier & Joseph Wang











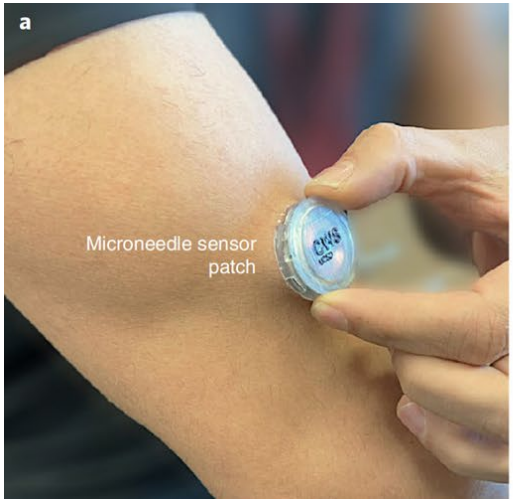
The first and only way to monitor microbiome metabolic activity in the gut in real time

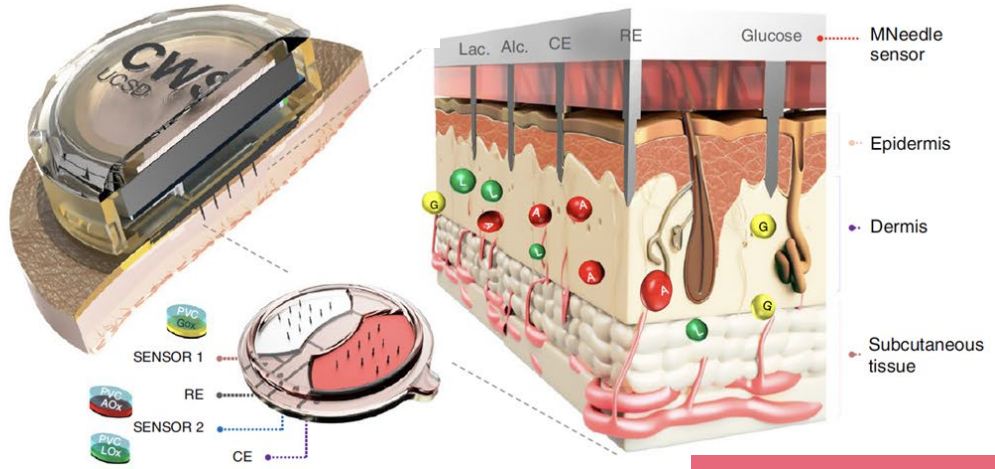
E. De La Paz et al., Nature Comm.'22

Microneedles for Minimally-Invasive Real-Time ISF Monitoring

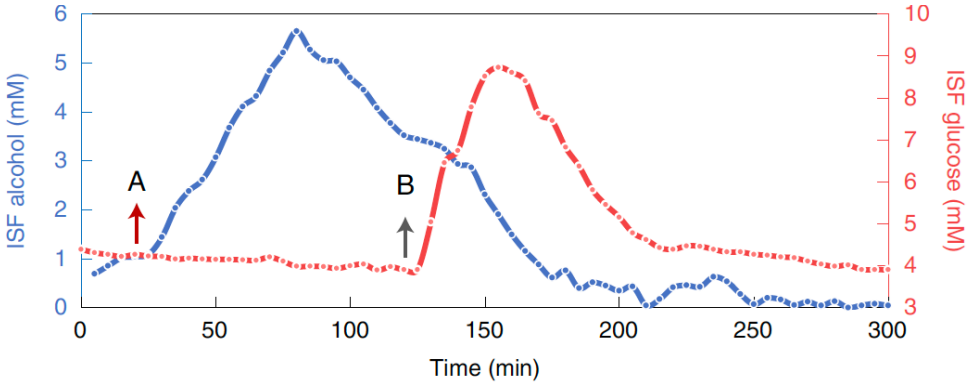
Joseph Wang & Patrick Mercier

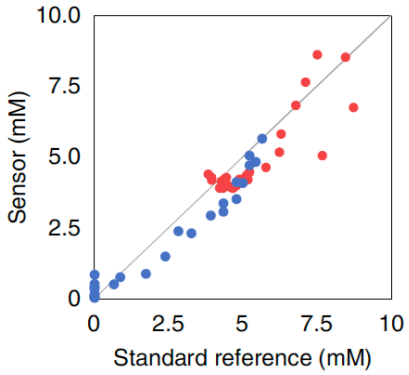
Center for Wearable Sensors





Pain-free!





Simultaneous real-time analyte measurements with high accuracy

because)

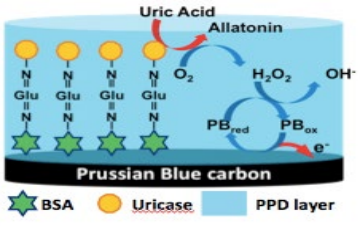
F. Tehrani et al., Nature BME'22

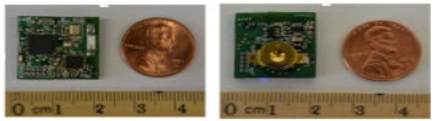
A wireless saliva sensor in a mouthguard

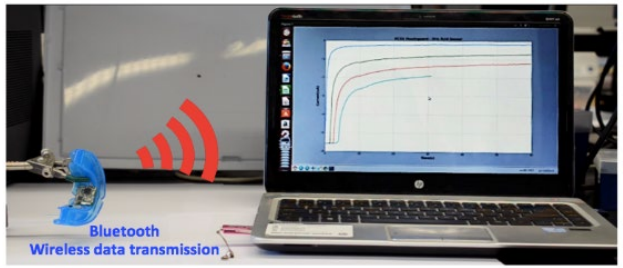
Joseph Wang and Patrick Mercier

Health applications

Measure Uric Acid for Hyperuricemia



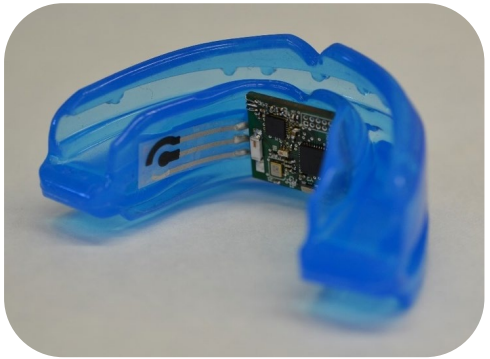


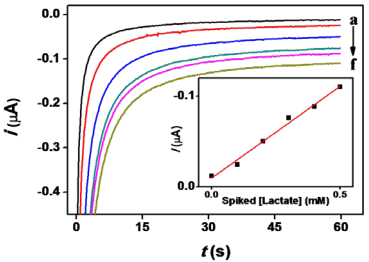


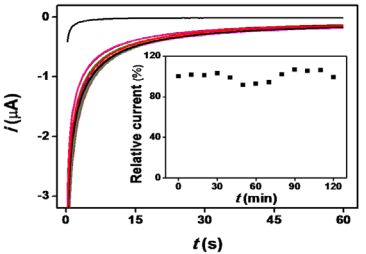
Startup company TRAQ

Fitness applications

Measure Lactate for Stress / Exertion







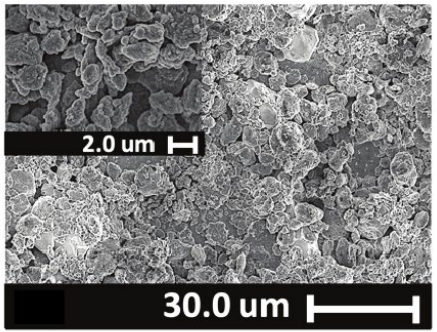
J. Kim et al., Biosensors & Bioelectronics, 2015

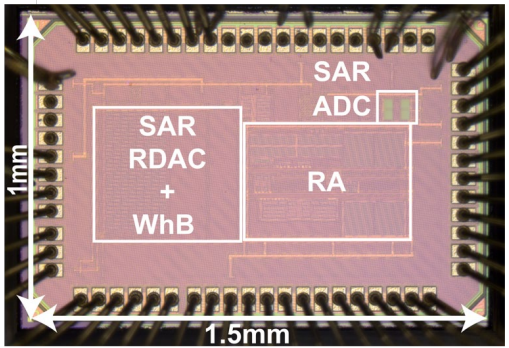
Low-Power Gas Sensor: SARS-Cov-2 & Glucose D

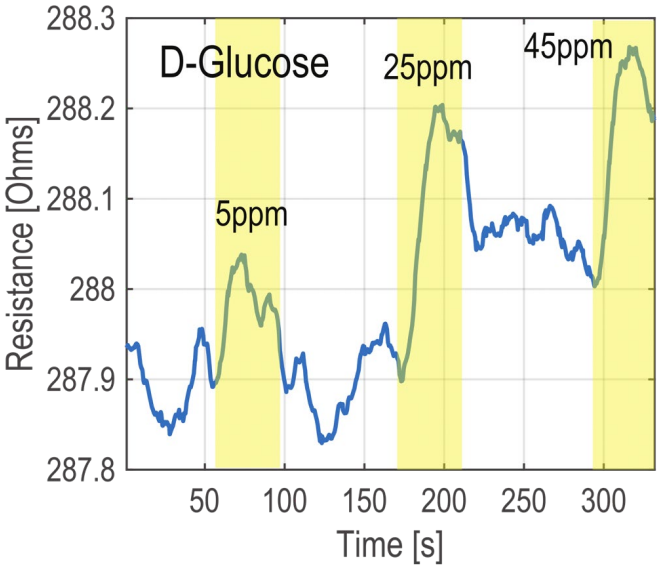
Patrick Mercier & Nian Sun

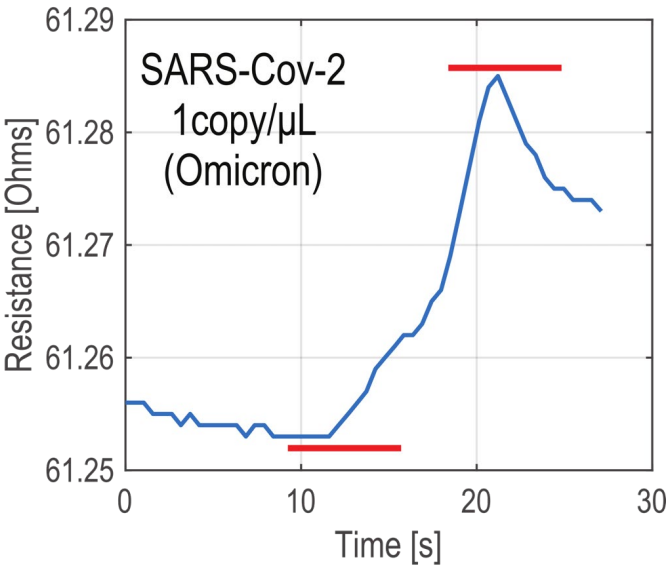
Center for Wearable Sensors

Molecularly imprinted polymer sensor: no heating required!









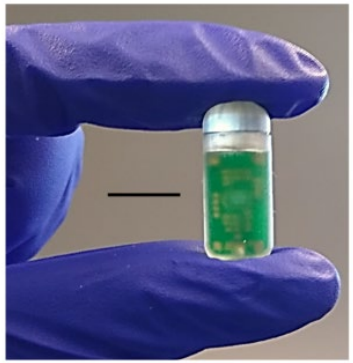
Ultra-sensitive detection of D-Glucose and SARS-Cov-2

24uW total power consumption!

R. Burns et al., CICC'24

Hardware Challenges: Device Requirements

- Clinically accurate
  - Absolutely essential for practical utility
- Small
  - Must be comfortable/usable
- Low power
  - Power dictates battery life and/or battery size – low power enables long battery life and/or small size
  - May need to incorporate energy harvesting
- Wireless
  - To reconfigure device, wirelessly stream data
- Scalable and manufacturable
  - Robustness and design for manufacturability needed
- Private and secure
  - HIPAA compliant
- May require some on-device AI/ML (tinyML)
  - For pre-processing needs
- Ultimately direct information (not data) to EHRs
  - No one can look at lots of raw data



Center for Wearable Sensors

What should we sense?

- We have data about most common panels measured across the US healthcare system
  - Pick the top 10 and enable this?
  - Strategize over the most important ones for low-cost/real-time assessment?
- In some ways, it doesn't matter…pick a subset and GO
  - "If you build it, they will come…"
  - Let's first solve the hard challenges of building sensing platforms, wireless infrastructure, AI processing, EHR integration, and more
- We are well equipped to do all of this
  - Just need to resources to get started!

Center for Wearable Sensors

Questions/Comments/Input?

Thank you!

Patrick Mercier
Vice Chair & Professor, Electrical and Computer Engineering
Co-Director, Center for Wearable Sensors
Site Director, Power Management Integration Center
pmercier@ucsd.edu

Discussion Topic: Career Readiness

UC San Diego
JACOBS SCHOOL OF ENGINEERING

We are the **2nd most applied to university** in the U.S. and the **2nd largest engineering school** in California

We have a **responsibility to prepare students** for new career pathways in the era of AI

This discussion is about **maintaining relevance** to as industries evolve, and adapt to AI

Please save questions/comments for discussion

Special Presentation

Nik Devereaux

Director of Software Engineering, Viasat

Industry Perspectives on Career Readiness

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

The Problem: Students are concerned about their future careers and the relevancy of the courses to prepare them in the age of AI innovation

- Tech companies **reduced entry level hiring by 25%** in 2024 (SignalFire)
- **40% of employers** intend to **cut staff** where AI can automate tasks (World Economic Forum)
- **75% of employers** looking for **AI skills** said they're **having trouble** finding qualified candidates (BestColleges.com)

One Solution: Get **industry partners involved** early and often in student career readiness

- Industry has **direct experience hiring early career engineers** and the skills required for the jobs
- Iteratively **adopting and evaluating modern AI tools** in their engineering processes
- Alumni and other industry professionals are looking for ways to help their alma mater and the next generation of the workforce

Our Proposal: Establish a Career Readiness committee of industry partners to:

- Provide students **guidance about future career paths** and how to prepare for them
- **Ensure relevancy in the curriculum** by providing Engineering Leadership (Dean, Chairs, Faculty) with insights to the future skills required from today's college graduates

Ideas for engagement:

- **Launch a career readiness seminar** taught by alumni and other industry professionals
- Partner with Engineering Leadership to **review AI impact on curriculum** and methodologies
- Advocate internally for **scalable recruiting models** that increase employment opportunities for students
- …Others?

Special Presentation

Ruanqianqian (Lisa) Huang

Graduate Student, Computer Science & Engineering

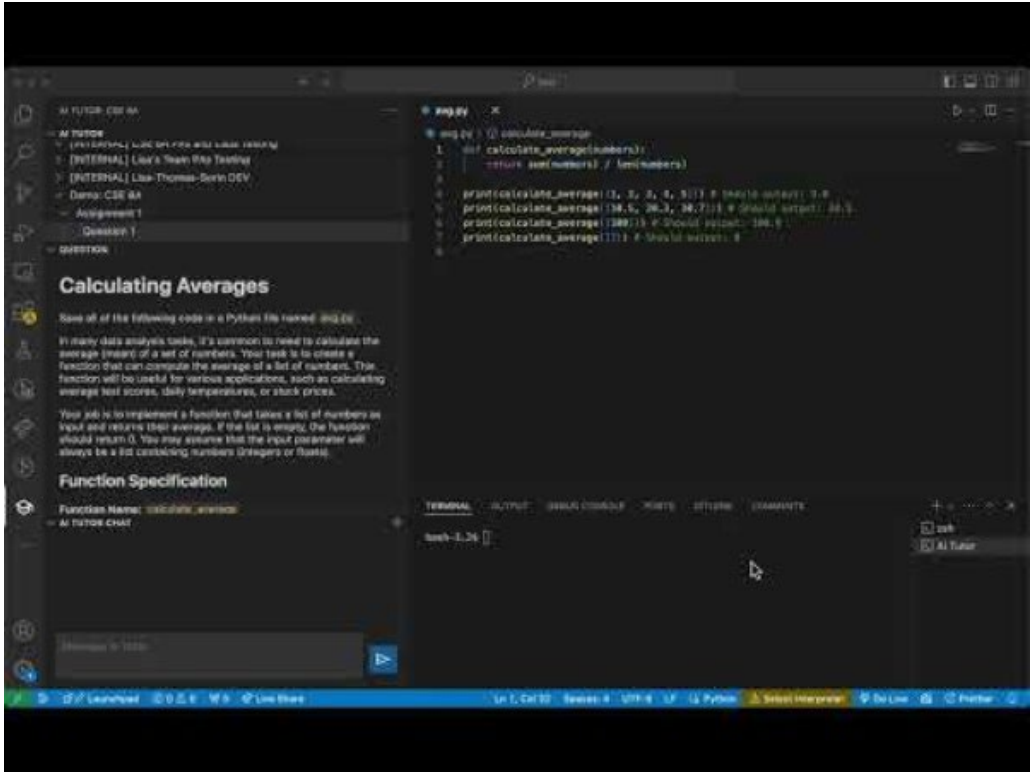
Building AI Tutors to Support Student Learning

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

AI Tutor for Intro Programming: Motivation, Challenges, and Design

- CSE 8A is an introductory programming course in Python
  - Mostly non-majors, about 500 students in Fall 2024
  - No programming background is required
- Programming can be challenging and frustrating for novices
  - Students often struggle with programming assignments
- Students of course have access to ChatGPT, BUT:
  - ChatGPT gives the answer away, which harms learning
- **Proposed: An assignment-focused tutor built into the coding environment for 24/7 help**

Demo



https://www.youtube.com/watch?v=d6bfcFIEKmw

Deployment Impression: Students Liked AI Tutor

- *“I like how AI tutor **did not give me the answer immediately**, instead it gave me tips to improve my code to get to the answer so **it really made me learn**.”*
- *“Please encourage all ucsd CS professors to use AI Tutor. It is **the best creature ever existed**”*
- *“The AI tutor was useful when I was stumped or confused about an error. It would **ask guiding questions to direct me to where the issue was**. I really like the AI tutor.*
- *“The AI tutor is amazing at **guiding me to the answer while still allowing me to learn** because it does not provide the answer itself. It allows me to take mental and physical notes on the material and learn from my mistakes and feel accomplished after finishing assignments.”*

Ongoing Analysis Highlights

- Most students chatted with AI Tutor to get help on assignments
- Students consistently rated AI Tutor as helpful
- AI Tutor still gave away code (against our design intent)
- Some students relied heavily on AI Tutor

Future Work

- Improving the System
  - Short term: Better guardrails and cooldown to reduce over reliance
  - Long term: AI Coach as a generalization of the AI tutor
- Upcoming Deployments (Fall 2025)
  - Intro programming (UCSD & CSUSM) and biology (UCSD & SDSU)
- Other Improvements (more human-oriented)
  - Training TAs to customize AI tutor → learn about building AI-infused apps
  - Fostering proper awareness and perception of AI among students
  - ***Other ways we could use AI to better prepare students for future careers?***

CAP Executive Board Input

- In the age of AI, what are the crucial skills that won't be replaced by AI that we should reinforce in our curriculum?
  - What would be the most meaningful ways you could envision your company engaging in helping our students develop these skills?

- As we train the AI-ready workforce of the future, would your company be most interested to help:
  - Build the AI major in CSE?
  - Develop the AI course in a specific department?
  - Support the TAs that build the AI tutors?

- Would these efforts translate into your company hiring more Jacobs School students?
  - If so, when, and with whom, should we talk in order to secure more internships for our students?

- Any other thoughts/comments/ideas?

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CAP Business

Wil Dyer

Director, Corporate Affiliates Program

UC San Diego
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CAP Updates

Jacobs School Corporate Affiliates Program

UC San Diego

Research Expo 2025 - a great success!

UC San Diego
JACOBS SCHOOL OF ENGINEERING

Winning poster: Liya Bi, Materials Science & Engineering

"Exotic self-assembly of m-terphenyl isocyanide ligands on silver surface"

Molecule self-organization into patterns on metal surfaces - patterns that may one day influence the development of advanced materials and transform the way microchips are manufactured.

Thank You sponsors and to our 100+ judges!

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THE GRAINGER FOUNDATION FRONTIERS OF ENGINEERING
THE NATIONAL ACADEMY OF ENGINEERING

UC San Diego
JACOBS SCHOOL OF ENGINEERING

Franklin Antonio Hall | June 4, 2025

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- Chancellor's "C" permit - park anywhere on campus!
- Register up to 5 license plates
  - Only one car can use permit at a time
- Permit runs from July 1 - June 30
- **Details coming from donorrelations@ucsd.edu mid-June**

Contact: Julie Choi, jchoi@ucsd.edu

CAP Talent Programs:
Talent Strategy Planning this Summer

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

Let's discuss your 2025-2026 talent strategy!

- ➔ Tailored events for your organization
- ➔ Internships
- ➔ Team Internship Program (TIP)
- ➔ Cooperative Education (Co-op)

Year-round: send us your openings

- ➔ New college graduate roles (graduation: June 13)
- ➔ Alumni for experienced roles (0-5 years)

Contact Alice Grgas at agrgas@ucsd.edu; Learn more at jacobsschool.ucsd.edu/talent

CAP Talent Programs:
Targeted Fall Talent Programming

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

- ➔ CSE Tutor Networking Night
- ➔ National Security Networking Night (Defense Industry)
- ➔ Early Summer Access to Students:

  CSE Graduate Orientation

  Transfer Prep

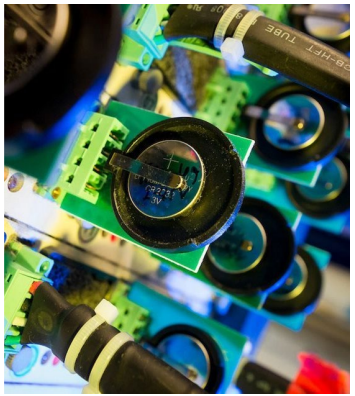
  Summer Engineering Institute

  and more.

CAP Partner Invitations to Research Reviews

UC San Diego
JACOBS SCHOOL OF ENGINEERING

Englekirk Structural Engineering Center
Shake Table Test Industry Day
June 23 or 24, 2025 - *stay tuned*



Sustainable Power & Energy Center
July 17, 2025

Contextual Robotics Institute
November 5, 2025

Accepting Applications: Master of Advanced Studies

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

MAS programs are interdisciplinary engineering degrees designed for working professionals with classes taught on Fridays and Saturdays every other week.

Contact:

Gary Henderson
Director, Executive Education
grhenderson@ucsd.edu

jacobsschool.ucsd.edu/mas

Convergent Systems Engineering (CoSE)
Engineering and Supply Chain professionals focused on intersection of systems thinking, supply chain and social sciences; modeling, AI and machine learning, and analysis. **Three programs: Architecture-based Enterprise Systems Engineering, Value Supply Chain, Cyber-Physical Social Systems.**

Wireless Embedded Systems (WES)
Engineering professionals with a background in CS / EE who want to enhance their understanding of IoT, edge computing, 5G and beyond (6G…)

Data Science and Engineering (DSE)
Engineering professionals with a background in CS / Math / Statistics with substantial experience in data analysis

Fall 2025 Application Deadline:

July 18, 2025 (extensions available upon request)

Happy Retirement, Jan Dehesh!

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

- Senior Director of Business Development for the Jacobs School of Engineering
- Over 13 years of service
- Previously CIO of Qualcomm
- Helped secure naming of Franklin Antonio Hall

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

Thank you!
Next CAP Executive Board Meeting: October 2, 2025