

We invent the wearable systems the world needs.

Wearable sensors are trending, but only UC San Diego is championing the unobtrusive, ultra-low power, highly adaptive sensor systems that will revolutionize health care by way of the data available from our bodies.

The Center for Wearable Sensors has world-renowned faculty and top students working in the key areas that converge to invent and test the sensing platforms and technologies that fuel the future of sensor systems.

Join us.

Systems Research and Technologies

NEW SENSOR TECHNOLOGIES

non-invasive chemical | electrophysiological sensors

ULTRA-LOW-POWER BIOELECTRONICS

sub-nanoWatt front ends | body-area network radios

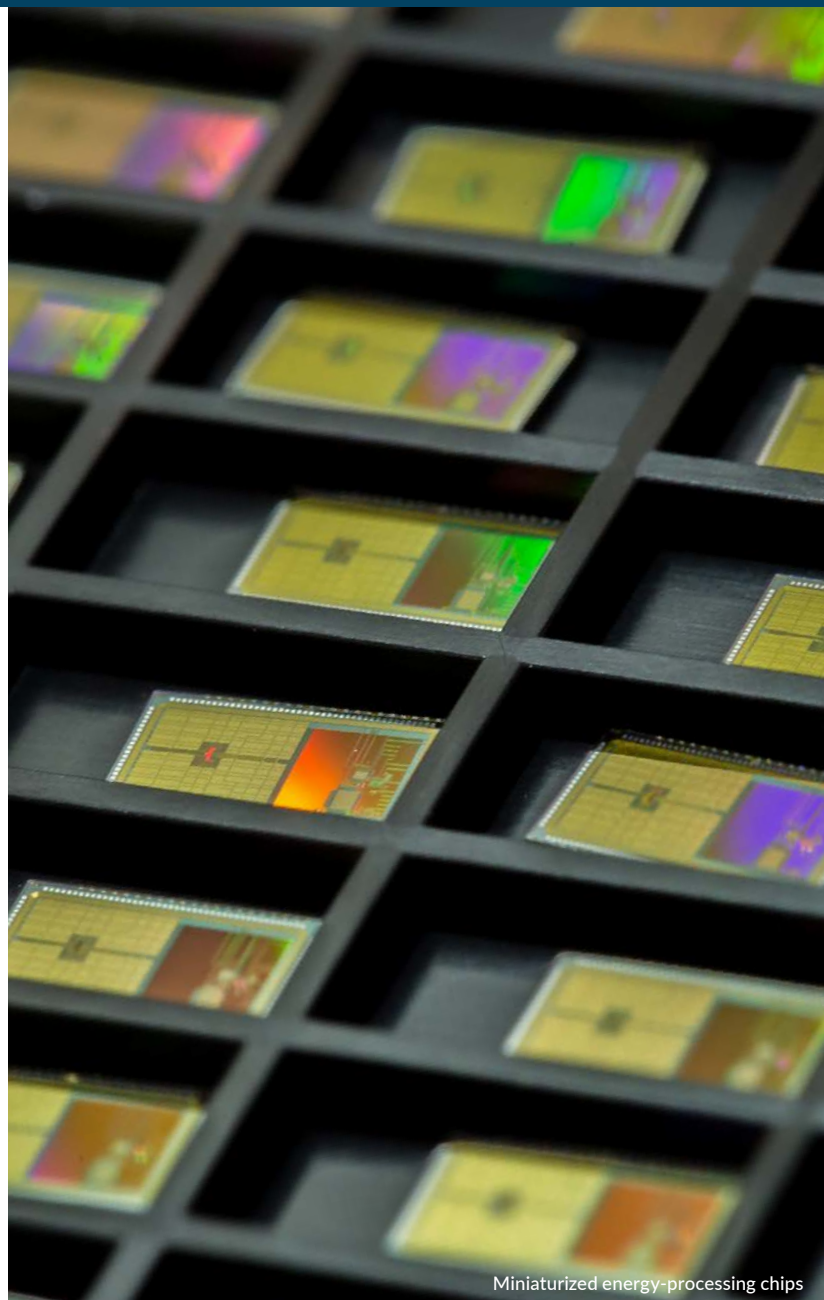
BIO-ENERGY HARVESTING

glucose biofuel cells | thermoelectrics | and more

NEW FABRICATION AND INTEGRATION TECHNOLOGIES

flexible electronics | biocompatible integration

NEW ENERGY-AUTONOMOUS SENSOR SYSTEMS



Miniaturized energy-processing chips



Membership Opportunities

Access **experimental wearable sensor platforms** and a community of engineers and medical researchers developing these systems for real-world applications.

Keep abreast of breakthroughs relevant for growth in **your industry**.

Recruit a **qualified technical workforce** innovating the wearable sensing industry.

WHO WE ARE and WHAT WE DO

We design new sensors, sensor electronics, materials, and energy harvesters. We integrate our work into real demonstration systems whose designs are informed by leading clinicians and human interface design experts.

SENSORS AND SYSTEMS

Gert Cauwenberghs

Wireless dry and non-contact biopotential monitoring

Todd Coleman

Information theory, neuroscience, machine learning, bioelectronics

Harinath Garudadri

Signal processing, wearable electrophysiology

Patrick Mercier

Wireless communications, energy-harvesting integrated circuits, ultra-low-power systems

Albert P. Pisano

MEMS, manufacturing, low-cost sensors

Joseph Wang

Non/minimally-invasive electrochemical sensing, printable sensors, bioelectronics

ULTRA-LOW POWER, MICRO- AND NANO- NETWORKS

Drew Hall

Biosensors, medical electronics, sensor interfaces

Gabriel Rebeiz

RFICs for microwave and mm-wave systems, low-power circuits

Tajana Rosing

Energy-efficient systems, embedded systems

NOVEL MATERIALS AND FLEXIBLE ELECTRONICS

Shadi Dayeh

Electro-neural interfaces and compact wearable electronics

David Gough

Long-term glucose sensors, biocompatible materials

Darren Lipomi

Stretchable electronics, polymer chemistry, stimuli-responsive materials

NOVEL FABRICATION AND INTEGRATION METHODS

Mike Heller

Sample-to-answer and POC diagnostics for cancer, brain injury, stroke, diabetes

Yu-Hwa Lo

Microfluidics, biomedical devices for in-vitro diagnostics, bio- and nanophotonics

CLOUD DATA STORAGE AND ANALYTICS

Chung-Kuan Cheng

Parallel processing, power network analysis for VLSI systems and circuits

Tzyy-Ping Jung

Dry & non-prep EEG sensors, wearable and wireless EEG systems

Gert Lanckriet

Machine learning, personalized mobile health

MEDICINE AND CLINICAL WORK

Kevin Patrick, MD

Mobile and social technologies for health care

DESIGN

Benjamin Bratton

UC San Diego visual arts professor

HEALTH CARE



SECURITY/FORENSICS



FITNESS



LIFESTYLE



Partner Benefits

- » Recruit our top students
- » Collaborate one-on-one with faculty
- » Embed a visiting Industry Fellow in our labs
- » Industry-faculty-student research teams
- » Biannual Research Reviews
- » Fast-track research agreements
- » Access to commercialization engine with lab-to-market focus
- » Corporate Affiliates Program membership

Director

Joseph Wang

Professor and Chair
Dept. of NanoEngineering

josephwang@ucsd.edu
+1 (858) 246-0128

Associate Director

Patrick Mercier

Professor
Dept. of Electrical and Computer Engineering

pmercier@ucsd.edu
+1 (858) 534-6026

Anne O'Donnell

Executive Director
Corporate Research Partnerships

odonnell@ucsd.edu
+1 (858) 822-5963