### Center for Wearable Sensors

# UC San Diego JACOBS SCHOOL OF ENGINEERING

# WE INVENT THE WEARABLE SYSTEMS THE WORLD NEEDS.

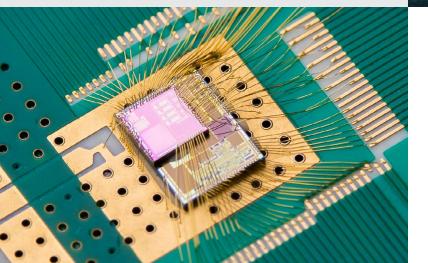
Wearable sensors are trending, but only UC San Diego is championing the unobtrusive, ultra-low power, highly adaptive sensor systems that are revolutionizing health, fitness, security, and energy – by way of the data available from our bodies.

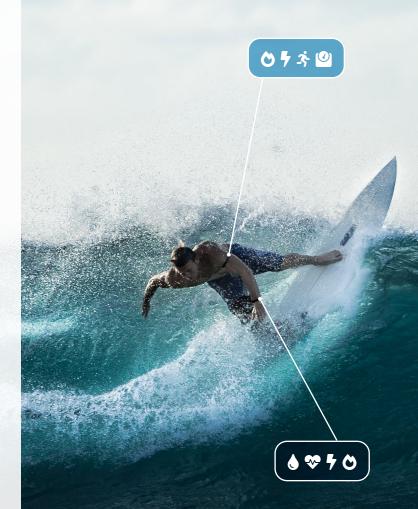
The Center for Wearable Sensors has world-renowned faculty and top students working in the key areas that converge to invent and test the sensing platforms and technologies that fuel the future of sensor systems.

Join us.

# **TECH AND SYSTEMS EXPERTISE**

- Chemical Sensors and Biosensors
- Electrophysiological Monitoring
- Soft Electronics and Stretchable Materials
- · Sensors-Electronics Integration and Fabrication
- Glucose Monitoring
- Wireless Communications
- On-Body Energy Harvesting
- Ultra-Low-Power Instrumentation
- Data Processing, Fusion and Machine Learning





## **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 systems whose designs are informed by leading clinicians and human interface design experts.

#### **Joseph Wang**

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

#### **Patrick Mercier**

Wireless communications, energyharvesting integrated circuits, ultra-lowpower systems

#### **Dinesh Bharadia**

Efficient wireless communications and networking

#### Gert Cauwenberghs

Wireless dry and non-contact biopotential monitoring

#### Chung-Kuan Cheng

Parallel processing, power network analysis for VLSI systems and circuits

#### Todd Coleman

Information theory, neuroscience, machine learning, bioelectronics

#### Shadi Dayeh

Electro-neural interfaces and compact wearable electronics

#### Harinath Garudadri

Signal processing, wearable electrophysiology

Job Godino Wearable and mobile health technology

David Gough Long-term glucose sensors, biocompatible materials

#### **Drew Hall**

Biosensors, medical electronics, sensor interfaces

#### Jesse Jokerst

Use of acoustic data to create devices that monitor human health

#### Tzyy-Ping Jung

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

#### Vincent Leung

Wireless transceivers, RF/mixed-signal circuit design

#### Darren Lipomi

Stretchable electronics, polymer chemistry, stimuli-responsive materials

### Yu-Hwa Lo

Microfluidics, biomedical devices for invitro diagnostics, bio- and nanophotonics

Kenneth Loh Multifunctional materials, spatial sensing, and tomographic methods

Tse Nga (Tina) Ng Free-form, flexible electronics fabrication

Albert P. Pisano MEMS, manufacturing, low-cost sensors

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

#### **Tajana Rosing**

Energy-efficient systems, embedded systems

**Sheng Xu** Wearable electronics, advanced stretchable materials

#### **Benjamin Bratton**

Visual Arts, interface with VR and AR environments









### PARTNER BENEFITS

- Recruit our top students
- Access to multidisciplinary researchers all focused on wearables
- Embed a Visiting Industry Fellow in our labs
- · Industry-faculty-student research teams

- Fast-track research agreements
- Access to commercialization engine
  with lab-to-market focus
- Seat on the Center Advisory Board
- Invitations to Research Summits

#### Director

#### Joseph Wang

Professor NanoEngineering

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#### Center for Wearable Sensors WearableSensors.ucsd.edu