

UC San Diego

JACOBS SCHOOL OF ENGINEERING  
Corporate Affiliates Program



Welcome  
CAP Executive Board  
February 9, 2023

# CAP Chair and Vice Chair



**Magaly Drant**

Vice President, Developer Productivity  
ServiceNow



**Rob Vasquez**

Chief Operating Officer, Energy Group  
General Atomics

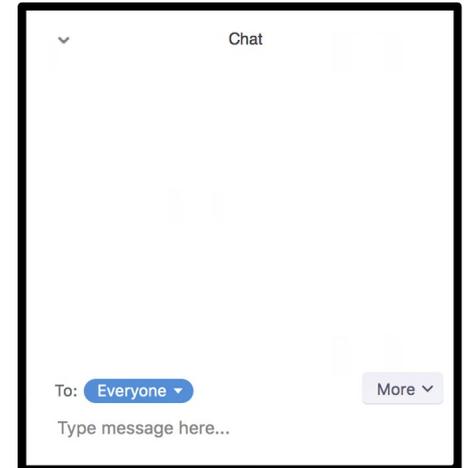
Welcome

**UC San Diego**

**JACOBS SCHOOL OF ENGINEERING**  
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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.



# Agenda

**5:00-5:10pm**

**CAP Executive Board Chairwoman Welcome**

*Magaly Drant*

*Vice President of Developer Productivity, ServiceNow*

**5:10-5:30pm**

**Dean's Report**

*Al Pisano*

*Dean, Jacobs School of Engineering*

**5:30-5:50pm**

**Processing with Intelligent Storage & Memory (PRISM)**

*Tajana Simunic Rosing*

*Professor, Computer Science & Engineering and Electrical & Computer Engineering*

**5:50-6:20pm**

**Executive Input: Enhance excellence and relevance of talent flow**

**6:20-6:30pm**

**CAP Business**

*Wil Dyer*

*Director, Corporate Affiliates Program*

**6:30pm**

**Adjournment**

# New CAP Executive Board Leadership



**Magaly Drant, Chair**

Vice President, Developer Productivity  
ServiceNow

- CAP Executive for ServiceNow since 2019
- Over 20 years technical experience and executive leadership
- Joined ServiceNow in 2011 after positions at Hewlett Packard and Peregrine Systems
- Executive focal that has championed major support for Jacobs School expansion (ServiceNow Terrace) and student success (ServiceNow Scholars)



**Rob Vasquez, Vice Chair**

Chief Operating Officer, Energy Group  
General Atomics

- CAP Executive for General Atomics since 2018
- Over 20 years of experience in the energy and space industries
- Joined General Atomics in 2016 after positions at SAIC/Leidos, Boeing and Hughes
- Executive focal for strategic collaboration, notably in the area of fusion energy

## Welcome New CAP Partners

**EMD  
ELECTRONICS**

**HOLOGIC®**

**PHILIPS**

**redoxblox**

**VIA***Touch*  
INTERACTIVE MEDIA

## Welcome Guests

ATE Corporation

General Motors

Parker Meggitt

ClarkDietrich

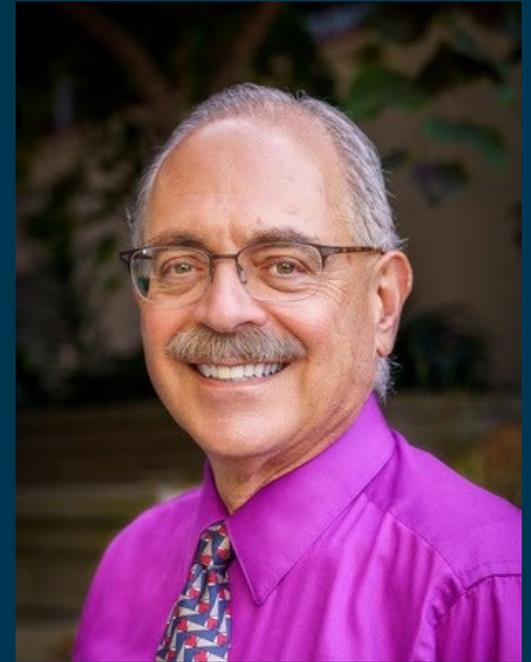
NSWC - Corona

Samsung

# Dean's Report

Albert P. Pisano

Dean, Jacobs School of Engineering



Towards the Top 5

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# Reflecting on a Successful 2022

# Our Students Made Global Headlines

**Won multiple awards**  
for their autonomous  
boat at the RobotX  
Maritime Challenge in  
Sydney, Australia



**Awarded Second Place**  
at Nanotechnology  
Entrepreneurship  
Challenge



**Achieved First Place**  
in the American  
Society of Civil  
Engineers Steel  
Bridge competition



**Provided prosthetic limbs**  
to amputees in Ukraine

# Our Faculty Developed Breakthrough Technologies

**System sequencing  
wastewater to detect COVID**

*Rob Knight  
Center for  
Microbiome Innovation*



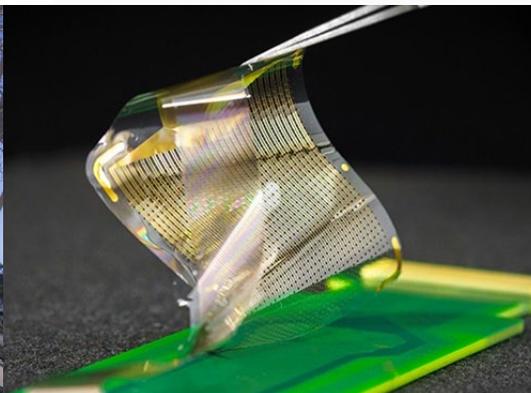
**Eco-friendly and low-cost Li-  
ion battery recycling**

*Zheng Chen  
Sustainable Power  
& Energy Center*



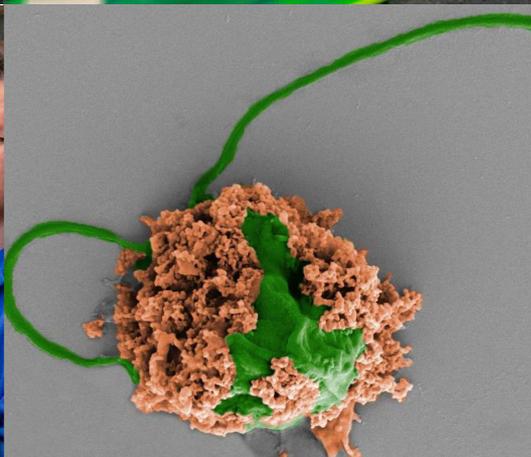
**Brain-computer interface  
sensor with flexible backing**

*Shadi Dayeh  
Center for  
Wearable Sensors*



**Microrobots that deliver  
medicine and clear bacteria**

*Liangfang Zhang  
Center for Nano  
Immunoengineering*



# We Opened Franklin Antonio Hall



# We Renamed the Bioengineering Department

## Announcing the Shu Chien-Gene Lay Department of Bioengineering



With a **\$25 million gift**, BioLegend founder and CEO **Gene Lay** (right) has named the bioengineering department in honor of his mentor, **Professor Emeritus Shu Chien** (left)

Funds will be used to:

- Recruit and retain early-career bioengineering faculty
- Attract world class graduate students
- Create new and upgraded hands-on instructional laboratories for undergraduate students

**We're off to a Fast Start in 2023**

# Accelerating through the Headwinds

- More than **9,600** engineering students studying at the Jacobs School of Engineering
- Nearly **1/3** research expenditures come from industry and private funding
- Three years running as a **top 10** engineering school in the nation

UC San Diego  
JACOBS SCHOOL OF ENGINEERING

SNAPSHOT  
2022

WE MAKE  
BOLD POSSIBLE.

We solve the tough challenges no lab, discipline, or company can take on alone.

#### How we do it

When we collaborate with industry, government and academia, we actually listen.

The result: deep interactions and bold collaborations within UC San Diego's \$1.54 billion research enterprise, throughout San Diego's tech ecosystems, across California, the nation and the world.

We are a **top 10** engineering school with the creativity and openness necessary to tackle the toughest shared challenges for the public good.

In Franklin Antonio Hall, we created a national model for innovation ecosystems with local roots and international reach.

We are transforming engineering education, at scale

#### How we do it

We empower one of the largest – and strongest – cohorts of students in the nation to apply engineering and computer science theory to real-world problems.

In November 2021, we launched the **Veteran Forge** program. This pilot program is being designed to support qualifying veterans working toward an engineering or computer science degree at the Jacobs School on their path to employment in national security careers and at National Labs.

**#10!!!**  
ENGINEERING SCHOOL  
IN THE USA

\*2023 U.S. News Rankings of Best Engineering Schools

#2

#2 Public engineering school in California\*  
#6 Public engineering school in the USA\*

\$218M

Total research expenditures for 2020-2021 at the Jacobs School of Engineering

1/3

One third of our research expenditures come from university-industry research partnerships that drive relevance

16

Industry-sponsored centers and institutes launched in the last 8 years

#1

The Jacobs School of Engineering at UC San Diego is the largest engineering school in California, and #2 on the West Coast, according to the latest enrollment data from ASEE.

9,594

Engineering Students (Fall 2021)  
6,284 BS / 1,901 MS / 1,409 PhD

3,019

Engineering Degrees (2020-2021)  
1,645 BS / 1,183 MS / 191 PhD

275

27 New faculty hired 2020-2021  
140 faculty hired in the last 8 years

# Faculty Awards Launch into 2023

- Stefan Savage (CSE) elected to the National Academy of Engineering for contributions to security, privacy, and reliability of network systems
- Tajana Simunic Rosing (CSE & ECE) to lead Processing with Intelligent Storage & Memory center as part of \$50.5M grant
- Farhat Beg (MAE) named inaugural Lin Chancellor's Endowed Chair in Engineering Science as an expert in matter under extreme conditions
- Farinaz Koushanfar (ECE) named Association for Computing & Machinery (ACM) Fellow for her pioneering work in security & privacy



*Stefan Savage (top left), Tajana Rosing (top right), Farhat Beg (bottom left) Farinaz Koushanfar (bottom right)*

# We're Hosting University-Industry Symposia

**National Academy of Engineering**  
Southern California Symposium  
February 16, 2023

National Academy of Engineering  
Regional Symposium  
February 16, 2023  
<https://nae-business-meeting.ucsd.edu/>

Kyoto Prize Symposium  
March 15 & 17, 2023  
<https://kyotoprize-us.org/>



# Looking Ahead: Top 5 in 5

# Strategic Plan: Four Tenants of achieving Top 5 in 5

1. Maintaining graduate student excellence via Graduate Record Exams (GRE)
2. Drive faculty recognition via National Academy of Engineering (NAE) memberships
- 3. Enhance excellence and relevance of talent flow to our corporate partners**
4. Landing leviathan research programs



# Enhance Relevance and Excellence of Talent Pipeline

## Our key advantage: a nationally recognized Corporate Affiliates Program

Enabling the Jacobs School of Engineering to deliver top talent

- Corporate Day@Jacobs
- Microfairs
- Targeted events
- Tech Talks & Information Sessions
- Professional Student Organizations
- Post Internships & Full-time Jobs
- Team Internship Program (TIP)
- Cooperative Education (Co-op)
- Ph.D Mentor Program
- Alumni for experienced roles



# Enhance Relevance & Excellence of Talent Pipeline

## Industry assessment is crucial to our rankings

- What strategies should we consider?
- What bold moves and new investments can we make together?
- How can we make you more successful in finding top talent?

# Faculty Presentation



## Tajana Simunic Rosing

Professor, Computer Science & Engineering, Electrical & Computer Engineering

Processing with Intelligent Storage & Memory (PRISM)

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# CAP Executive Board Input: Enhancing Relevance and Excellence of Talent Pipeline

- What strategies should we consider?
- What bold moves and new investments can we make together?
- How can we make you more successful in finding top talent?

# CAP Business

Wil Dyer

Director, Corporate Affiliates Program



## CAP Updates

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# Jacobs School Corporate Affiliates Program



# We're Hiring!

## Director of Corporate Research Partnerships

This person will:

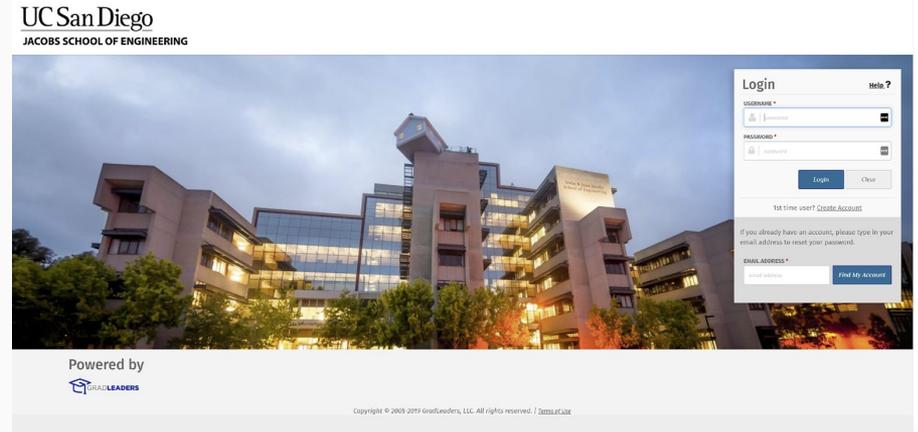
- Lead strategic alignment of research centers, institutes and initiatives
- Drive meaningful collaboration with industry
- Enhance student professional growth
- Strengthen industry partnerships to achieve common goals and maximize value

*Contact Cody Noghera, [cnoghera@eng.ucsd.edu](mailto:cnoghera@eng.ucsd.edu)*

# CAP Talent Programs - There is still time to recruit students!

Send us the description(s) and we'll take care of the rest!

- Team Internship Program (TIP)
- Cooperative Education (Co-op)
- Individual Internships
- Full-time/Part-time jobs
- Alumni for experienced roles



Learn more at [jacobsschool.ucsd.edu/talent](https://jacobsschool.ucsd.edu/talent)

Contact Alice Grgas at [agrgas@eng.ucsd.edu](mailto:agrgas@eng.ucsd.edu)

# Customized Student Engagement Opportunities

We'll organize the logistics & marketing to your target student audience, for upcoming needs or to build your talent pipeline for the future:

- Tech Talks / Student Profesional Development
- Information Sessions
- Micro Career Fair / Targeted Networking
- Mock Interviews / Resume Reviews
- Speed Recruiting

Contact Alice Grgas at [agrgas@eng.ucsd.edu](mailto:agrgas@eng.ucsd.edu)



RESEARCH  
EXPOSURE 2023

WEDNESDAY APRIL 26, 2023 | UC SAN DIEGO

ASML

Qualcomm

UC San Diego

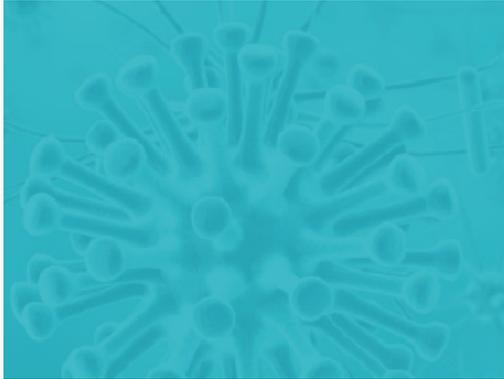
EXTENSION

CAP Partner Sponsorship

Ph.D Recruitment

CAP Executive Judges

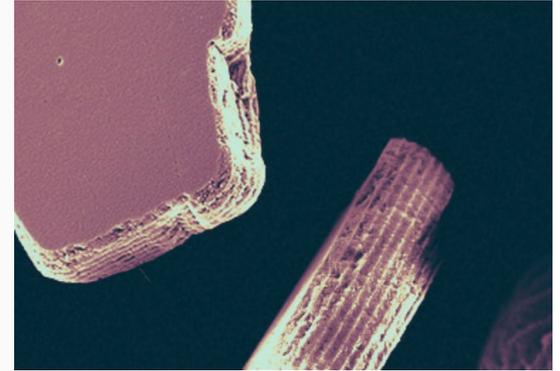
# CAP Partner Invitations to Research Reviews



Center for Microbiome Innovation  
CMI.ucsd.edu  
March 14-16, 2023



Center for Resilient Materials  
and Systems  
resilientmaterials.ucsd.edu  
April 21, 2023



Institute for Materials  
Discovery & Design  
IMDD.ucsd.edu  
May 11-12, 2023

Contact: Wil Dyer, [wdyer@eng.ucsd.edu](mailto:wdyer@eng.ucsd.edu)

# Current Slate of Important Dates

February 23	Honors Networking Event
March 3	Jacobs Chancellor's Endowed Chair in Innovations for Engineering in Medicine - Liangfang Zhang
March 14-16	Center for Microbiome Innovation International Microbiome Meeting
March 17	Scientific Machine Learning Symposium
April 15-16	HARD Hack
April 3-5	Institute for Supply Chain Excellence & Innovation Board Meeting, Gala, and Summit
<b>April 26</b>	<b>Jacobs School Research Expo</b>
May 11-12	IMMD Board Meeting and Research Summit
May 20-21	TritonHacks: High school hackathon targeting underrepresented student populations
<b>June 1</b>	<b>Spring CAP Executive Board Meeting</b>
June 8	Center for Visual Computing Industry Retreat
June 17	Jacobs School Ring Ceremony for graduating students

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Thank you!  
Next CAP Executive Board Meeting:  
June 1, 2023