UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

Welcome
CAP Executive Board
October 5, 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
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Corporate Affiliates Program

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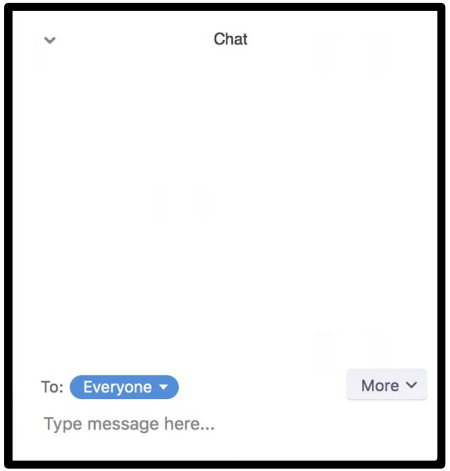
Corporate Affiliates Program

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

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Corporate Affiliates Program

5:00-5:05pm	**CAP Executive Board Chairwoman Welcome**
	Magaly Drant
	Vice President of Developer Productivity, ServiceNow
5:05-5:20pm	**Team Internship Program (TIP) Presentation**
	Solar Turbines TIP Team
	RedoxBlox TIP Team
5:20-5:40pm	**Dean's Report**
	Al Pisano
	Dean, Jacobs School of Engineering
5:40-6:00pm	**Microelectronics Commons Superhub**
	Yu-Hwa Lo
	Professor, Electrical & Computer Engineering
6:00-6:20pm	**Executive Input**
6:20-6:30pm	**CAP Business**
	Wil Dyer
	Director, Corporate Affiliates Program
6:30pm	**Adjournment**

Welcome New CAP Partners

ClarkDietrich®

DRS DAYLIGHT SOLUTIONS

Welcome Guests

ASM

CLINICOMP INTERNATIONAL

DEXCOM

QUIDELORTHO

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Corporate Affiliates Program

CAP Partner Milestones

20+ years

10 years

5 years

Welcome Solar Turbines TIP Team

Low-Cost Package Enclosure Camera Solution

Executive Report Out

- Interns: Zohair Mohidin, Saman Naseri
- Mentors: Marc Campagnolo, Igor Carvalho, Suman Goli
- Sponsor: Hiep Ly

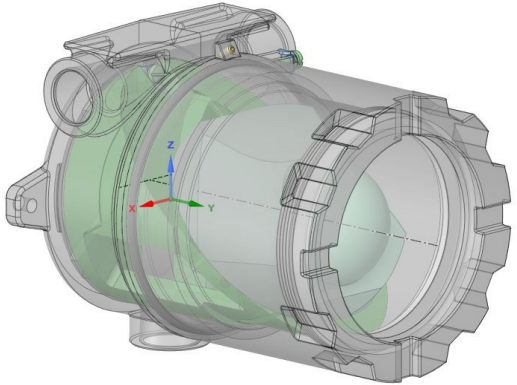
Solar Turbines
A Caterpillar Company

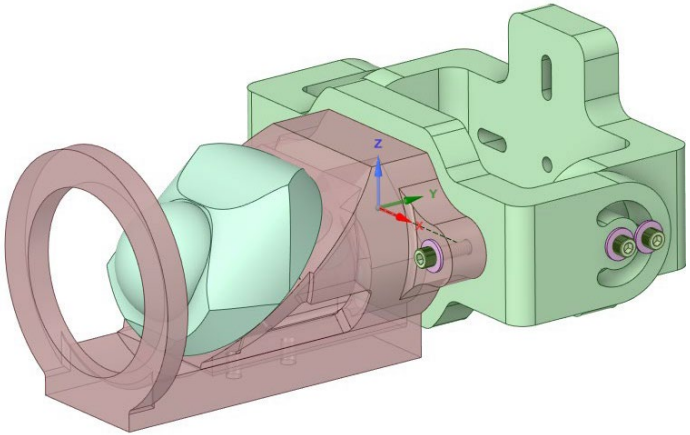
PROJECT OVERVIEW

- Some customers are looking to reduce human intervention and physical inspection by leveraging technology to improve monitoring of their assets at Normally Unattended Facilities (NUFs)
- In this project, we are exploring the use of cameras to find solutions with the related challenges inside a turbine package

Problem Statement and Solution

- Cameras need to meet Ex certification requirements
- Current explosion proof cameras can cost up to $20,000 and many do not meet temperature requirement
- Develop Ex camera solution using commercially available high-temperature cameras
- Our solution would cost 10 times less

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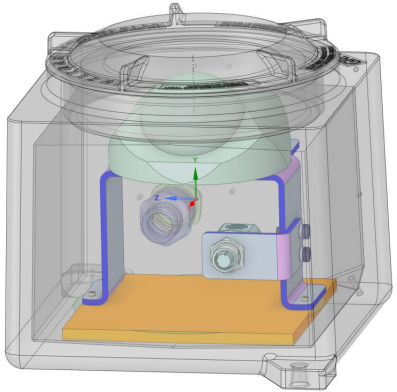
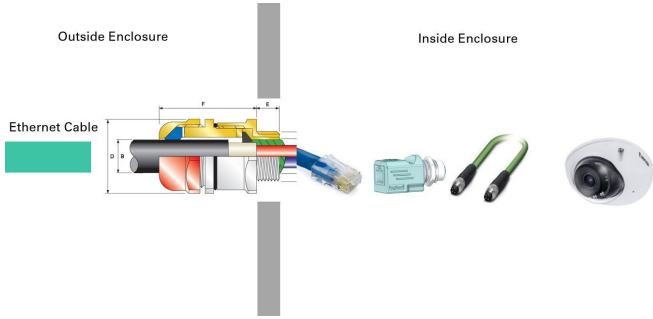
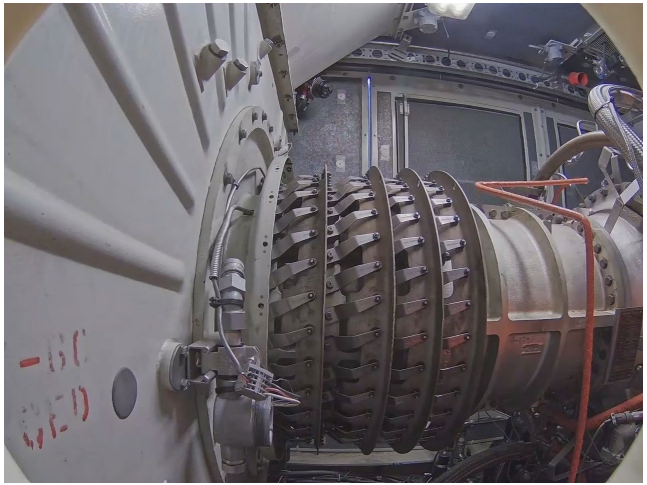
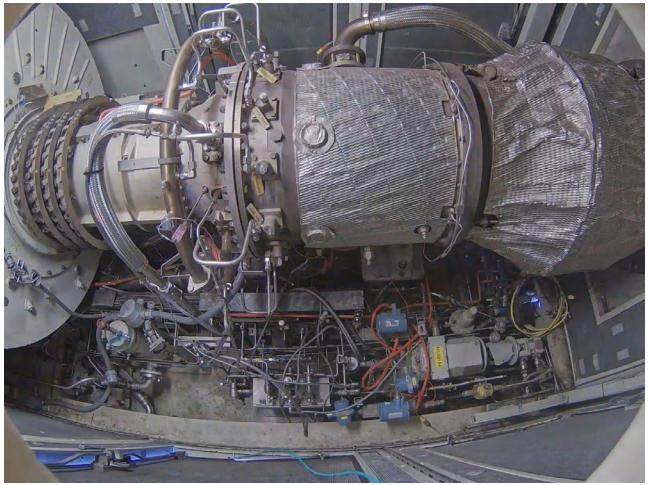



Outside Enclosure
Inside Enclosure
Ethernet Cable





INTERNSHIP HIGHLIGHTS

- Camera testing
- Harbor Drive and KM tours
- Meeting other interns
- Ice cream social
- Intern luncheons
- Intern BBQ
- Peer interaction benefits

QUESTIONS?

Welcome Redoxblox TIP Team

redoxblox

UC San Diego
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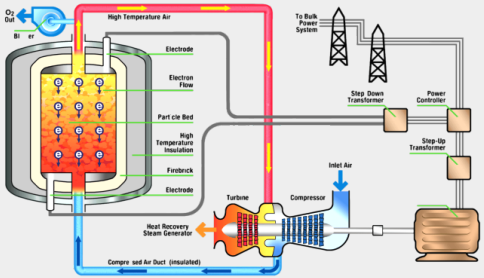
Team Internship Program

Interns: Joseph Pallan (4th Year ME) – Sam Green (4th Year ME) – Quinn Mullineaux (5th Year ME)

Supervisor: Dr. Nima Rahmatian

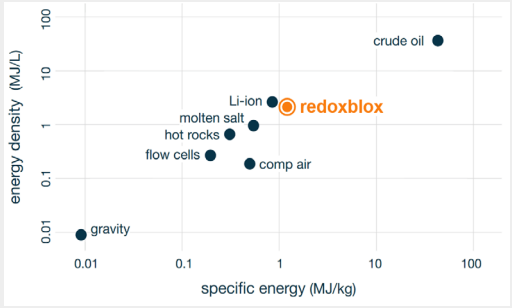
Background

Thermochemical Energy Storage



Redoxblox's technology allows fast charging, long duration energy storage when integrated into a power grid.

Energy Density



The proprietary mixed metal oxide has high energy density and competes against technologies like Li-ion and molten salt batteries.

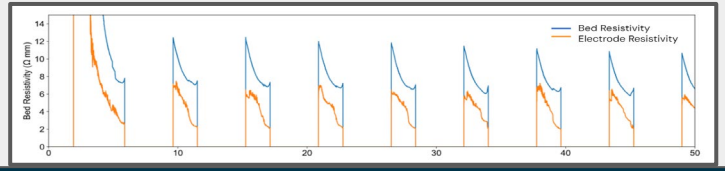
Prototype

Various battery products prototypes and experiments run concurrently. Plenty of hands-on work to be done to meet project milestones and develop new technologies.

Volumetric Heating Experiment

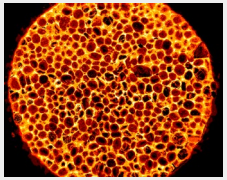
The Experiment

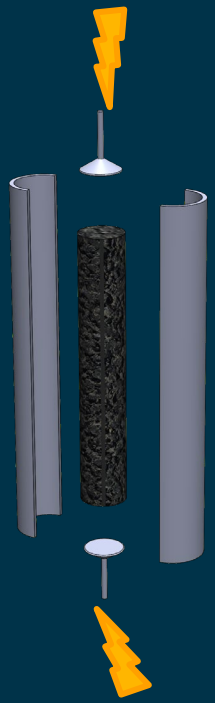
- Test the volumetric heating capabilities of the mixed metal oxide.
- Evaluate the characteristics of the electrode and heating apparatus.
- Determine how the system characteristics change with many cycles.



Internship Milestones

- Increased reliability, repeatability, durability and user friendliness
- Improved Documentation
- Familiarization with programs such as Visual Studio, Solidworks, Lucidchart, Arduino's IDE, and programs from NOVUS and B&K



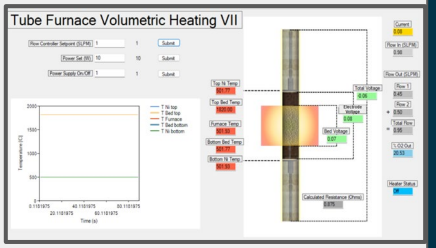


The Software

- Custom Made GUI to visually collect important information.

- Implemented a robust data logger and data loss prevention.

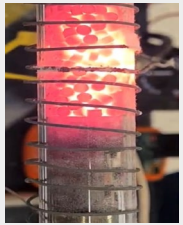
- Reduced logical errors in the code



The Internals

Key Projects

- Improvements in the accuracy and detail of the system CAD Model
- Documentation of component properties and changes
- Modification of the linear actuator in order to prevent jamming due to bed expansion\contraction
- Machining and manufacturing of internal Components
- Monitoring and troubleshooting during extended experiments
- Evaluation of materials using EDS scans and thermogravimetric analysis



Single Pellet Furnace

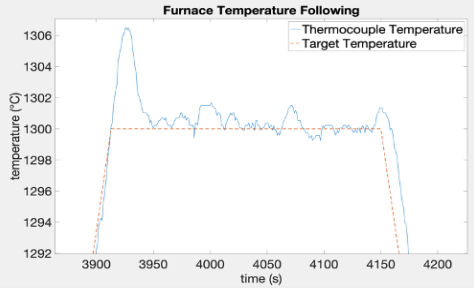
Single Pellet Furnace

During heat cycling, deformation of the pellets have been observed. While the team has thermogravimetric analysers and industrial box furnaces, these systems are too large, costly, and complex to run simple, high cycle tests.

Goals:
1. **Uniform heating**
2. **Fast**
3. **Cost Effective**
4. **Automated**
5. **Safe**

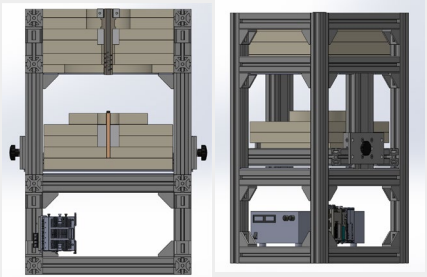
Controls

The furnace utilized a P1AM - 100 PLC, type B thermocouple, a current shunt and voltage divider to monitor the system.



Structural

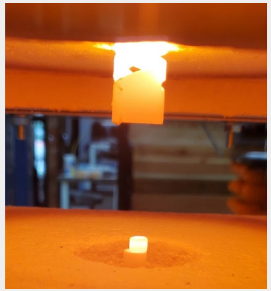
The team settled on an adjustable bed design. This allowed for the best alignment of heating element and specimen every single run once calibrated.



Results

After some basic tuning of the PID controller was complete we were ready to cycle a pellet in the furnace. The controller was able to maintain an error of less than a few degrees celsius compared to the target temperature with various profiles.

The furnace was able to meet the goals of the project and is ready for the team to experiment on the pellets



Teamwork

Collaboration

Redoxblox interns collaborated broadly across our projects to share expertise from unique

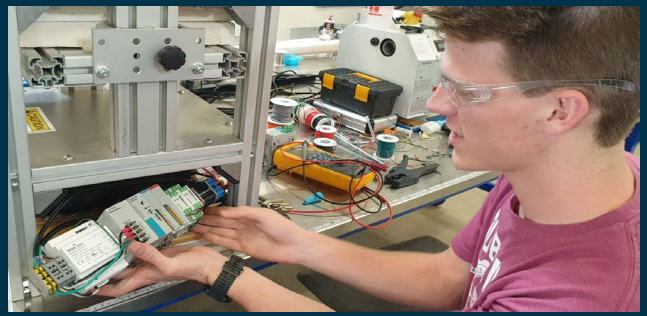
- Classwork and Major Specialization (e.g. Controls vs Materials)
- Extracurricular experience (e.g Triton Racing vs Engineers Without Borders)
- Internship Experience (e.g Lab work vs electrical panel work)

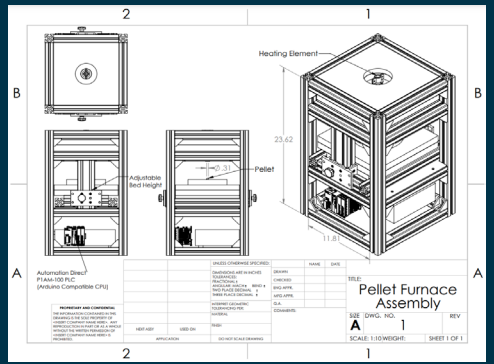
R&D
Nima Rahmatian
Laboratory Director

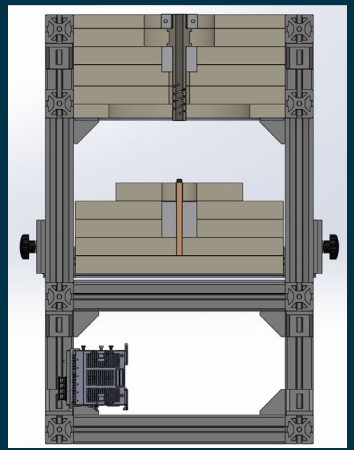
R&D
Sam Green
Intern

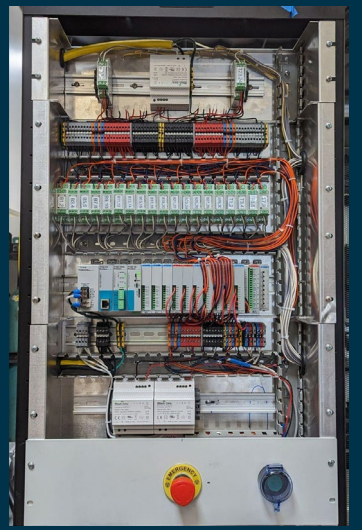
R&D
Quinn Mullineaux
Intern

R&D
Joseph Pallan
Intern









redoxblox

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Team Internship Program

Thank You for Your Time!

Questions?

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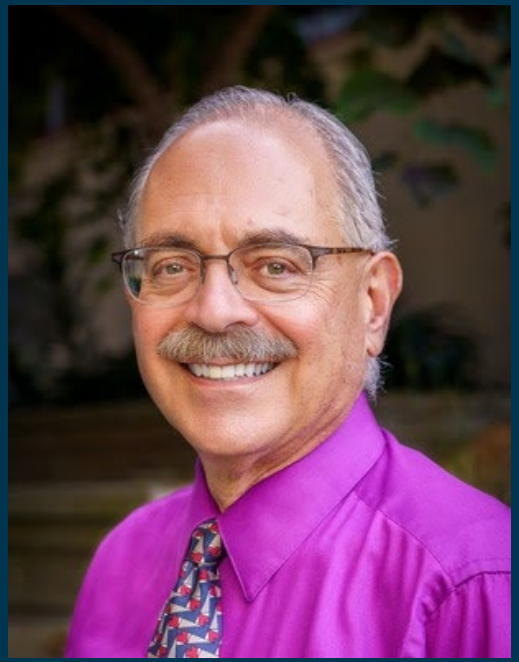
Supervisor: Dr. Nima Rahmatian

Dean’s Report



Albert P. Pisano

Dean, Jacobs School of Engineering

Arrived and Rising

UC San Diego
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Corporate Affiliates Program

Celebrating 25 years as the Jacobs School of Engineering

UC San Diego
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Corporate Affiliates Program

Thank you to all who have supported the Jacobs School over the past 25 years.

The Jacobs School has arrived, but it is not done rising!

Welcome 15 New Faculty

UC San Diego
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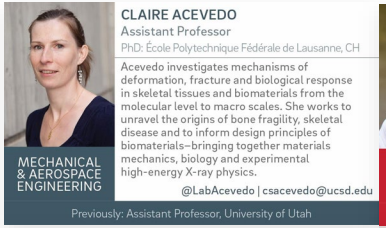
In next 3 years: 35+ new faculty hires, 300+ total faculty



CLAIRE ACEVEDO
Assistant Professor
PhD: École Polytechnique Fédérale de Lausanne, CH

MECHANICAL & AEROSPACE ENGINEERING

Acevedo investigates mechanisms of deformation, fracture and biological response in skeletal tissues and biomaterials from the molecular level to macro scales. She works to unravel the origins of bone fragility, skeletal disease and to inform design principles of biomaterials–bringing together materials mechanics, biology and experimental high-energy X-ray physics.

@LabAcevedo | csacevedo@ucsd.edu

Previously: Assistant Professor, University of Utah

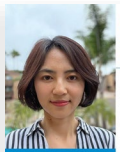
YUFEI DING
Associate Professor
PhD: North Carolina State University

COMPUTER SCIENCE & ENGINEERING

Ding specializes in programming systems, influencing realms from machine learning to quantum computing. As a leader in intelligent programming, her work delves deeply into domain-specific language innovations, GPU-optimized library development, and cutting-edge compiler and architecture designs.

yufeiding@ucsd.edu

Previously: Associate Professor, UC Santa Barbara



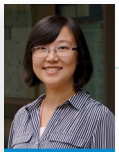
WANLU LI
Assistant Professor
PhD: Tsinghua University, China

NANOENGINEERING

Li drives eco-friendly innovation by designing catalysts and materials for sustainable energy applications using quantum mechanics, molecular dynamics and machine learning. As a foundation for this work, Li's research focuses on investigating the electronic structure, chemical bonding and environmental effects of nanoclusters and condensed phases.

wal019@ucsd.edu

Previously: Postdoctoral Researcher, UC Berkeley



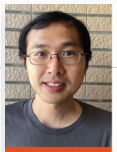
YANRAN LI
Associate Professor
PhD: UCLA

NANOENGINEERING

Li, a synthetic biologist, blends chemistry and biology to study plants using engineering techniques. Li's group creates microbial cell factories to gain insights into plant metabolism and immunity. The goal is to cultivate sturdier plants that are better equipped to withstand a range of challenges, from pests to changing environmental conditions.

yal152@ucsd.edu

Previously: Associate Professor, UC Riverside



JUN-KUN WANG
Assistant Professor
PhD: Georgia Institute of Technology

ELECTRICAL & COMPUTER ENGINEERING

Wang specializes in optimization and machine learning. His research aims to make algorithms faster; build robust theoretical foundations; and overcome issues such as model mis-specification or distribution shifts that arise during real-world deployment of machine learning methods. He holds a joint appointment with the Halıcıoğlu Data Science Institute.

jkw005@ucsd.edu

Previously: Postdoctoral Researcher, Yale University

KIANA ARAN
Associate Professor
PhD: Rutgers University

BIOENGINEERING

Aran develops bioelectronics for multi-omics studies, targeted drug delivery, and studying the mechanisms of aging. She pioneers approaches to fuse CRISPR and electronics to improve the quality of genotyping and gene editing. She is a founder of two San Diego biotechnology companies and holds a joint appointment with UC San Diego School of Medicine.

Kiana_Aran@kgi.edu

Previously: Associate Professor, Keck Graduate Institute

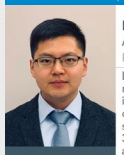
QIPENG LIU
Assistant Professor
PhD: Princeton University

COMPUTER SCIENCE & ENGINEERING

Liu focuses on quantum computing, quantum information and cryptography in a quantum world. His research includes analyzing and understanding how safe existing cryptographic systems will be once quantum computing becomes widely available. He also works to build cryptography powered by quantum computing and information.

qipengliu@ucsd.edu

Previously: Quantum Postdoc Fellow at Simons Inst. for the Theory of Computing



HAIWEN LUAN
Assistant Professor
PhD: Northwestern University

MECHANICAL & AEROSPACE ENGINEERING

Luan merges intelligent electronics and microfluidics into living systems to create bio-integrated, multifunctional microsystems that can be used to address medical challenges. These systems mimic living tissues, possess complex 3D geometries, respond to mechanical input, and improve our ability to sense and regulate processes in biological systems.

@HaiwenLuan | haiwenluan@u.northwestern.edu

Previously: Postdoctoral Scholar, Northwestern University

ALESSANDRO MARINONI
Assistant Professor
PhD: École Polytechnique Fédérale de Lausanne, CH

MECHANICAL & AEROSPACE ENGINEERING

Marinoni primarily studies magnetically controlled nuclear fusion. His research focuses on understanding plasma turbulence and ways to control it. This involves developing innovative diagnostic systems for nuclear fusion devices, designing experiments within them, and using advanced modeling tools for data analysis.

amarinoni@ucsd.edu

Previously: Research Scientist, Massachusetts Institute of Technology

RAJEEV SAHAY
Assistant Teaching Professor
PhD: Purdue University

ELECTRICAL & COMPUTER ENGINEERING

Sahay's research lies at the intersection of machine learning and networking. This work focuses on two main areas: cellular networks, with the goal of improving communication efficiency in congested networks, and social learning networks, which are deployed in the classroom to foster student interaction and aid effective learning.

r2sahay@ucsd.edu

Previously: Senior Machine Learning Software Engineer, Saab, Inc.

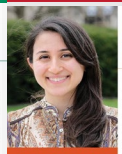
FANNY CHAPELIN
Assistant Professor
PhD: University of California San Diego

BIOENGINEERING

Chapelin develops non-invasive MRI methods to track immune cell migration to foci of inflammation in different conditions. Study areas include cell therapy distribution, fate and efficacy in preclinical studies; inflammation processes in tumor progression; stem cell transplant and graft vs host disease; and cell interactions in vivo. She has a joint appointment with the UC San Diego Department of Radiology.

fachapelin@ucsd.edu

Previously: Assistant Professor, University of Kentucky



PARINAZ NAGHIZADEH
Assistant Professor
PhD: University of Michigan

ELECTRICAL & COMPUTER ENGINEERING

Naghizadeh develops mathematical models and analytical tools to predict and influence human and/or algorithmic behavior in complex networks. Applications include enhancing the security of cyber-physical systems and designing ethical AI algorithms for systems involving human interaction, such as in hiring, banking and school admissions.

pnaghizadeh@ucsd.edu

Previously: Assistant Professor, The Ohio State University

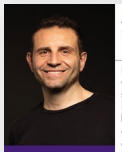
ABDOULAYE NDAO
Assistant Professor
PhD: Université de Franche-Comté, France

ELECTRICAL & COMPUTER ENGINEERING

Ndao's research merges theory, simulations, nanofabrication and device integration to develop smaller, lighter, more efficient optical devices without compromising on functionality. Applications include sensors that can detect biological activity at single-cell resolution and components for building photonic quantum circuits.

a1ndao@ucsd.edu

Previously: Assistant Professor, Boston University



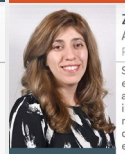
ALESSANDRO PALERMO
Professor
PhD: Politecnico di Milano, Italy

STRUCTURAL ENGINEERING

Palermo's world-leading expertise covers design-oriented resilient and sustainable engineering solutions for earthquake damage protection. He intends to continue researching on novel low-carbon concrete technologies and advanced engineered timber. Palermo's research will cover modern construction methods for timber buildings and concrete bridges including the use of digital construction techniques.

alpalermo@ucsd.edu

Previously: Professor, University of Canterbury, Christchurch, New Zealand



ZAHRA SADEGHIZADEH
Assistant Teaching Professor
PhD: Missouri University of Science and Technology

MECHANICAL & AEROSPACE ENGINEERING

Sadeghizadeh aims to create and promote evidence-based teaching approaches that can advance engineering curriculum, particularly in aerospace engineering. Her pedagogical methods foster active and hands-on learning; deep understanding of complex concepts; and essential problem-solving skills, enhancing students' success in their academic and professional paths.

zsadeghizadeh@ucsd.edu

Previously: Assistant Professor of Teaching, UC Davis

New Faculty Leadership Appointments

UC San Diego
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Stefan Llewellyn-Smith
Chair
Mechanical &
Aerospace Engineering

Liangfang Zhang
Chair
NanoEngineering

Mike Todd
Chair
Structural Engineering

The Jacobs School is a central hub in our $1.76B in UC San Diego research ecosystem

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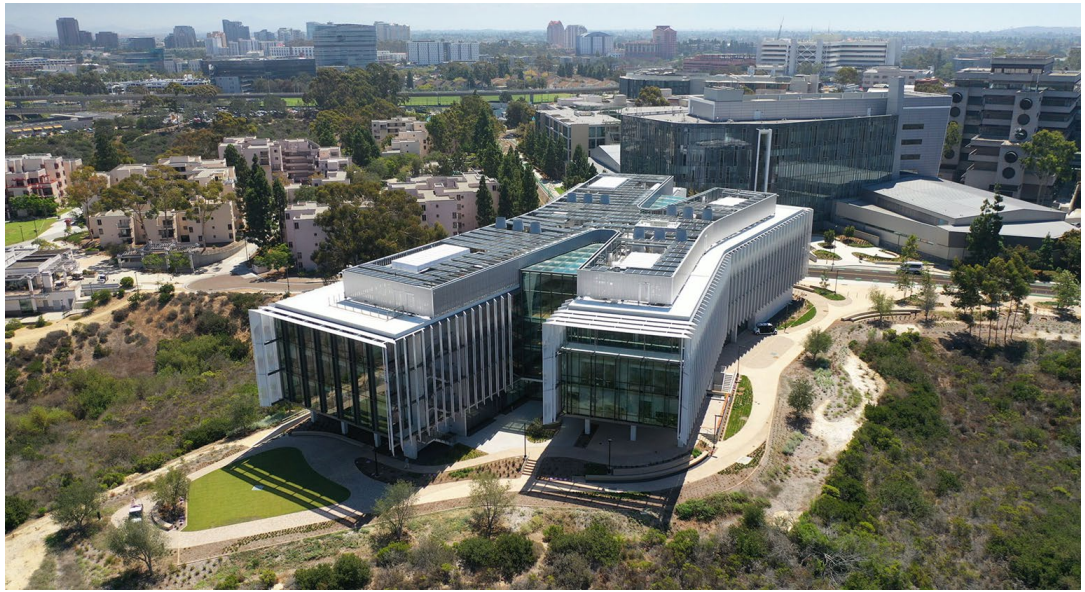

$245M in Research Expenditures

#1 in California

My goal: help the campus continue to grow and strengthen our collective research enterprise

Last CAP Board Meeting:
My 8 point plan for the next 5 years

UC San Diego
JACOBS SCHOOL OF ENGINEERING
Corporate Affiliates Program

- Continue momentum for engineering diversity
- Build more multi-faceted campus partnerships
- Enhance undergrad education
- Drive graduate education quality
- Accelerate faculty career growth and impact
- Implement "Leviathan Project"
- Accelerate fundraising
- Build cachet

Major gift to drive research and academic excellence

- Early faculty career acceleration (2-2-2 Program)
- Graduate student experience and research excellence
- Enhanced undergraduate education experience
- 18 new endowed chairs named for founding faculty

Leviathans

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The Jacobs School Leviathan Initiative is a major project, spanning the interests of several faculty across all six departments which could command a grant in the size of $50M-$100M over a 5-year period.

Engineering an End to Cancer
Adam Engler, Ph.D.
Shu Chien-Gene Lay Department of Bioengineering

Grounded, Aligned, & Rational Intelligence
Sorin Lerner, Ph.D., Mohan Paturi, Ph.D.
Computer Science and Engineering

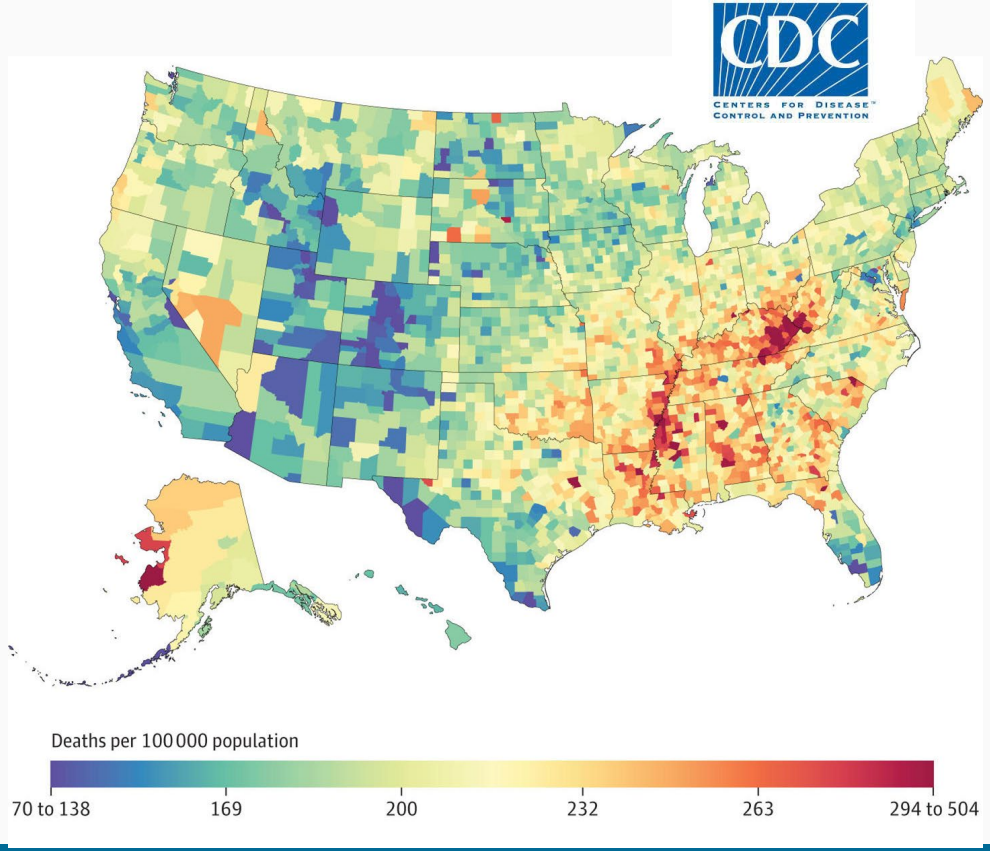
II7: Interactive Intelligence for 7G & Beyond
Farinaz Koushanfar, Ph.D.
Electrical & Computer Engineering

Engineering Human Resilience
James Friend, Ph.D.
Mechanical & Aerospace Engineering

Biomanufacturing of Intelligent Living Materials
Shaochen Chen, Ph.D.
Nanoengineering

Digital Twins for Comprehensive Infrastructure Asset Management & Optimization
John McCartney, Ph.D.
Structural Engineering

Engineering an End to Cancer



Cancer overtook heart disease as the leading cause of death in 2014 in 22 states, *including California (14.1M worldwide)*

Goal: Develop a Center that identifies tomorrow's unmet clinical needs with next generation engineering tools

Engineering Human Resilience

The hallmark of disease is the *deterioration of resilience.*
Resilience is an adaptive response to stressors. We will study the spatiotemporal response to stressors across scales – from cells to human body – to learn biological principles of resilience that apply to human diseases.

Develop technologies to measure phenotype-relevant outcomes to stressors at high spatiotemporal resolution from cells to human body.

Build scalable cellular systems that accurately model *in vivo* human responses to stressors.

Construct and disseminate predictive cell-type and stress-specific resilience maps.

Engineer large-scale methods to identify all regulons that control resilience.
(regulon: cluster of genes for a specific function)

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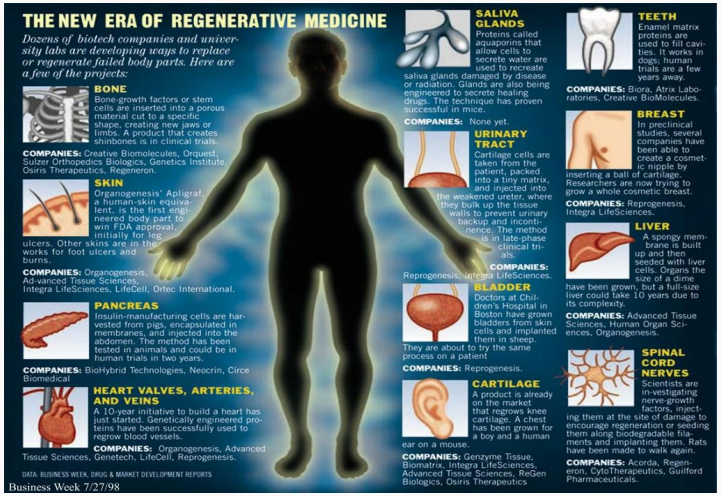
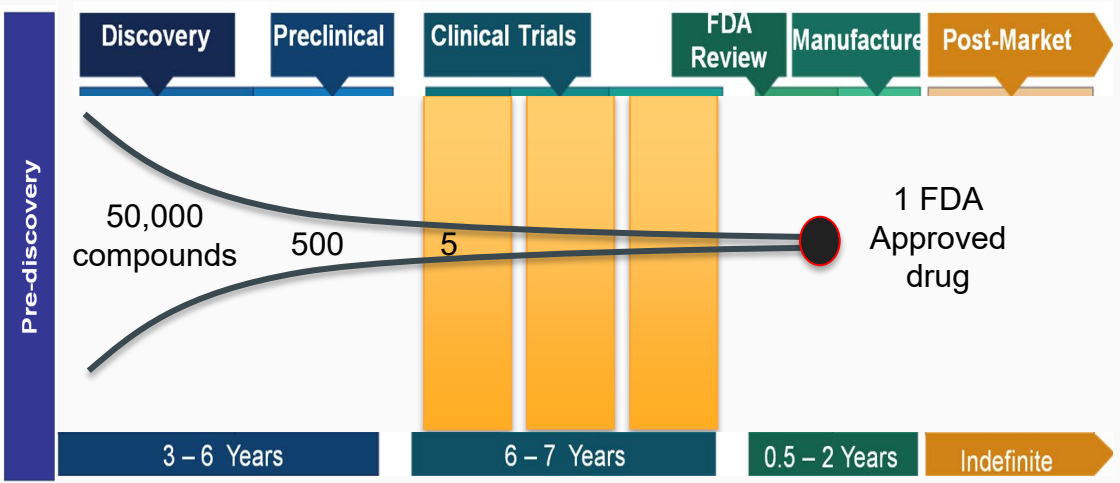
The tool is a set of instruments designed to identify, measure & manipulate regulons that affect vulnerability and resilience in humans.

Biomanufacturing of Intelligent Living Materials





Longer life span = more diseases
Aging = disease

Drug discovery is too long and too expensive.
It takes 12 years and $2 billion to develop a drug.

Digital Twins for Comprehensive Infrastructure Asset Management & Optimization

Modeling/ Simulation

- advanced FEA
- failure mode modeling
- corrrelation/updating

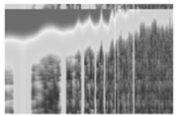
Asset

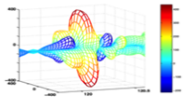
- defined failure or functionality loss
- operational evaluation
- technology integration
- deployment challenges

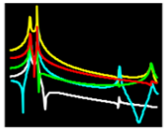
Sensing/ Instrumentation

- novel transducers
- architecture optimization
- power management
- data archiving/telemetry
- modality multiplexing

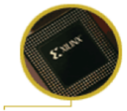
Data Interrogation/ Management



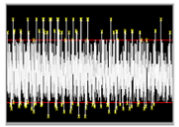


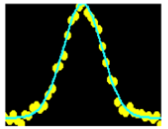


- feature extraction
- algorithm development
- data mining
- information technology
- data compression and management
- hardware implementation



Life Cycle Management



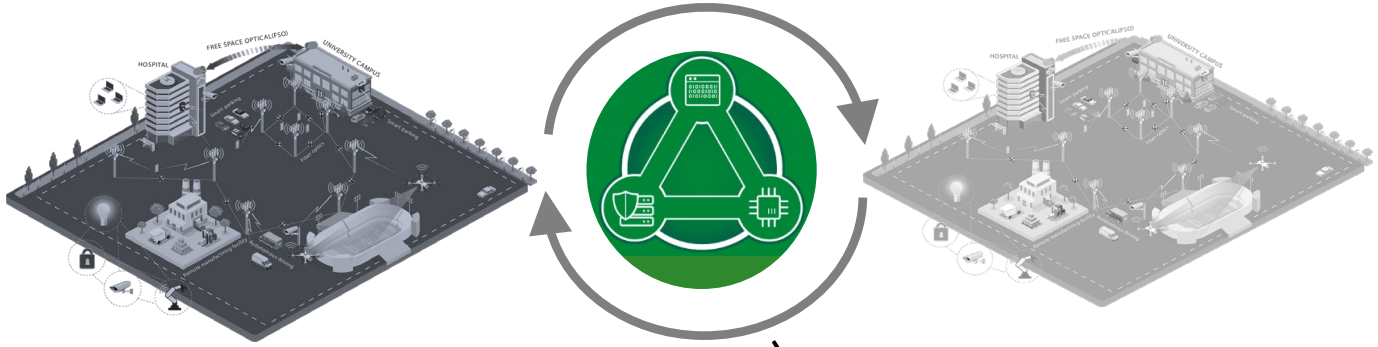


Decision Sciences

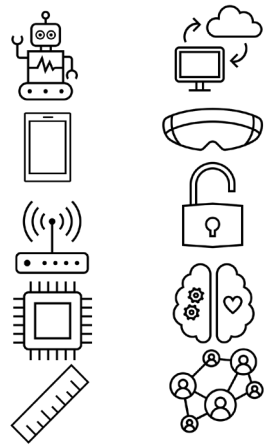
- statistical modeling
- uncertainty propagation and quantification
- economic constraints
- other considerations

- integration of all components to make an INFORMED decision about the current asset state and make a PREDICTION about the future asset state
- "digital twin" concept: a surrogate model that evolves and predicts future performance of the asset

II7: Interactive Intelligence for 7G & Beyond



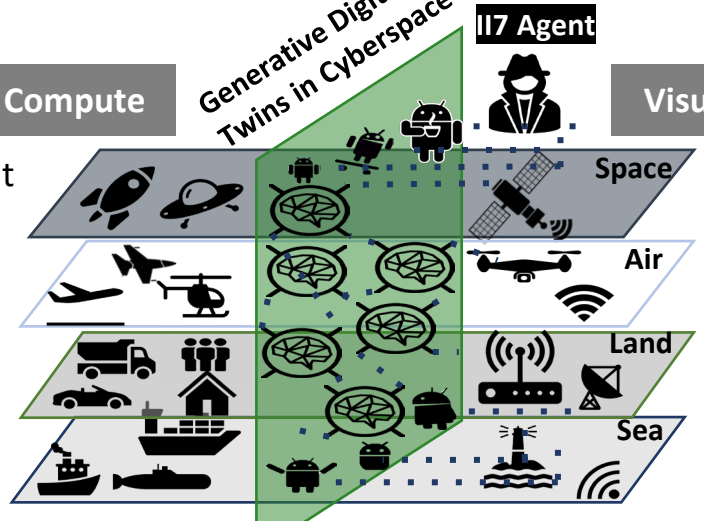
ECE Strengths



Collect | **Predict** | **Compute** | **Visualize** | **Response** | **Aware**

Generative Digital Twins in Cyberspace

II7 Agent



Just-in-time Management

Efficient Response

Security and Privacy

Sensing and Actuation

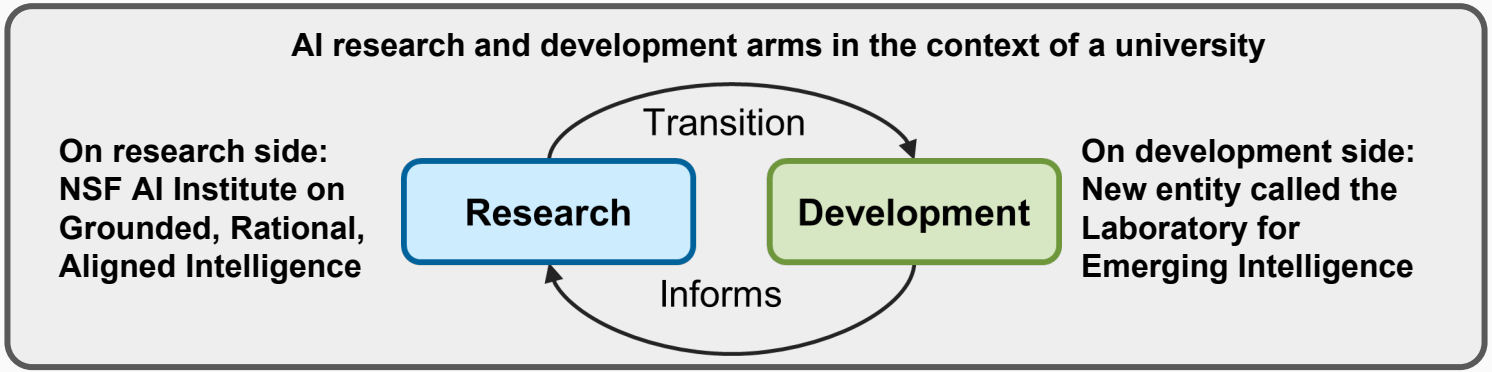
Interactive Co-optimization

Safety and Robustness

Network Planning

Inter-operation

Grounded, Aligned, Rational Intelligence



Key Principles

Application-first Approach

- Prioritize and support critical applications

AI Engineer-led Execution

- Dedicated AI engineers drive project execution and delivery

Thriving Platform & Ecosystem

- Enable campus users to innovate with AI applications.

Organizational Attitudes

- Mission-driven, start-up mentality focused on high-risk / high-reward R&D.

Resource Allocation

- Allocate resources based on contributions to the mission.

Example problems

- **Programming environments for designing LLM-based workflows**
- **Web-Scale Information Extraction**
- **AI Prophet:** Multi-Modal Spatiotemporal Forecasting
- **Cancer Prediction from Genetic Signatures**
- **Automating Meta-Analyses**
- **Multi-Modal Clinical Foundation Models**
- **Learning in Low-Resource Settings:** Tools for learning given limited quantities of data, for example sign languages.

Questions or Comments about Dean's report?

Leviathan discussion after faculty presentation

Special Report: California CHIPS & Science Act

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CHIPS Update

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California CHIPS Coalition

- UC-Industry-Government effort to engage the CHIPS + Science Act of 2022
- Coalition goal is to secure the National Semiconductor Technology Center headquarters
- Approximately 80 entities in the coalition

California DREAMS

- Defense Ready Electronics and Microdevices (DREAMS)
- DoD Microelectronics Commons Superhub recently funded
- USC-led / a team of 12 Jacobs School faculty led by Professor Yu-Hwa Lo

Faculty Presentation

Yu-Hwa Lo

Professor, Electrical & Computer Engineering

Microelectronics Commons

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UCSD DoD ME Commons Project (US CHIPS Act)

Yuhwa Lo
ylo@ucsd.edu
Electrical and Computer Engineering Department

CA DREAMS Superhub

CA DREAMS is one of 8 national microelectronic technology hubs($100M each over 5 years) supported by DoD under the US CHIPS Act.

- The Northeast Micreoelectronics Coalition (NEMC) Hub in Vermont
- The Commercial Leap Ahead for Wide Bandgap Semiconductors (CLAWS) Hub in North Carolina
- The Midwest Microelectronics Consortium (MMEC) Hub in Ohio
- The Silicon Crossroads Microelectronics Commons (SCMC) Hub in Indiana
- The Southwest Advanced Prototyping (SWAP) Hub in Arizona
- The California Defense Ready Electronics and Microdevices Superhub (California DREAMS) in southern California
- The California-Pacific-Northwest AI Hardware Hub (Northwest-AI Hub) in northern California

CA DREAMS Superhub

Goals and Missions:

CA DREAMS Superhub (Hub) will accelerate the demonstration and adoption of **advanced RF and supporting technologies** with a domestic prototyping capability for the **5G/6G communications**.

The Hub will implement **Lab-to-Fab transition** to support industrial fabs for DoD scale manufacturing.

CA DREAMS Superhub Members

Company Name	City	State
University of Southern California (Information Sciences Institute)	Marina del Rey	CA
University of Southern California (Viterbi School of Engineering)	Los Angeles	CA
University of Southern California (Information Sciences Institute)	Arlington	VA
University of California, Santa Barbara	Santa Barbara	CA
University of California, San Diego	La Jolla	CA
University of California, Los Angeles	Los Angeles	CA
University of California, Riverside	Riverside	CA
University of California, Irvine	Irvine	CA
California Institute of Technology	Pasadena	CA
Northrop Grumman Corporation	Redondo Beach	CA
The Boeing Company	Huntington Beach	CA
Lockheed Martin Aeronautics Company	Ft. Worth	TX
Raytheon	El Segundo	CA
Teledyne Technologies	Thousand Oaks	CA
HRL Laboratories	Malibu	CA
PDF Solutions	Santa Clara	CA
Pasadena City College	Pasadena	CA
North Carolina Agricultural & Technical University	Greensboro	NC
Morgan State University	Baltimore	MD

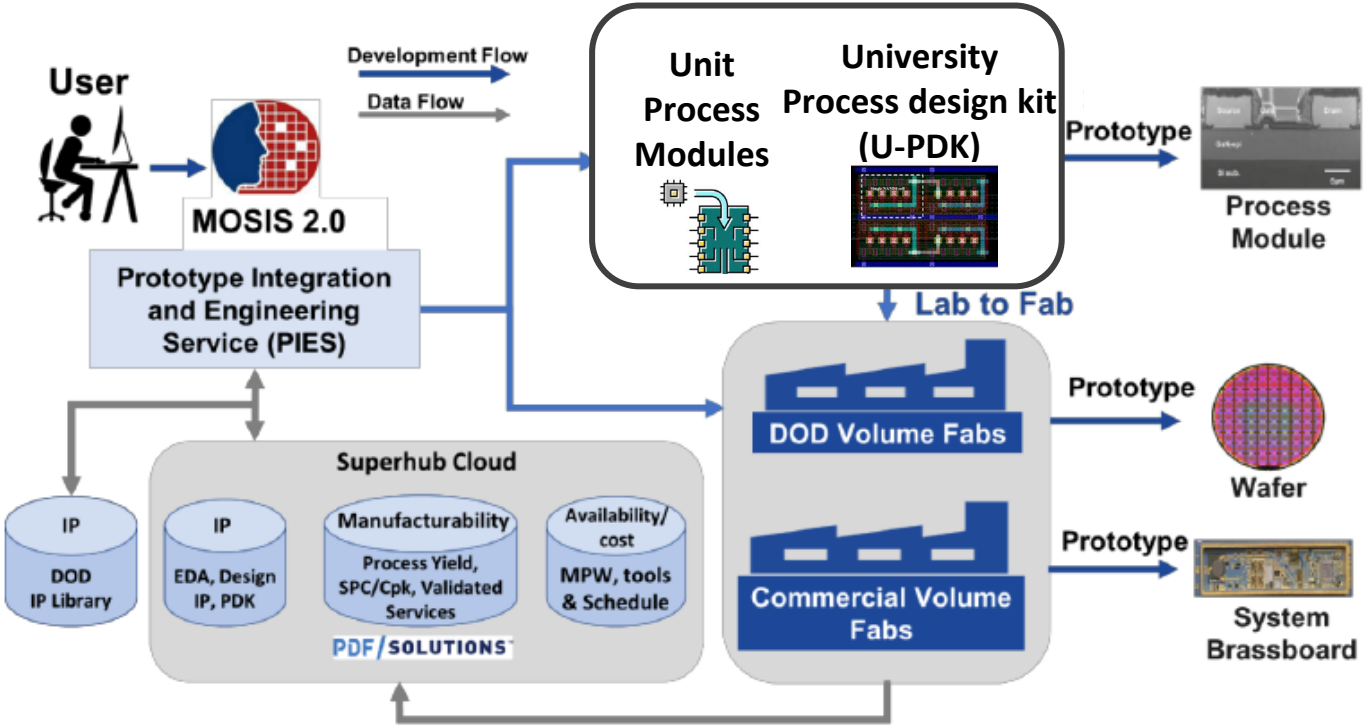
UC San Diego Industrial Support to Proposal

Thank you for your support:

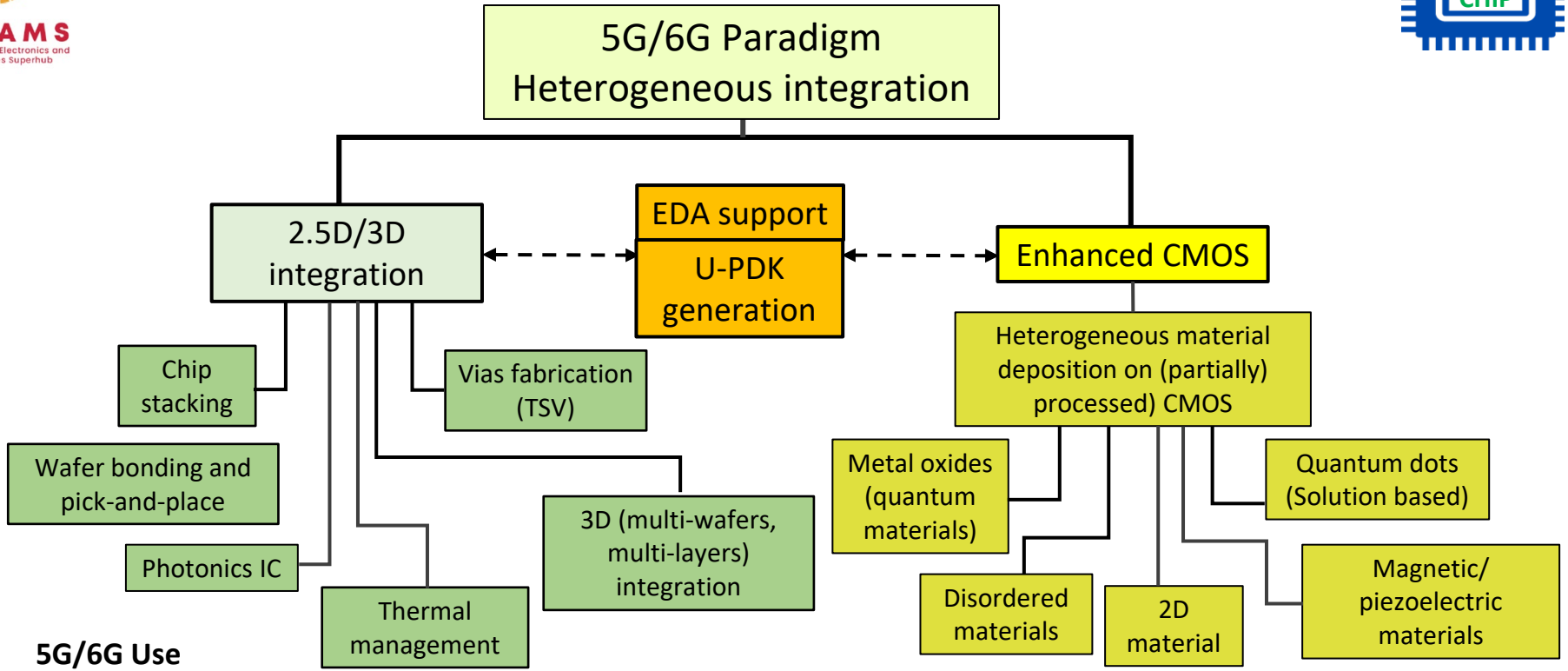
• ANSYS • Applied Materials • ASML • Datastax • Dell • Ericsson • Intel • Keysight • L3Harris	• Leidos • Lockheed Martin Corporation • Mathworks • Microsoft • Murata • National Instruments (NI) Corp. • pSemi • Qualcomm • Xcom

CA DREAMS Superhub Operation Model

MOSIS 2.0 Lab-to-Fab Rapid Prototyping Paths

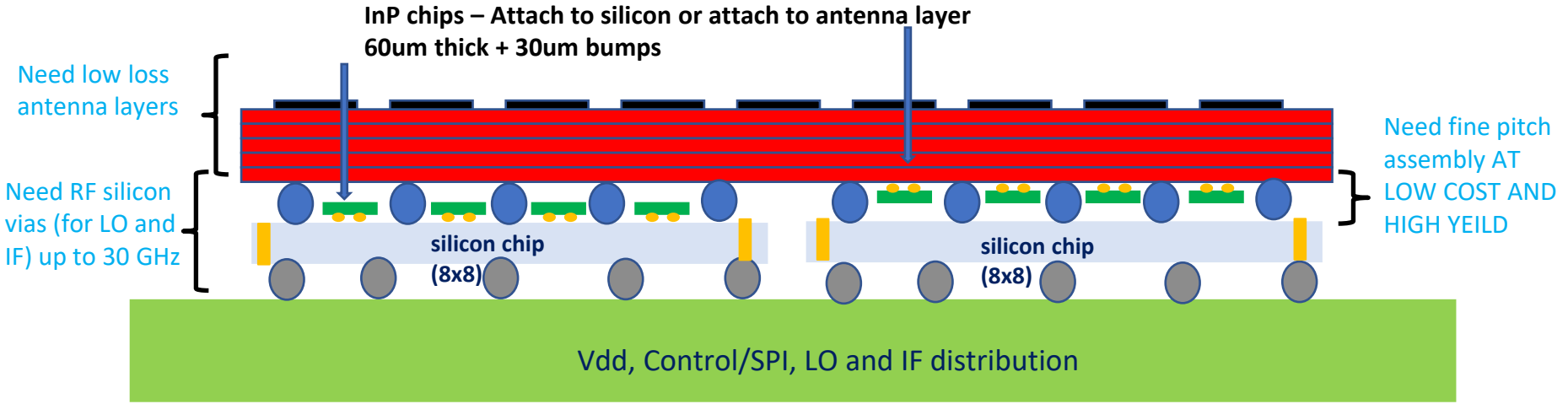


Technology Focus - UCSD



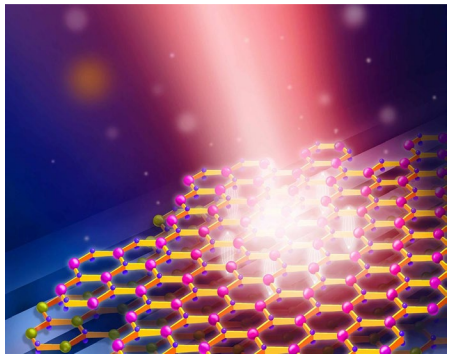
Project Example: Phased Arrays for 5G/6G

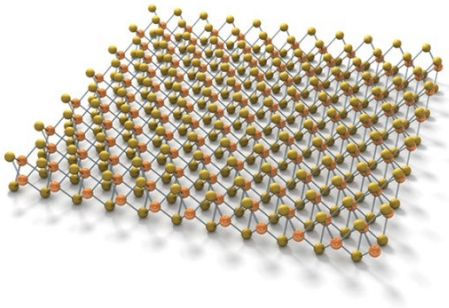
- Multi-level integration to get the InP and antenna and silicon all in a unit cell
- At ~200 GHz, an 8x8 silicon phased-array chip is ~6x6 mm^2
- At ~300 GHz, an 8x8 silicon phased-array chip is ~4x4 mm^2

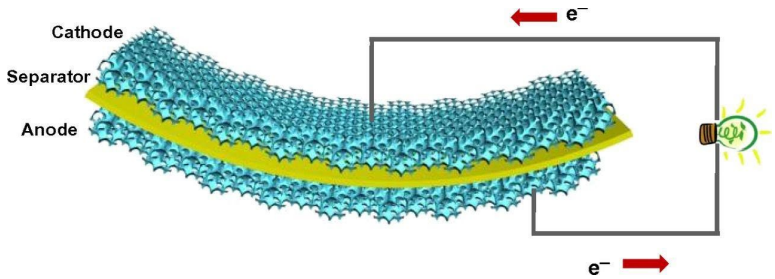


Project Example: Enhanced CMOS with Integration of 2D Material

Surface emitting lasers and photodetectors with 2D materials on CMOS for sensing, imaging, and communications







Questions/Comments?

CAP Executive Board Input:
Leviathan Projects

- The Jacobs School Leviathan Initiative is a major project, spanning the interests of several faculty across all six departments which could command a grant in the size of $50M-$100M over a 5-year period
- Complete scoring rubric
- Additional comments/feedback

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CAP Business

Wil Dyer

Director, Corporate Affiliates Program

CAP Updates

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Jacobs School Corporate Affiliates Program

Thank you for joining us on the CAP Executive Cruise

September 25, 2023

Special thanks to GB Singh and Solar Turbines for hosting us aboard the Spirit of Solar!

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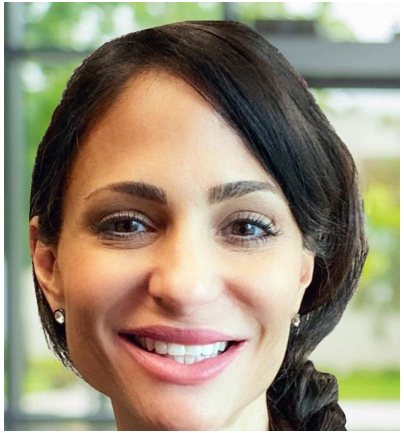
Welcome newest CAP Team member



Cindy will:

- Lead strategic alignment of portfolio of agile research centers and institutes
- Drive meaningful collaboration with industry
- Strengthen industry partnerships to achieve common goals and maximize value

Cindy Hanson
Director of Corporate Research Partnerships
cahanson@ucsd.edu

CAP Talent Programs: Talent Strategy Planning

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Corporate Affiliates Program

It's not too late to plan your 2023-2024 talent strategy with the CAP Team!

- Tailored events for your organization
- Site tours at your company
- Internships
- Team Internship Program (TIP)
- Cooperative Education (Co-op)

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

CAP Talent Programs: Recruiting has begun!

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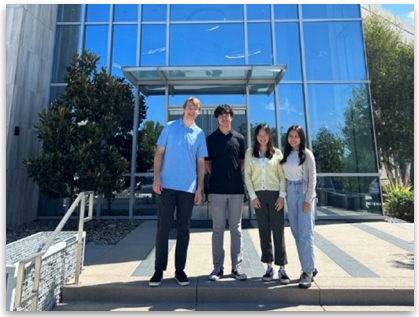
Promote your internship/TIP/Co-op/full-time openings

- Stand out with a Team Internship Project: students are asking for them!
- Cooperative Education (Co-op): start recruiting now for summer 2024
- Send us the link/job description, and we'll take care of the rest



Contact Alice Grgas at agrgas@ucsd.edu

Senior (Capstone) Design Projects

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Why Senior Design Projects?

- Team of 3-6 students
- Student skills & fresh ideas in action on your technology
- Mentor students
- IP assigned to sponsor

Department	Format	Deadline to Submit Proposal
Bioengineering	1 year project	May 22, 2024
Chemical Engineering	Winter & Spring Quarters (consecutive)	Dec 8, 2023
Electrical & Computer Engineering	Winter Quarter & Spring Quarter	Dec 8, 2023
Mechanical & Aerospace Engineering	November - March or February - June	Oct 7, 2023 (Fall/Winter) Jan 5, 2024 (Winter/Spring)
NanoEngineering	Winter & Spring Quarters (consecutive)	Jan 5, 2024

Contact Alice Grgas at agrgas@ucsd.edu

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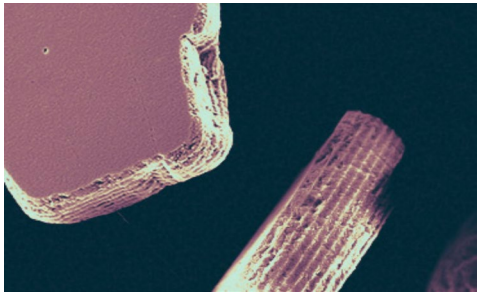
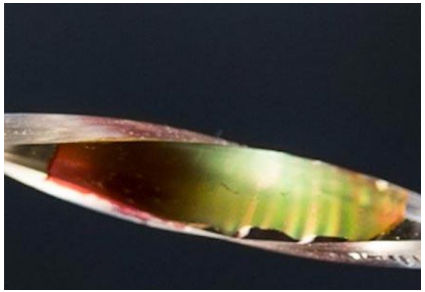
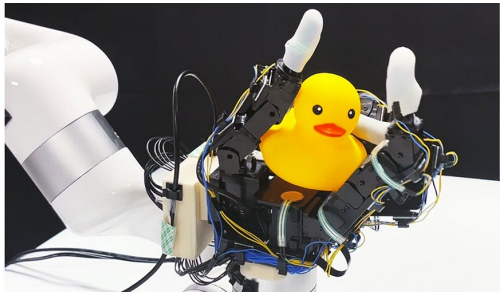
CAP Partner Invitations to Research Reviews



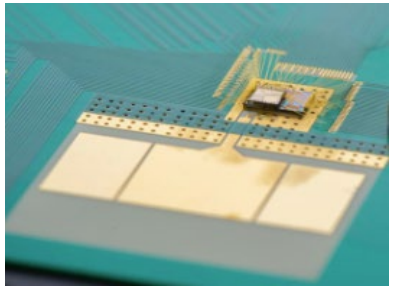
Institute for Materials Discovery & Design
October 10-11, 2023



Center for Wearable Sensors
November 8, 2023



Contextual Robotics Institute
November 14, 2023



Center for Wireless Communications
November 29-30, 2023

Contact: Wil Dyer, wdyer@ucsd.edu

Current Slate of Important Dates

UC San Diego
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September 25, 2023	CAP Executive Cruise aboard *Spirit of Solar*
September 26, 2023	New Faculty Welcome & Early Career Development Award
October 10-11, 2023	Institute for Materials Discovery & Design Research Symposium
October 24, 2023	Machine-Intelligence, Computing & Security Board Meeting
November 6, 2023	Student-led Disciplines in Engineering Career Fair (DECaF)
November 8, 2023	Center for Wearable Sensors Research Summit
November 13-14, 2023	Contextual Robotics Institute “Speed Dating” Recruitment & Research Forum
November 15, 2023	Institute for the Global Entrepreneur Showcase
November 29-30, 2023	Center for Wireless Communications 6G and Beyond Summit
December 8-9, 2023	San Diego Hack-a-thon (SD Hacks) hosted at UC San Diego
December 14-15, 2023	Power Management Integration Center Board Meeting
February 8, 2024	**Winter CAP Executive Board Meeting**

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Thank you!
Next CAP Executive Board Meeting: February 8, 2024