Dean of the Marlan and Rosemary Bourns College of Engineering Vision Seminar

Athina Markopoulou
Professor, EECS
Samueli School of Engineering
UC Irvine
Friday, November 13, 2026

UC RIVERSIDE

Outline

PART 1

Background & Experience

- Overview of my background
- Relevant experience
- Interest in the Dean position at BCOE

PART 2

Vision for BCOE

- Opportunities and challenges for Higher Ed and BCOE
- Vision for BCOE and how to achieve it



UC RIVERSIDE UNIVERSITY OF CALIFORNIA
Marlan and Rosemary Bourns College of Engineering

My Journey



Kalamata
Greece



NTUA
Athens, Greece

Stanford



1991

1996

Aloha Networks NOKIA cisco RouteScience

2002





UC Irvine

IT UNIVERSITY OF COPENHAGEN 2012

Startup, 2012–2016

2006

Sprint ATL ARISTA

2019

2026

My Journey: Leadership



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Sprint ATL ARISTA

Startup, 2012–2016

2019

2020+
COVID

2022+
UAW

2025+
Federal Funding

CS Dept Chair
2019–2022

Associate Dean for Graduate Affairs
2022–2025

CA LIT2
2022–2030

ProperData Director
2020–2025

AI
2022–2030

2030

2030

2026

Research Leadership

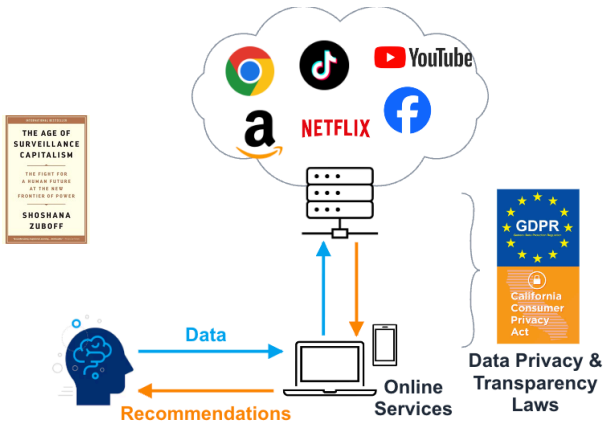
properdata.eng.uci.edu



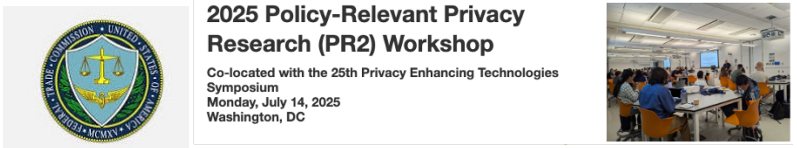
2020–2025 · Director and Lead PI

ProperData: $10M NSF SaTC Frontiers Center

- **Privacy** and **Data Transparency**, using a **joint technical & policy approach**: measurement, privacy-enhancing technologies, auditing compliance with privacy laws, algorithmic auditing
- 10 faculty, ~50 students and researchers, across 6 institutions (UC Irvine, UC Davis, USC, Northeastern, BU, Princeton)
- Outreach to policy, community college and high school students







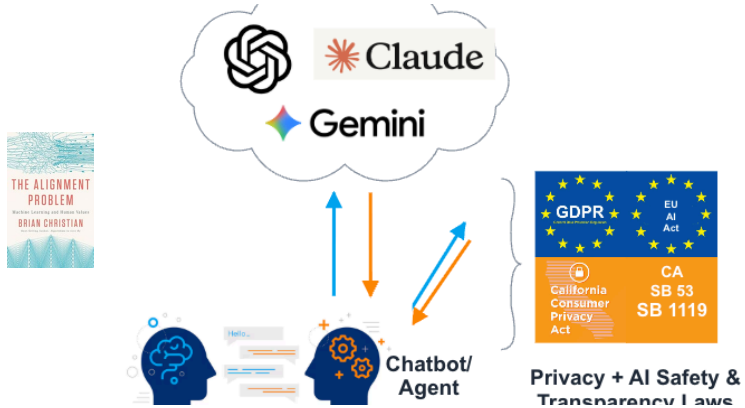
Research Leadership

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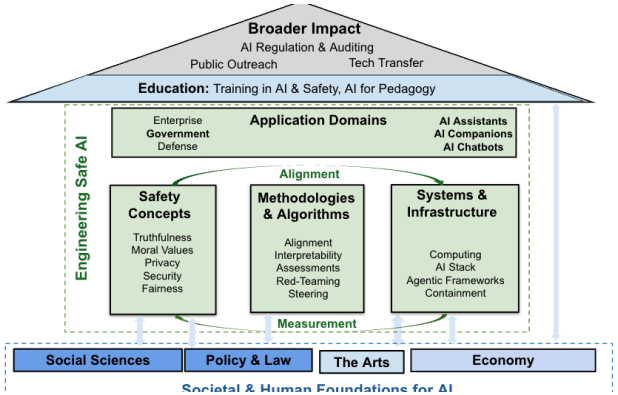
2025–2030 · Director

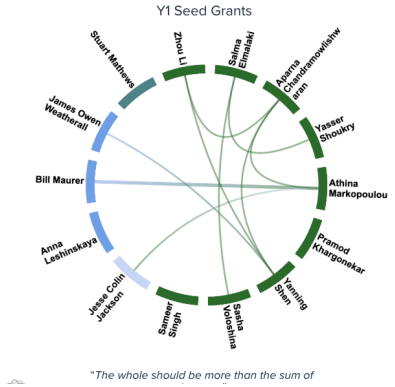
ProperAI: E+Society Institute on AI

- **AI Safety** using a **Socio-Technical Approach**: privacy, security, explainability, and safety.
- An SSoE “e+” institute, $2.5M endowment from the Samueli Foundation
- ~15 faculty across Engineering, ICS, Social Sciences, Arts, Beall Applied Innovation
- Outreach through: the Arts, Cities, High schools









City of Riverside Launches “Rivy” AI Chat and Voice Assistant to Improve City Services, Community Engagement



Art installations





Research Leadership 3 of 3

properdata.eng.uci.edu

properai.eng.uci.edu

2020–2025 · Director and Lead PI

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How to make the "whole more than the sum of the parts"?

Academic Leadership 1 of 5

2019–2022

EECS Department Chair

2022–2025

Associate Dean, Graduate & Professional Studies

2025–present

Director, CALIT2 (UCI Division)

Also: campus-level **working groups on budgets**, **graduate funding**, and **search committees**; review of **centers**; UC-wide Cal ISI network

Structure	**Strategic Goals → Resources & Incentives → Data-driven, Transparent Processes**
Culture	***How to make the "whole more than the sum of the parts"?***
People	**Faculty** **Staff** **Students** **Community**

Academic Leadership

2019–2022

EECS Department Chair

Facts

- Largest department in the school: ~40 faculty, 300 grad and 1,000 undergrad students, 7 staff, ~$10M operational budget
- COVID

Visibility and recognition

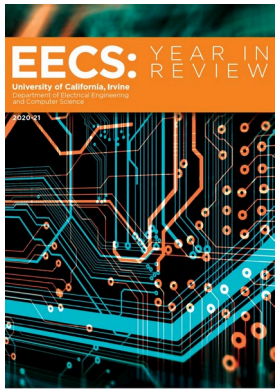
- Established communications, newsletter, online presence
- Revamped seminar series
- Joined ECEDHA
- **US News rankings improved by 16 (EE) and 12 (CpE) points**

Processes

- Ongoing strategic planning
- Hiring and retentions
- Established faculty nominations
- ABET; new ML, BioEE course sequences

Graduate Students

- **Multi-year Ph.D. funding guarantees**
- **Established "GEECS": Grad EECS Student Association**











GEECS Stats



150 Members



10+ Events per Quarter



Connect w/ EECS Alumni

Academic Leadership

2022–2025

Associate Dean, Graduate & Professional Studies

- All graduate programs: 9 Ph.D., 9 M.S., 2 self-supporting; 1,000+ students, 6 staff
- ~$6M in fellowships, ~$500K in flex funds
- Increased Ph.D. applications and yield
- **Implemented new UAW contracts**; fewest grievances on campus
- **Restructured Professional Programs**
- Streamlined Fellowships

Grad Student Development

- "**Preparing Future Faculty**" Program
- NSF GRFP Training Program
- Established Outstanding Student Awards
- Sponsored SWE & WiCys Career Dev Events











Academic Leadership

2025–present

Director, CALIT2 (UCI Division)

- **CALIT2:** California Institute for Telecommunications and Information Technology: **calit2.uci.edu**
- 1 out of 10 UC-wide "Cal ISIs". Mission: innovation & workforce dev to benefit CA economy and citizens
- ~10 staff; ~$2M/y core funds + grants
- Workforce dev programs + industry nights
- AI focus: large AI proposals + server room
- UCI Campus: interdisciplinary across schools
- Connected with other UCs





Academic Leadership

2025–present

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Industry Nights
Make A Difference Opportunity (MADO) Program
Interdisciplinary Research Teams (IRT) Program
Semiconductors
Individual Study
SMART ITAC
Student Organizations



Interdisciplinary Research Teams (IRT) Program

The Interdisciplinary Research Teams (IRT) Program connects graduate and undergraduate students across disciplines to collaborate on faculty-mentored research at UCI. The 2026–27 cycle supports up to 20 teams. The program has grown from 10 completed teams in 2022–23 to 42 in 2025–26, and has supported 174 students representing six UCI schools, advised by 48 faculty members.

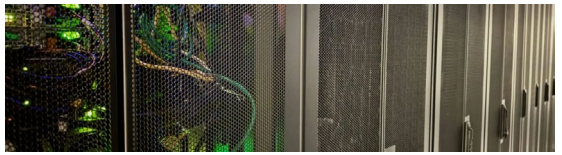
CALIT2 Make A Difference Opportunity (MADO) Program

A hands-on workforce development program that connects UCI students with local businesses and organizations through short-term projects, mentorship, and real-world experience. The **2026–27 cycle** supports up to 20 student projects. *MADO is generously supported by a WorkForce Development grant from the University of California, Office of the President.*

OC Innovation Ecosystem



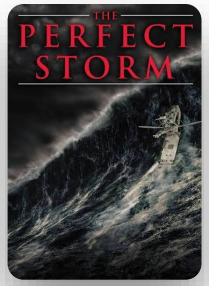
AI Infrastructure



Industry nights



Challenges for Higher Education



*Some are **Policy-Related.***

International student pipeline has been disrupted
- Restriction in student visas before/after
- Uncertainty

Federal funding landscape has changed
- Some cancellations; but same funding levels
- Shift towards industry/defense consortia and translation
- Changes in scale and speed

Budget constraints
- Decreased enrollment+grants
- Increased costs: UAW
- State support does not keep pace

*Some are **Fundamental.***

Value of Higher Education?
- Return on investment? For individuals and the public?

AI, data, and computing are transforming Higher Ed
- How to incorporate AI in education?
- Rethink educational offerings in the AI era
- Compete? with industry for talent and resources

Societal implications of engineering research

Challenges & Opportunities for BCOE 2 of 2

*Some are **Policy-Related.***

International student pipeline has been dis
- Restriction in student visas before/after
- Uncertainty

Domestic student pipelines

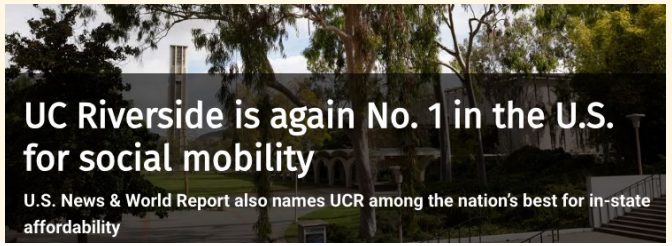
Federal fur
- Some can
- Shift towa
- Changes i



UCR CNAS

Budget constraints
- Decreased enrollment+grants
- Increased costs: UAW
- State support does not keep pace

*Some are **Fundamental.** We are at an inflection point.*



RAISE@UCR

and computing are transforming Higher Ed

incorporate AI in education?
educational offerings in the AI era
te? with industry for talent and resources



Center for Environmental Research and Technology

ADVANCING MANUFACTURING. TRANSFORMING THE REGION.

UC RIVERSIDE SoCal OASIS® Park



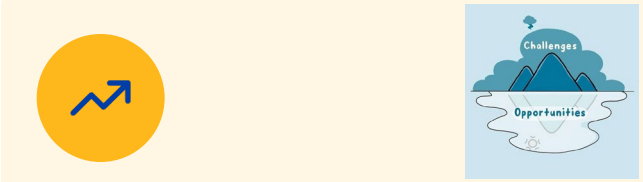
Societal implications of engineering research

Why am I standing here?

Our mission matters

U.S. Academia
Public University
University of California

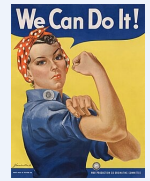
Defend and advance it



Challenges/opportunities

Exciting times …
… for **higher education** and **engineering**.
Opportunity to get ahead.

Must adapt and evolve



There is a path forward

.. and I enjoy making *"the whole more than the sum of the parts"*

1 + 1 > 2

BCOE@UCR is well positioned



Research Enterprise 1 of 3

Good news: 1) same federal funding levels 2) Engineering is a priority.
Challenges: focus on translation, industry/defense, changes in scale and speed.





Research Enterprise 2 of 3

Lessons learned over the last year

AI, AI, AI



University Research Dev Needs Updates

Be in the arena

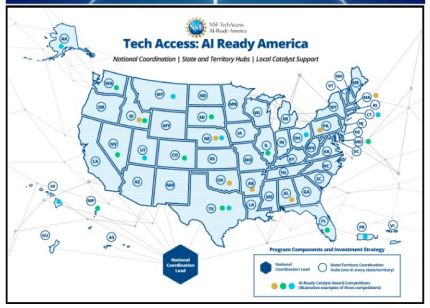


NSF X-Labs

The U.S. National Science Foundation X-Labs (NSF X-Labs) initiative is designed to launch and scale a new generation of organizations focused on independent research, development, and innovation.

Workforce, Hubs





Infrastructure, Hubs

NSF News

New NSF State and Regional AI Infrastructure Hubs will power AI-enabled scientific research across the country

August 4, 2026

New initiative will accelerate AI-enabled scientific discovery by expanding access to compute for researchers, students and educators through regional partnerships among state and local governments, academic institutions, industry and philanthropy, and will build a highly skilled technical workforce to leverage AI and computing for science

NVIDIA Joins NSF State and Regional AI Hubs Program to Expand AI Research and Education Across the US



Co-invest with NSF ($100M) for Regional/State AI Hubs

Industry, Translation

NSF's new plan to fund graduate students to work in industry covers familiar ground

gency gives university-industry consortium $47 million to reinvent existing internship program

UIDP I-PhD SCHOLARS Industry-Integrated PhD

TIP Technology, Innovation and Partnerships

Research Enterprise 3 of 3

Align with national priorities.

University Research Dev Needs Updates





Source: The White House, "Trump Administration Announces More Than $5 Billion for the **Genesis Mission**" (July 22, 2026): National Science and Technology Challenges, *https://www.whitehouse.gov/releases/2026/07/45502/*

*"Launched by President Trump's Executive Order in November 2025 and led by the White House, the Genesis Mission is a national effort to harness AI for science. **What began at the Department of Energy (DOE) is now a whole-of-government initiative: More than 15 Federal agencies** will contribute research awards, funding opportunities, specialized scientific datasets, and research facilities to the National Science and Technology Challenges. "*

Helping Americans Live Longer, Healthier Lives

- Chronic Disease (NSF, DOE)
- Pediatric Cancer (DOE)
- Accelerating **Drug Discovery** and Clinical Translation (DOE, **DOW**)
- Better Health Outcomes for Veterans (DOE)

Delivering Reliable Infrastructure and Energy Affordability

- American **Infrastructure** (DOE)
- Scaling **the Grid** to Power the American Economy (DOE)
- America's **Natural Resources**

Building American Industrial Strength

- **Microelectronics** in America (DOE)
- **Scaling Biology** for American Industrial Leadership (DOE, NSF, **DOW**, **USDA**)
- **Design** of Weapons **Components and Systems** (**DOW**, DOE)

Extending the Frontiers of American Discovery

- Mining **Space Data** for Discovery (DOE)
- Achieving **AI-Driven Autonomous Laboratories** (DOE, NSF)
- **Quantum Systems** for Discovery and Use (DOE, **DOW**)
- Living Systems (DOE, NSF, **DOW**, **USDA**)
- **Materials** with Predictable Functionality (DOE)

Protecting the Nation from Emerging Threats

- **Early Detection** and Attribution of Biological Threats (**DOW**, DOE, **USDA**)
- Accelerating **Materials Discovery, Production, and Qualification**
- Strengthening Deterrence Through Attribution of Nuclear Signatures

NSF X-Labs

The U.S. National Science Foundation X-Labs (NSF X-Labs) initiative is designed to launch and scale a new generation of organizations focused on independent research, development, and innovation.

X-Labs Topics so far:

1. Scientific Instrumentation for **Sensing and Imaging**
2. **Quantum Systems:** Interconnects and Integrated Photonics
3. **AI for Physical Systems**

Partnership Opportunities

Align with regional/UC/state priorities.



USDA U.S. Department of Agriculture

UC RIVERSIDE | College of Natural & Agricultural Sciences

Rockefeller Foundation, OpenAI Foundation Announce $50 Million Partnership To Help Cities Improve Public Services Through AI

PRESS RELEASES PUBLISHED DATE October 14, 2026



UCOP › UC National Laboratories › UC Office of the National Laboratories

UC National Laboratories



Governor Newsom signs SB 53, advancing California's world-leading artificial intelligence industry

CalCompute

Public AI for California's Students

Compute is a vital and limited resource for California's public research ecosystem, and without it, that ecosystem is already atrophying.

EMPIRE AI

AI RESEARCH FOR THE PUBLIC GOOD



Empire AI puts world-class computing power in the hands of New York's leading researchers to accelerate discovery, solve real-world

Education / WorkForce Development

Strengthen Domestic Pipelines

UC RIVERSIDE MESA

Transfer

BACHELOR'S + MASTER'S PROGRAM

Building Bridges to the Professoriate (BB2P)

Evolve Curriculum

Robotics

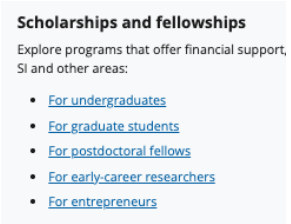
Computational Data Science

AI & Education

Leverage funding for Workforce Dev

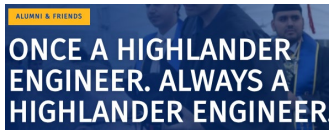






Leverage Student Orgs and Alumni





Industry, Innovation, Economic Development



The Role of the Dean



	Research	Education	Partnerships
Opportunities+Focus Strategic Planning Shared Governance	• Grow current strengths • Keep up with trends • Leverage regional, state and align with national priorities	• Grow strong programs • Consolidate and update others	• Across depts, on campus • UC, region, CA, …
Support Efforts Resources and processes Align budget with strategic goals	• Proposal Dev Support • Seed Funds • Research Infrastructure • Communications	• Student Pipelines: Recruiting, Funding, Placement • AI & Education	• Liaison Staff • Support for Consortia
Tell our Story	• Rankings	• Higher Ed Value • Alumni	• Advancement

Support People — **Faculty** | **Staff** | **Students** | **Community**

UNIVERSITY OF CALIFORNIA



Thank you!

Questions & Discussion

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