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

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UC RIVERSIDE

UC RIVERSIDE · BOURNS COLLEGE OF ENGINEERING · CHALLENGES, OPPORTUNITIES AND THE FUTURE · NOVEMBER 17, 2026

Turning Momentum into Lasting Strength

Taking the Bourns College to New Heights Together

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imec





29 years at UC San Diego · **250+** publications · **6** patents that led to **2** startups







ECE Chair, 2019 · **60** faculty · **40** staff · **2,500** students · switched to remote in days



18 new faculty, a generational renewal of nearly **30%** · **25+** honors and prizes
ECEDHA Innovative Program Award



Associate Dean since **2024** · **$329M** annual research expenditure · **14** centers



$5M NSF EMPOWER for low-income transfer students · **240** scholars · all **6** engineering departments

Four headwinds

- Federal funding: more volatile than ever; shifting to center-scale, interdisciplinary
- The international pipeline, under pressure
- State support that does not keep pace
- AI is reordering research and education

THE TECTONIC FORCE

AI is reordering research, in every discipline

WHAT CHANGES

- Platform shifts reorder the leaderboard
- Discovery: years to months
- Compute as core infrastructure
- Agencies reorganizing around AI for science
- The line runs through every department

WHAT A DEAN DOES

- Tools and compute as college infrastructure
- Seed pilots in every department
- Communities of practice
- AI in the research office
- A few flagship bets

A paradox, not a contradiction

THE PARADOX

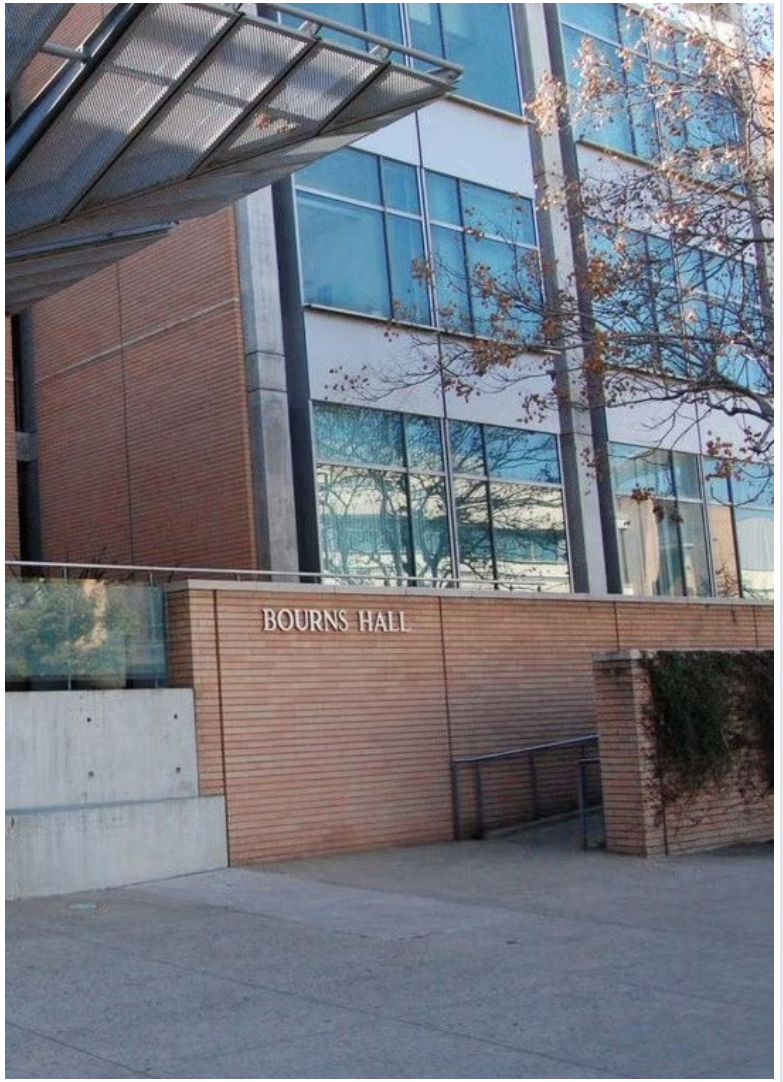
- Two camps: fundamentals and critical thinking, vs. AI fluency as the competitive edge
- Both are right; a paradox, not a contradiction
- Run it like training a model: many experiments, accept they will be noisy, each needs a loss function
- The loss function is the northstar: are we preparing students to change lives

THREE COMMITMENTS

- Fluency is accountable AI: ensure every student is accountable to how they use AI, emphasize accountability in what they build in their careers
- Standing leadership at two levels
- Access: work with campus to ensure every student has equitable AI access, no assignment depends on a paid tool

A college with momentum

- 3,400 to 5,000 students since 2018; consistent outcomes
- 25 new faculty, 20 new staff; three new degrees
- Research expenditures up 50%; 50+ CAREER awards
- $8M for AI education and industry-aligned engineering
- AAU since 2023; CARB next door; RAISE, Lithium Valley
- No. 1 in social mobility; HSI; 49% first-generation



The opportunities, and the questions growth raises

OPPORTUNITIES

- Momentum to convert: 5,000 students, 25 new faculty, three new degrees, AAU
- AI with a regional mandate: e.g., RAISE, LAUNCH
- A region that needs its engineers: clean air and energy, manufacturing, health
- Access as a national story only this College can tell at scale

WHAT I WOULD ASK FIRST

- Capacity for 5,000 students: faculty, staff, space, advising, budget
- Research per faculty: the support that would grow it fastest
- Graduate programs at the standard of the best; a master's model that pays
- Keeping the faculty the College recruited
- Recognition lagging the record

THE DESTINATION · FOR DISCUSSION

Engineering that changes lives, at scale, in the age of AI

- Research: center-scale wins led here; AI-supported scientific discovery in engineering; industry and mission partners a rising share
- Education: the best critical thinkers, the most AI-fluent, and the most accountable engineers anywhere; every student through experiential learning in the age of AI
- Access: No. 1 in social mobility, and the engineering college that proves it, at scale
- Accountable AI as the College's signature, in research and in the classroom
- In service of the campus mission: to transform the lives of the diverse people of California, the nation and the world

Strengthen the machinery, place the bets

- Increase proposal-development capacity for large center grants, built for short turnaround times
- Incubate centers with industry and mission partners
- Diversify the portfolio toward industry and mission sponsors
- Place flagship bets where the College is strong



Recruit, retain, and recognize excellent faculty

- Hire for excellence in the core, with departments leading; add targets of opportunity, year-round, for exceptional candidates
- Grow research space and endowed chairs, the two currencies of recruitment and retention
- Mentor every new hire from day one: a team to join, a voice in the department; measure every hire at year three
- Retain years before the counteroffer: mentoring, space, being seen
- Scale up recognition: a standing awards committee and a nomination process, up to the national academies

Educate the best-prepared engineers

- Every student masters the fundamentals and learns to think critically
- Bring every student to experiential learning in the age of AI
- Expand internships with Riverside County and Inland Empire industry, and in public service
- Make access a system: scholarships, mentoring, internships, research
- Invest in teaching excellence: teaching professors, endowed chairs
- Fund the doctoral program to the standard of the best
- Grow professional master's programs on a model that funds the mission
- Make accountable AI fluency part of every curriculum



Engage the whole College, leverage the campus

- Invest in staff: career paths, recognition, systems
- Partner widely across campus: lead where engineering is irreplaceable, partner everywhere else
- Expand partnerships with industry
- Raise philanthropy as relationships: steward the gifts that built this College, make the case to the next donors
- Leverage campus resources and align with the campus plan

