

AGENDA

University of Connecticut Board of Trustees

Committee for Research, Entrepreneurship and Innovation Thursday, June 12, 2025, at 1:00 p.m. Virtual Meeting

Public Streaming Link (with live captioning upon request): <https://ait.uconn.edu/bot>

(A recording of the meeting will be posted on the Board website <https://boardoftrustees.uconn.edu> within seven days of the meeting.)

Call to order at **1:00 p.m.**

1. Public Participation*

*Individuals who wish to speak during the Public Participation portion of the Thursday, June 12, meeting must do so 24 hours in advance of the meeting's start time (i.e., 1:00 p.m. on Wednesday, June 11) by emailing BoardCommittees@uconn.edu. Speaking requests must include a name, telephone number, topic, and affiliation with the University (i.e., student, employee, member of the public). The Committee may limit the entirety of the public comment to a maximum of 30 minutes. As an alternative, individuals may submit written comments via BoardCommittees@uconn.edu, and all comments will be transmitted to the Committee.

2. Minutes from the April 24, 2025, Meeting

3. Presentation by Undergraduate Students Sean Dunn and Haseeb Chaudhry -
The Builder's Journey: UConn's Entrepreneurial Ecosystem

4. Presentation by Dr. Ji-Cheng 'JC' Zhao, Dean, College of Engineering -
Research and Innovation at UConn College of Engineering

5. University Senate Representative Report

6. Other Business

7. Executive Session (as needed)

8. Adjournment

PLEASE NOTE: *If you are an individual with a disability and require accommodations, please e-mail the Board of Trustees Office at boardoftrustees@uconn.edu prior to the meeting.*

The Builder's Journey: UConn's Entrepreneurial Ecosystem

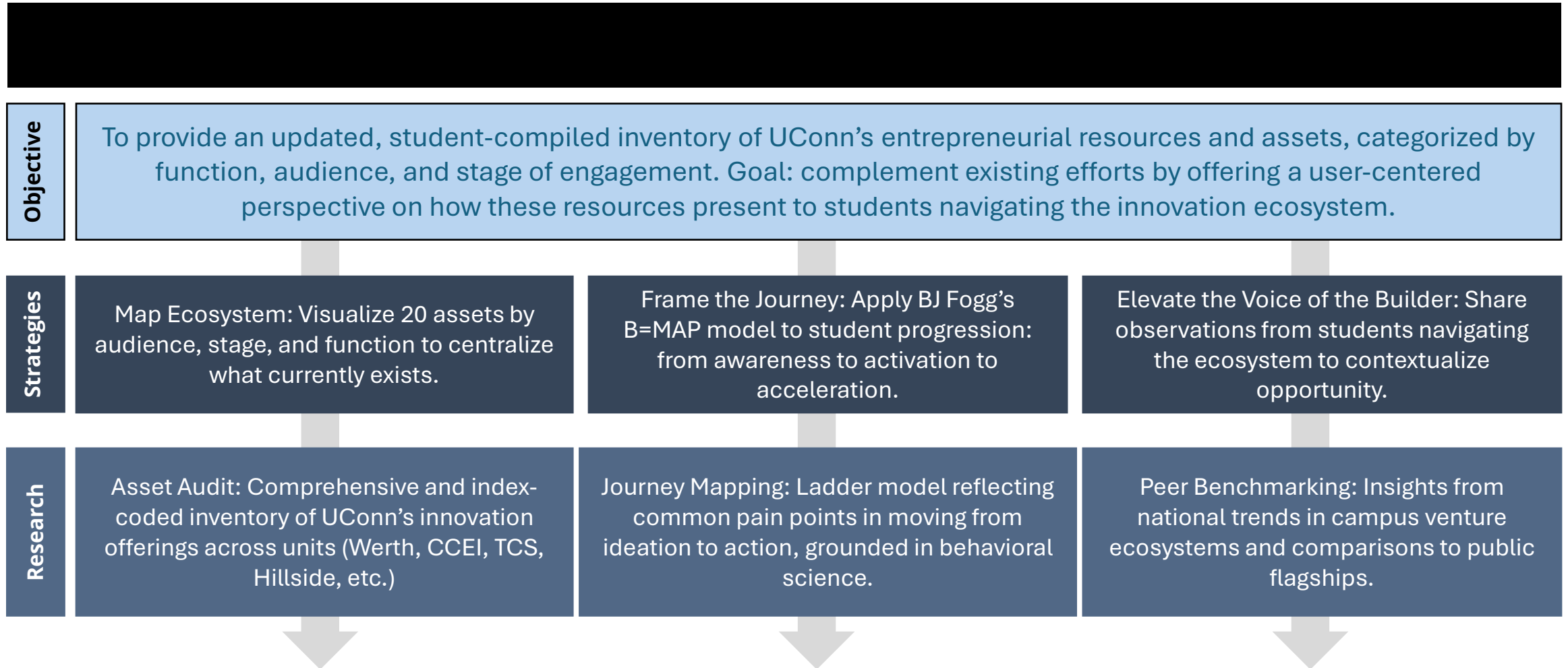
Unlocking Scalable, Student-Centered Innovation Pathways Across the University

BOT REI: 6/12

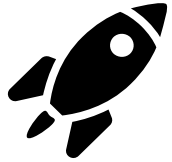
Haseeb Chaudhry '28 | Founder at CrescentOS, Yuno, ChromaShield

Sean Dunn '26 | Undergraduate Trustee, Head of Strategy at Pathway Oncology

Executive Summary



Why UConn, Why Now



CT's Innovation Window Is Open

State leadership is investing in tech, quantum, and biotech (QuantumCT, CI, AdvanceCT, BioCT). Private and public capital is flowing toward innovation.



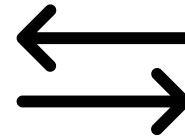
UConn is Uniquely Positioned to Lead

CT's flagship public research university with \$8.5B in economic output, Public Act 19-154 mandates entrepreneurship support across faculty, students, and commercialization.



Massive Potential, Low Visibility

UConn students show strong enthusiasm for innovation. Enhancing visibility and clarifying entry points could help more students access and benefit from existing programs like CCEI and TIP.



The National Standard is Shifting

Leading institutions embed entrepreneurship into student life. UConn has many similar foundational assets and a timely opportunity to further elevate visibility and early-stage engagement among students.

UConn already has world-class assets, and it has the potential to become a national leader in innovation.

The Entrepreneurial Mindset Ladder

1. Awareness – “Why build anything?”

Students must first believe that creation is possible.

Many students are unaware they can start a company, join a lab, or bring a new idea to life.

→ *Trigger moments:* exposure in a first-year class, peer wins Innovation Quest, hears a UConn startup story.

3. Activation – “How do I start?”

First actions often involve fear: applying to a program, joining a team, or launching an idea.

→ Barriers: imposter syndrome, lack of cofounders, uncertainty.

→ What helps: peer mentors and guidance, starter programs, supportive communities.

2. Access – “Where do I go?”

Once curious, students need clear pathways. While we have incredible resources, they may feel scattered, siloed, or unknown.

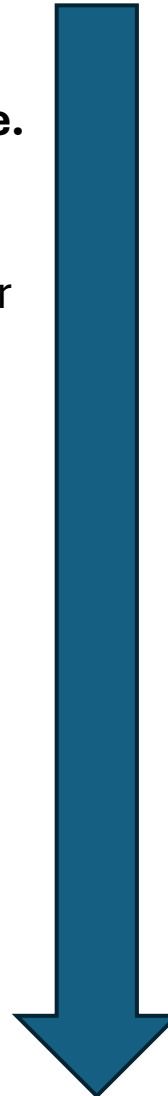
→ Common friction: “I didn’t even know this existed.”

→ Example: Makerspaces open to all majors, but few non-engineers know.

4. Acceleration – “How do I grow?”

Once moving, students need coaching, capital, and confidence to scale.

→ Support systems: Innovation Quest, Hillside Ventures, CCEI Summer Fellowship.



Behavioral Lens and a Student Story

Behavioral Science: B = MAP

Behavior = Motivation × Ability × Prompt (BJ Fogg Model)

- **Motivation** is high - UConn students want to build.
- **Ability** is the gap - many lack confidence, clarity, or starter skills.
- **Prompt** is often missing - programs appear too late, after students self-identify as “entrepreneurial.”

Student Story: From Pre-Med to Innovator

Came to UConn on a pre-med track - didn't even know entrepreneurship was even an option.

- **Awareness:** A chance walk past a CCEI event sparked curiosity.
- **Access:** Realized programs like TIP and Werth were open to all students
- **Activation:** Submitted an early-stage startup idea with no experience - gained mentorship and traction.
- **Acceleration:** Built 3 ventures, raised tens of thousands in funding, and competed on national stages.

Ecosystem Overview

The Three Pillars



- \$30M+ endowed hub supporting cross-disciplinary entrepreneurship through labs, makerspaces, and events
- Flagship programs: Werth Innovators and NetWerx
- Experience Innovation Expo and HackUConn comps



- Get Seeded pitch nights, Summer Fellowship, Accelerate (NSF I-Corps), and Wolff New Venture Competition
- Initiatives: Build Hartford, and veteran bootcamps
- Regional partners: CTNext, Webster Bank, Canva, etc.



- Manages invention disclosures, patents, licensing, etc.
- TIP incubators (Storrs, Farmington) and fellowships
- TIP alumni: 168+ ventures since 2003, raising over \$1.4B

Approach & Insights

- Compiled 20 university-affiliated programs and initiatives into a categorized database, indexed by:
 - Type
 - Target audience
 - Stage of engagement
- Included emerging centers like the NursEng Innovation Center
- Many core programs contain internal sub-initiatives that serve students at varying levels of experience, highlighting both the richness and complexity of UConn's support ecosystem

AirTable

Barriers to Entry (Student-Identified)

Awareness gaps

- Students in nontraditional disciplines are unaware of entrepreneurship resources
- No unified “front door” or central system
- Robust offerings like Werth, CCEI, and TCS often remain invisible to early-stage builders

Siloed pathways

- Fragmented resources across parallel offices
- Students face duplicated efforts, support gaps
- Transitions between schools often lack continuity and mentorship

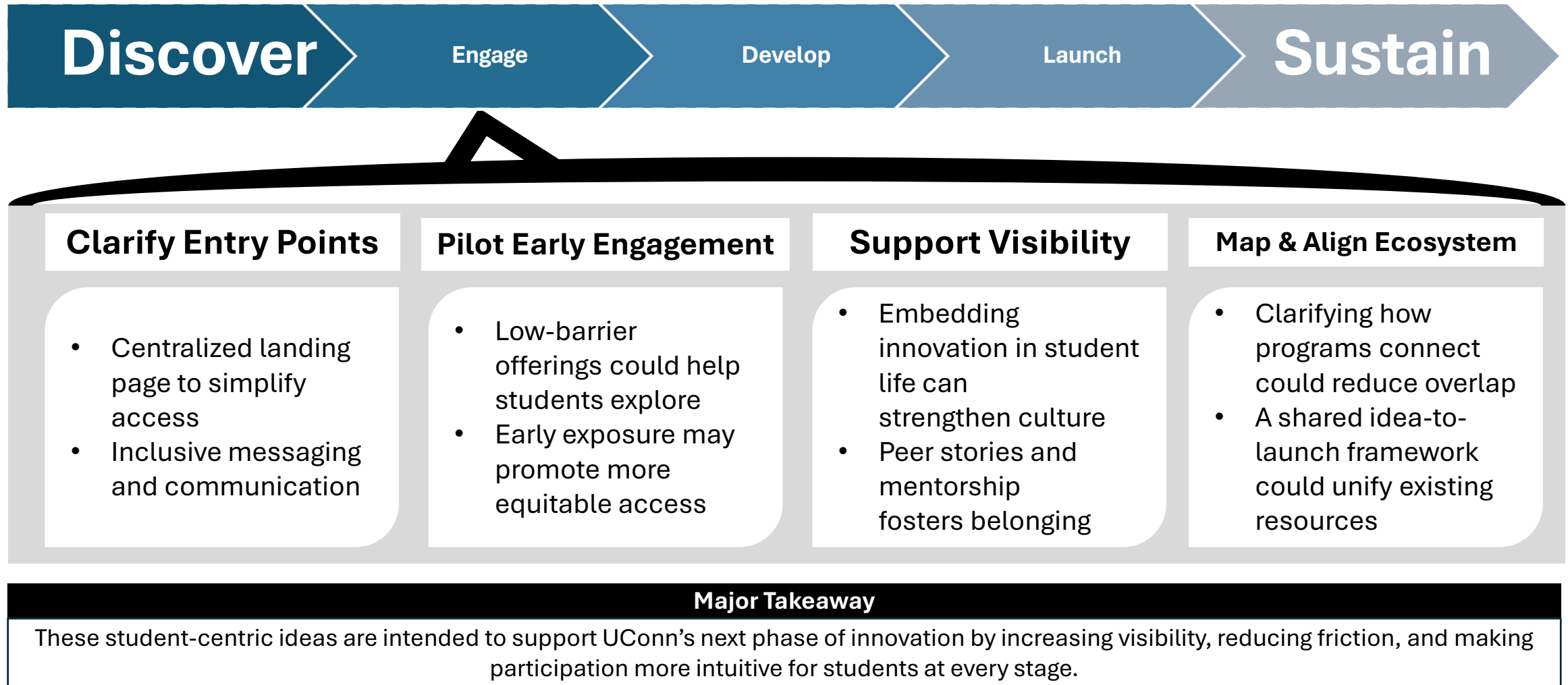
Lack of prompts

- Many programs don’t actively engage participation, leading to low visibility
- Students may not identify as "entrepreneurial"
- Entry points feel tailored to BUS/ENGR majors

Innovation fatigue

- Fragmented support and outdated site info create confusion and decision fatigue
- A crowded landscape obscures next steps
- Student passivity often reflects uncertainty, not lack of interest

A Path Forward: Opportunities for Visibility & Engagement



Major Takeaways

Grounded in the student journey from **Awareness** → **Access** → **Activation** → **Acceleration**, we propose the following opportunities to enhance visibility, reduce friction, and empower builders at scale:



Awareness

Integrate early exposure into academic pathways (like first-year seminars, discipline-specific innovation modules).



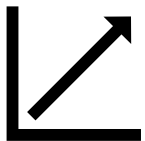
Access

Develop a centralized, student-navigable landing page and map of programs across schools and centers.



Activation

Establish a broader peer mentorship network and expand faculty-student connection points to reduce friction and fear.



Acceleration

Map and align ecosystem interactions to clarify how programs connect, overlap, and build on one another.

Research & Innovation at UConn College of Engineering

JC Zhao

Dean of UConn College of Engineering

A brief presentation to
Research, Entrepreneurship, and Innovation (REI) Committee of UConn BOT

June 12, 2025

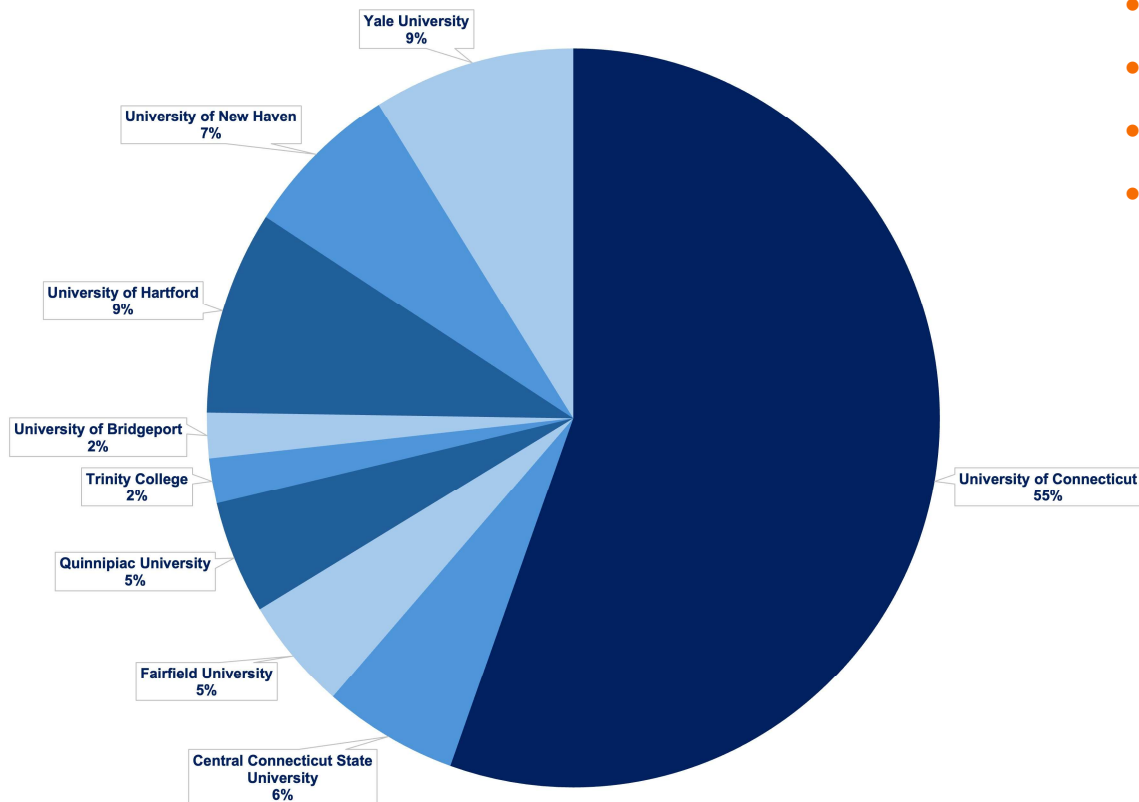
UConn Engineering by the Numbers

- \$85M research expenditures (FY25)
- 250+ collaborating companies
- 219 new awards for research (FY23)
- 155 tenured/tenure-track faculty
- 50 in-residence faculty
- 52 professors ranked *Top 2% World Scientists*
- 9 Fellows of the National Academy of Inventors (NAI)
- ~ 4,000 UG; ~ 930 Grad



UConn Delivered 55% of All Engineering Graduates Across Connecticut in 2023

Engineers Graduating From Connecticut Universities in 2023



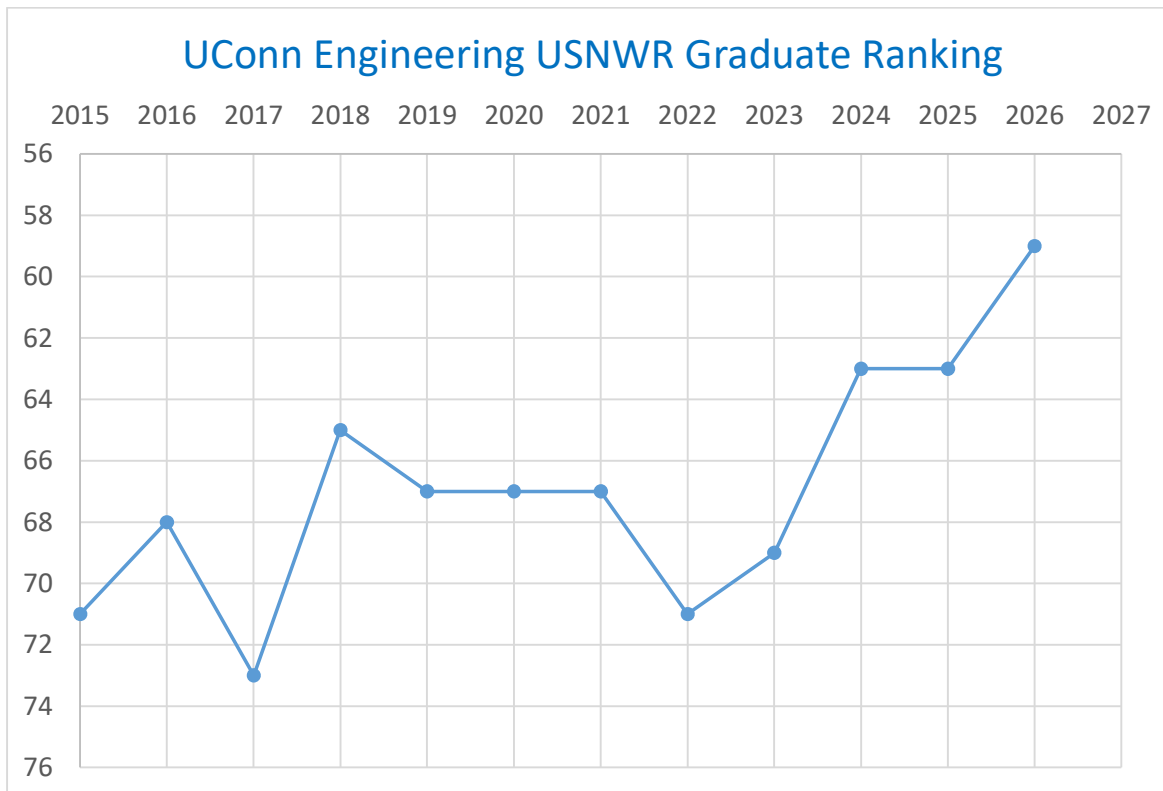
- 67% of our graduates stay in Connecticut
- 2,200 alums in P&W
- 220+ senior design project teams/yr
- 120+ industry sponsors/yr



Global Excellence

*In Connecticut
For Connecticut*

UConn College of Engineering USNWR Graduate Ranking breaks into Top 60



#59 (Top 60 for the 1st time)

#33 in public universities

Aim for Top **45** (Top **25** public)

52 UConn Engineering professors ranked Top 2% World Scientists

TOP 2%
SCIENTISTS
LEADING MINDS IN SCIENCE



Read the full story on
UConn Engineering

<https://today.uconn.edu/2024/12/52-uconn-engineering-faculty-among-worlds-top-2-of-scientists/>

People



9



NATIONAL ACADEMY
of INVENTORS
FELLOW



[Ki Chon](#)



[Bahram Javidi](#)



[Tom Katsouleas](#)



[Cato Laurencin](#)



[Radenka Maric](#)



[Luyi Sun](#)



[JC Zhao](#)



[Lakshmi Nair](#)



[Steven Suib](#)

[UConn Engineering Boasts 9 National Academy of Inventors \(NAI\) Fellows - UConn Today](#)

People

Sir Cato Laurencin

Knight Commander of the Order of St. Lucia



[Dr. Cato T. Laurencin Appointed Knight Commander of the Order of St. Lucia - UConn Today](#)

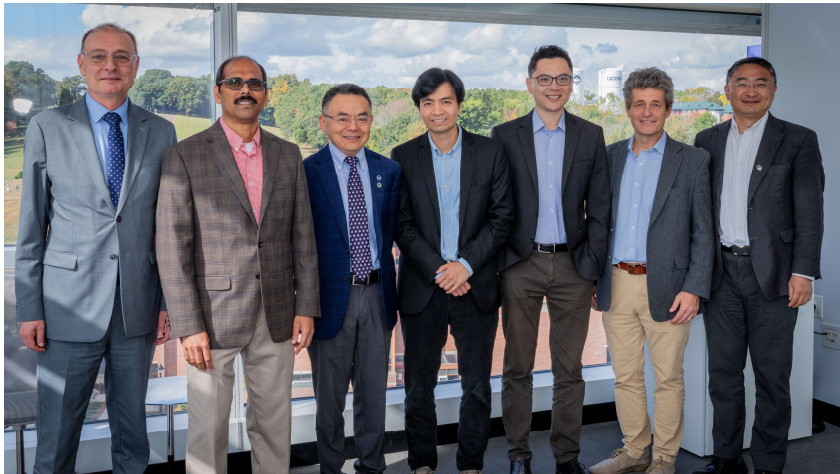
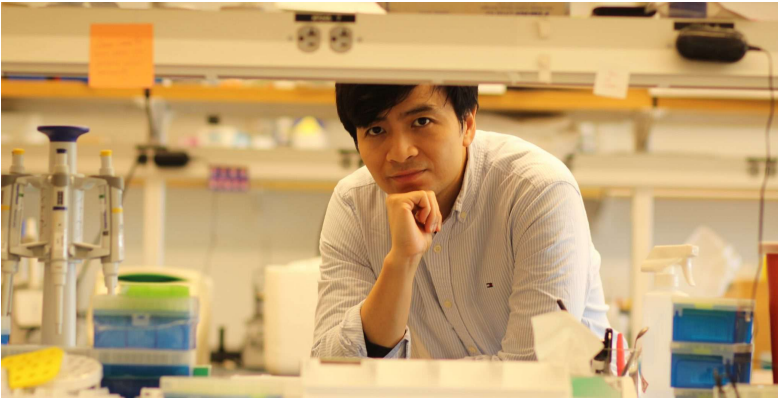
[Paul Terasaki Innovation Award](#)



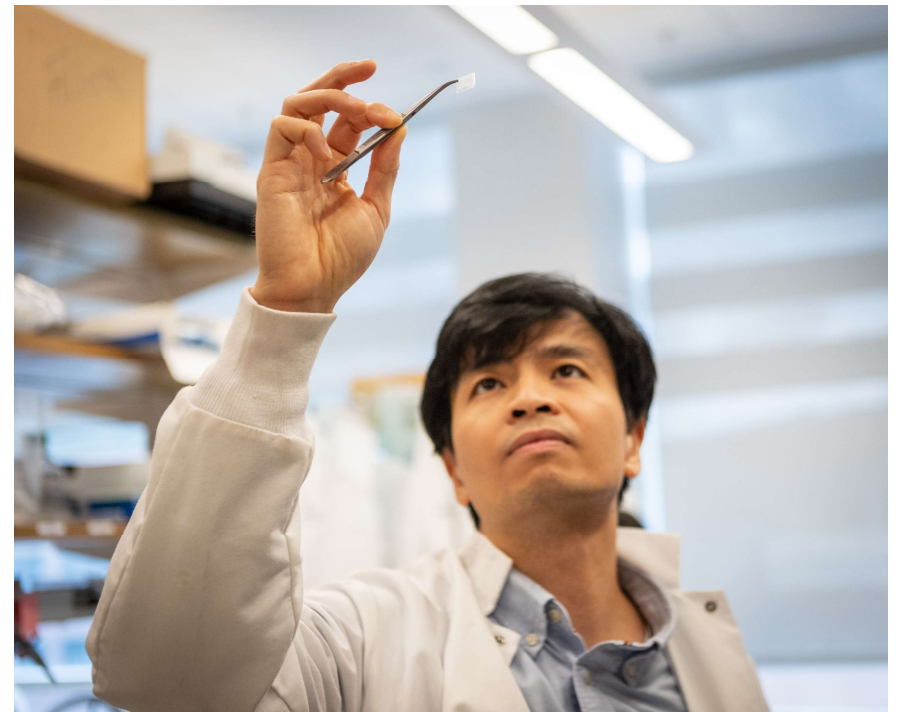
<https://today.uconn.edu/2025/02/professor-cato-laurencin-recipient-of-2025-terasaki-innovation-award/>

People:

Thanh Nguyen: \$9.7 million NIH grants + \$6.6 million from Gates Foundation



Featured on ***UConn Today***



<https://today.uconn.edu/2024/10/nguyen-a-biomedical-engineering-star/>

People



- On Jan. 14, Prof. Arash Zaghi was honored by President Biden with the PECASE Award. This is the highest honor bestowed by the U.S. government on outstanding scientists and engineers.
- Only 4 UConn faculty members have ever received it since its establishment by President Clinton in 1996.

People Jeffrey McCutcheon: Paul Busch Award & Yoeman Innovation Award

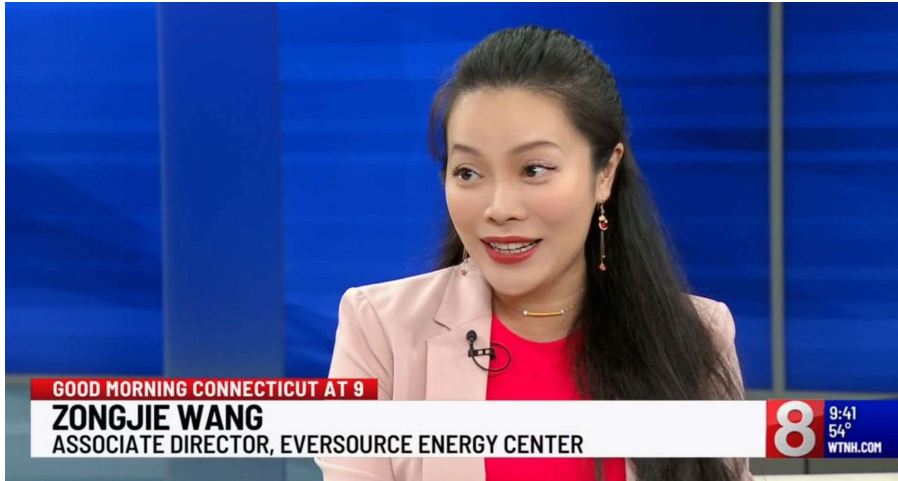


- Water Research Foundation
- \$100,000



AICHE Separations Division **Yeoman Innovation Award**

People **Zongjie Wang:** Women Inventor of the Year (Connecticut Technology Council)



Channel 8
Good Morning Connecticut



People

Anna Tarakanova won the Eshelby Mechanics Award for Young Faculty



The Eshelby Mechanics Award for Young Faculty is given annually to rapidly emerging junior faculty who exemplify the creative use and development of mechanics. The intent of the award is to promote the field of mechanics, especially among young researchers, and commemorate the memory of Professor John Douglas Eshelby. The awardees are formally recognized at the annual Applied Mechanics Division banquet at the ASME-IMECE meeting.

People **Leila Daneshmandi:**
Encapsulate: 2nd at the 2024
Entrepreneurship World Cup
Global Finals (16,000 applications
from 200+ countries)



Research & Innovation

NIUVT (National Institute for Undersea Vehicle Technology)



Richard Christenson

INNOVATIVE ACADEMIC, INDUSTRY, & GOVERNMENT PARTNERSHIP

- Provides for persistent collaboration, increased speed of innovation & constitutes fundamental change in Navy R&D/workforce development
- Applied research projects (178 total; 104 active) consumed directly by industry & government; regular cycles to identify projects & conduct research
- Workforce development: early (K-12); training (UG & GR students); retaining (current engineers/ sailors)
- Federal support: **\$93M** applied research, **\$31M** workforce development
- 57 UConn faculty from every School/Department of CoE (229 students; 197 grads)



Research & Innovation

ANCHOR (Advancing Naval Careers through Higher-ed Outreach and Research)



UConn PI:
Alexandra Hain



<https://today.uconn.edu/2025/04/uconn-uri-and-general-dynamics-electric-boat-launch-workforce-development-program/>

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**CONNECTICUT TRANSPORTATION
INSTITUTE (CTI)**

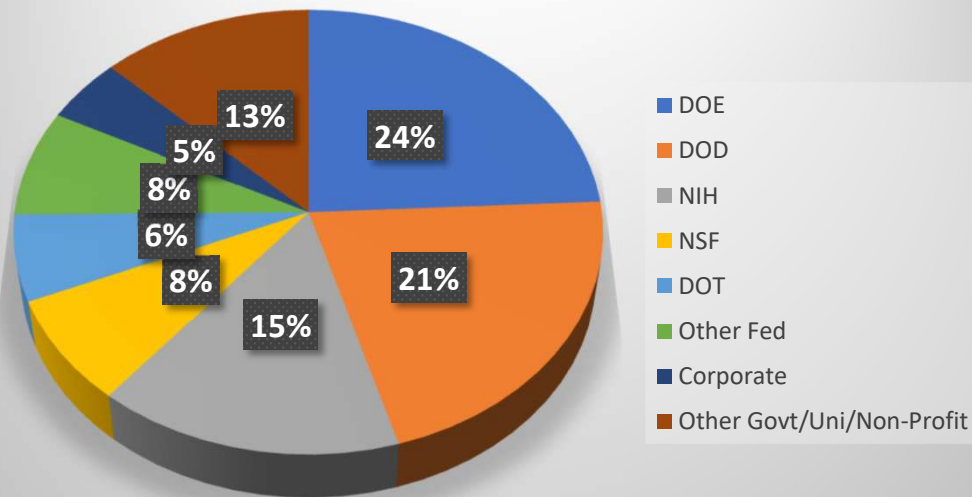


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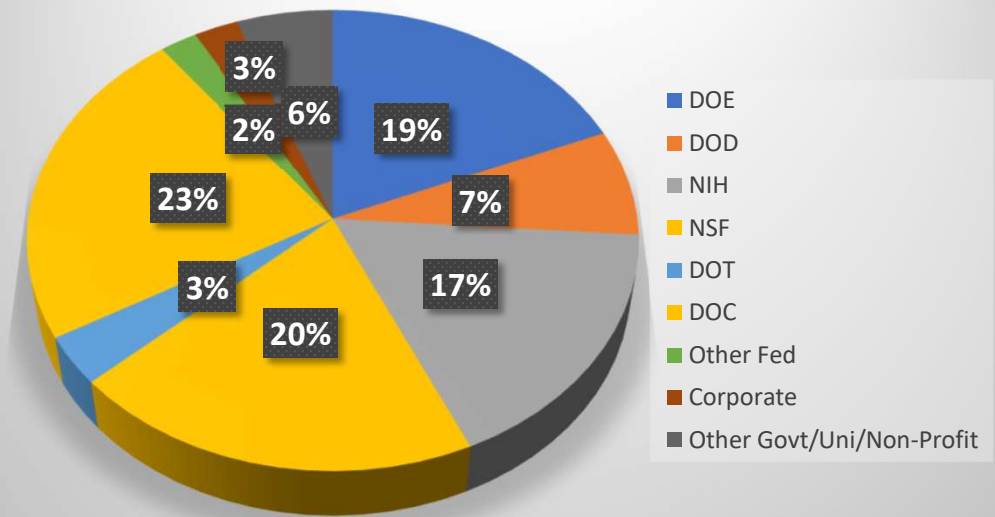
Research & Innovation

COE Sponsored Research: Awards FY25 Preliminary Data (7/2024 – 4/2025)

Award Distribution by Sponsor









Proposal Distribution by Sponsor



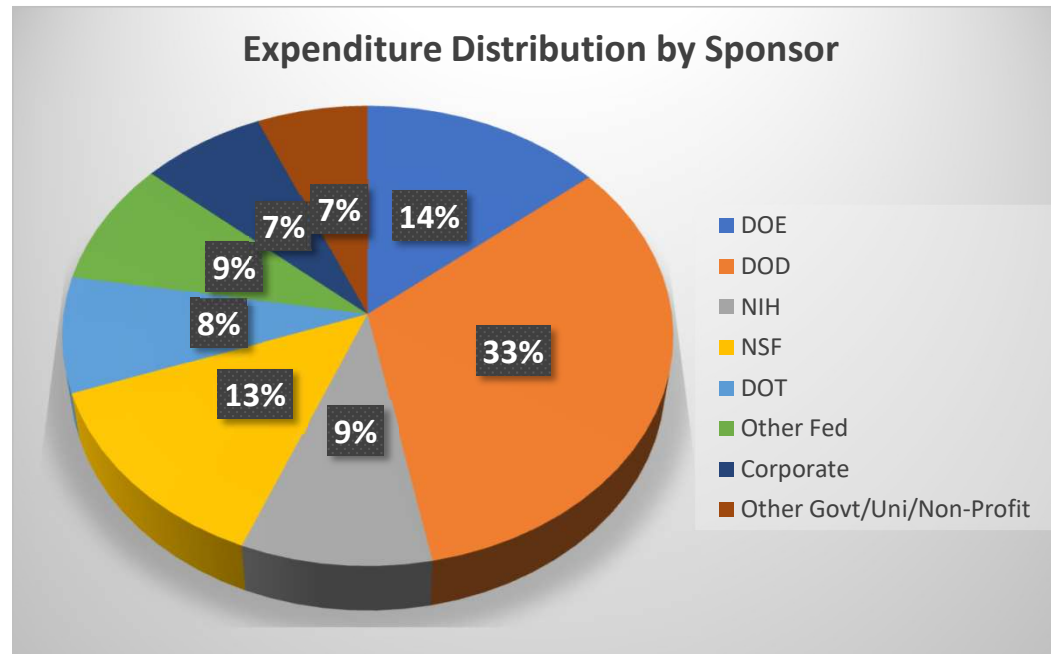
Research & Innovation

Single Awards over \$2 Million FY25 Preliminary Data (7/2024 – 4/2025)

						
Award Sponsor	\$5M DOD	\$4M Gates FDN	\$3.6M DOE	\$3M NIH	\$2.5M DOE	\$2.1M DOT
		\$2M NIH			\$2.1M DOE	
PI Department	Alexandra Hain CCE	Thanh Nguyen MAME	Ravi Gorthala MAME	Hugo Posada-Quintero BME	Junbo Zhao ECE	Donna Shea CTI
Managing Unit	NIUVT	IMS	PWIASE	CBBI	Eversource	CTI

Research & Innovation

COE Sponsored Research: Awards FY25 Preliminary Data (7/2024 – 4/2025)



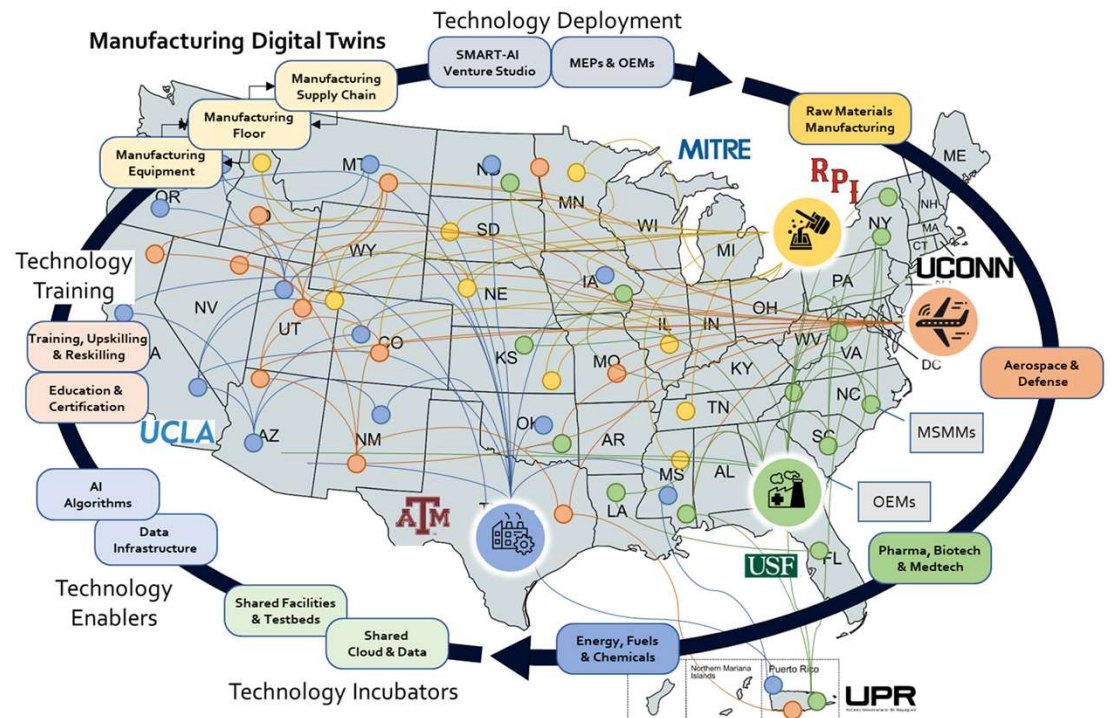
Research & Innovation

COE Sponsored Research: Major Proposal

George Bollas:

- One of five MFG USA Institute proposals selected by the NIST after concept paper reviews.
- Final decision expected in June. **SMART-AI, the Institute for Smart Manufacturing Automation Resilience Through Artificial Intelligence** aims to create a transformative ecosystem for AI-enabled advanced and resilient manufacturing that unites:
 - Original equipment manufacturers (OEMs)
 - Institutions of Higher Education (IHEs)
 - Micro, small, and mid-sized manufacturers (MSMMs)
 - Manufacturing extension partnerships (MEPs)
 - Non-profit networks that support manufacturers, organizations that foster workforce training, national labs, and other Manufacturing USA institutes.

~\$200M



Research & Innovation

Engineering-Health/Medicine + Jackson Lab gathering to explore collaborations



- First mixer attended by 65 researchers – Focus: AI, data science, computing
- Topic by topic for future mixers
- Seed grants would be extremely helpful

Research & Innovation

- Engineering-Pharmacy meeting held to explore collaborations
- Nursing and Engineering Innovation Forum held



Research & Innovation

George Bollas:

November 11, 2024 – November 14, 2024



Digital Twins Workshop

- Grow understanding and development of standards for DT in Manufacturing
- 50+ industry leaders, researchers, and practitioners
- 400+ participants, 2-day event

Research & Innovation

Ali Bazzi: COMPLEX Center & First Northeast Power Electronics Symposium (NEPES 2024)



Research & Innovation

- Working with OVPR to mount a Materials Research Science and Engineering Center (MRSEC) proposal (~ 1 yr in advance)
- Tried to mount NSF ERC proposals last Fall – Too short prep time
- Explore opportunities to bring industry to UConn campuses
- **Faculty fellow** program with industry and others
- Identify and expand research excellence in COE

Matthew & Margarethe Mashikian Innovation & Entrepreneurship Hub (eHub)

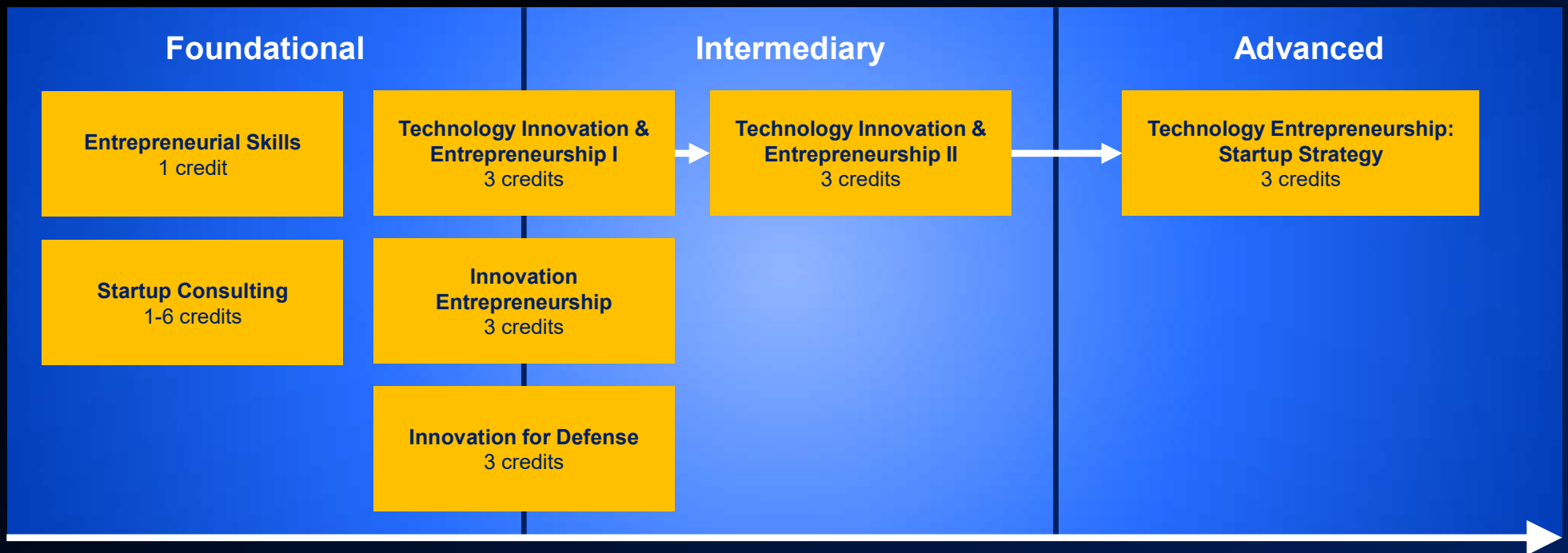
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MASHIKIAN INNOVATION &
ENTREPRENEURSHIP HUB

- Focus is on technological innovations and advancements in sectors including HealthTech, GreenTech, Advanced Materials, Electronics, EdTech, Software, Artificial Intelligence, and more.
- Offer courses, programs, and activities that provide training and support in skills, tools, and entrepreneurial mindset.
- Programs provide funding assistance and support and mentorship to entrepreneurs working on innovative technologies and high growth startups.
- Work in close collaboration with UConn Technology Commercialization Services, as well as the UConn Tech Park.



Matthew and Margarethe Mashikian with Assistant Professor In Residence of Innovation and Entrepreneurship and eHub Director Leila Daneshmandi. (Matthew Hodgkins/UConn Photo)

Innovation & Entrepreneurship Hub Courses Overview



Innovation & Entrepreneurship Hub Programs Overview



The Entrepreneurship Fellowship Program

A year-long cohort-based fellowship to train STEM graduate students in entrepreneurial skills & competencies.



Technology Pitch Competition

A university-wide deeptech pitch competition with prizes.



Tech Entrepreneurship Bootcamps

Intensive day-long sessions to rapidly train STEM students in the core concepts of tech entrepreneurship.



Idea2Prototype Fund

Early-stage funding & prototyping resources to advance ideas into prototypes & proof-of-concept.



Student Clubs

New track in the John Lof Leadership Academy dedicated to entrepreneurship



UConn Technology Showcase Day

Annual university-wide event to showcase UConn technology innovations, patents, & startup to industry.



Current Programs



Future Programs

Innovation & Entrepreneurship Hub Courses Overview

Offered in Fall

**Technology Innovation &
Entrepreneurship I**

**Technology Entrepreneurship:
Startup Strategy**

Innovation for Defense

Startup Consulting

Offered in Spring

**Technology Innovation &
Entrepreneurship II**

Innovation Entrepreneurship

Entrepreneurial Skills

Startup Consulting

ehub.engr.uconn.edu

The Entrepreneurship Fellowship Program

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MASHIKIAN INNOVATION &
ENTREPRENEURSHIP HUB

A framework of carefully designated **courses**, **programs**, and **activities** that progressively train STEM graduate students in entrepreneurial and leadership skills.

Program Structure:

- Year-long
- Cohort-based
- Curricular and co-curricular program
- Experiential learning
- Peer-to-peer learning and mentorship
- Funding opportunities

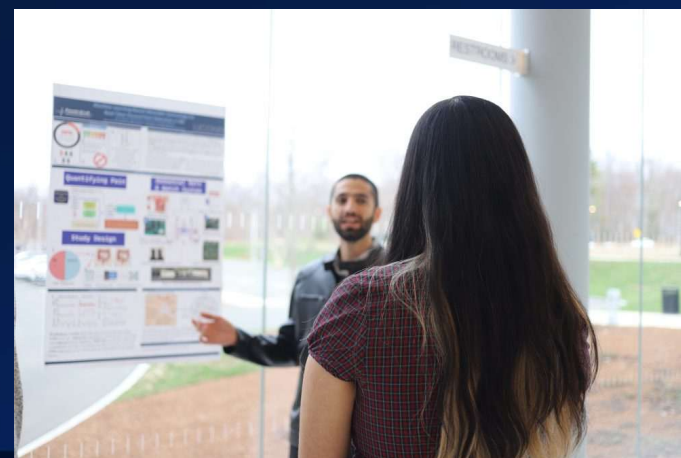


Entrepreneurship Fellows Cohort AY 2024-2025

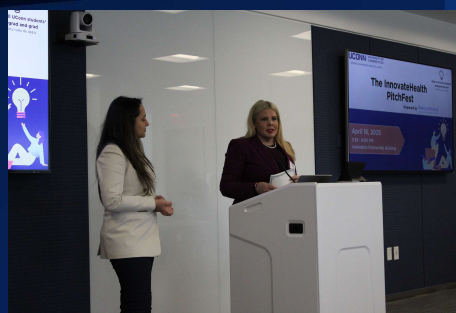
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UConn Nursing and Engineering Innovation Center

- Advances healthcare collaboration between the School of Nursing and the College of Engineering to promote new healthcare technology innovation.
- Promotes ideation, creation and commercialization.
 - Research, Education, Community Engagement and Technology Transfer.
- Opportunities:
 - Faculty Grants,
 - InnovateHealth PitchFests
 - Senior Design Projects
 - Fellowships

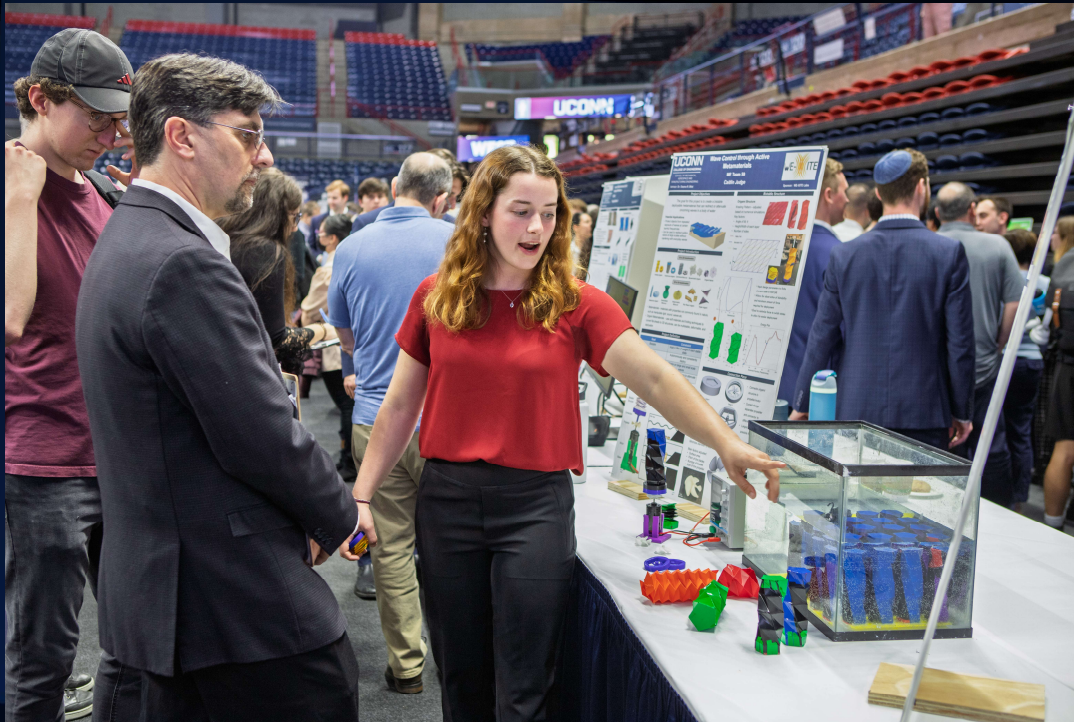


Above: The Nursing and Engineering Innovation Forum held in April featured students pitching research projects and discussing their work during poster sessions. (Coral Aponte / UConn Photo)



Left: Leila Daneshmandi, left, and Tiffany Kelley, co-directors of the Nursing & Engineering Innovation Center, speak at a PitchFest event (Sarah Redmond / UConn Photo).

Senior Design Demonstration Day



seniordesignday.engr.uconn.edu

Expert Mentoring Real-World Problems Industry Sponsors Recruitment Tool

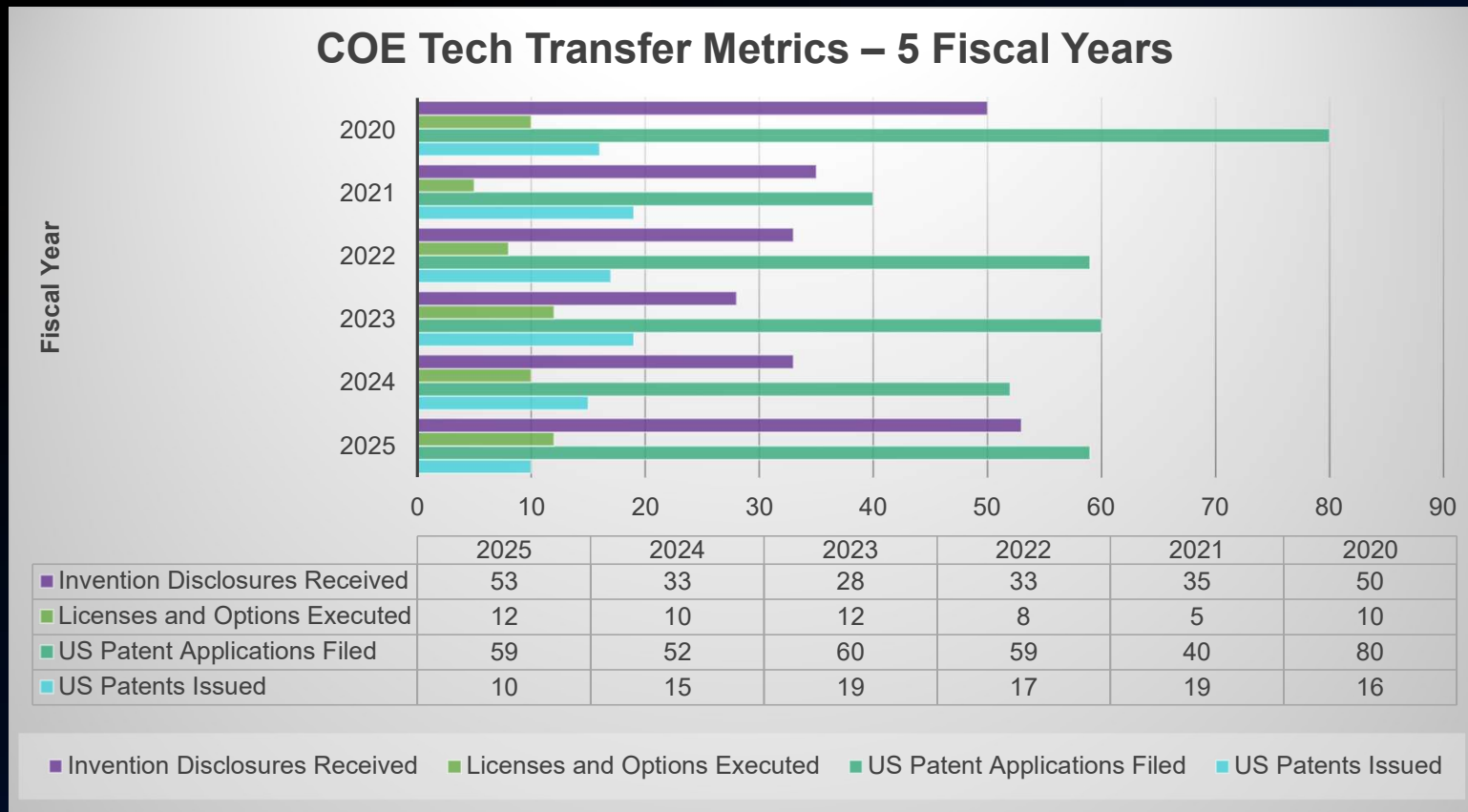
- Senior students are mentored by faculty and industry engineers.
- Solve real-world engineering problems.
- Industry sponsorships are provided to support the cost of materials and travel for the students.
- In addition to experiential learning, these innovative projects are a helpful workforce recruitment tool for the company sponsor.

Entrepreneurship & Innovation: University Task Force

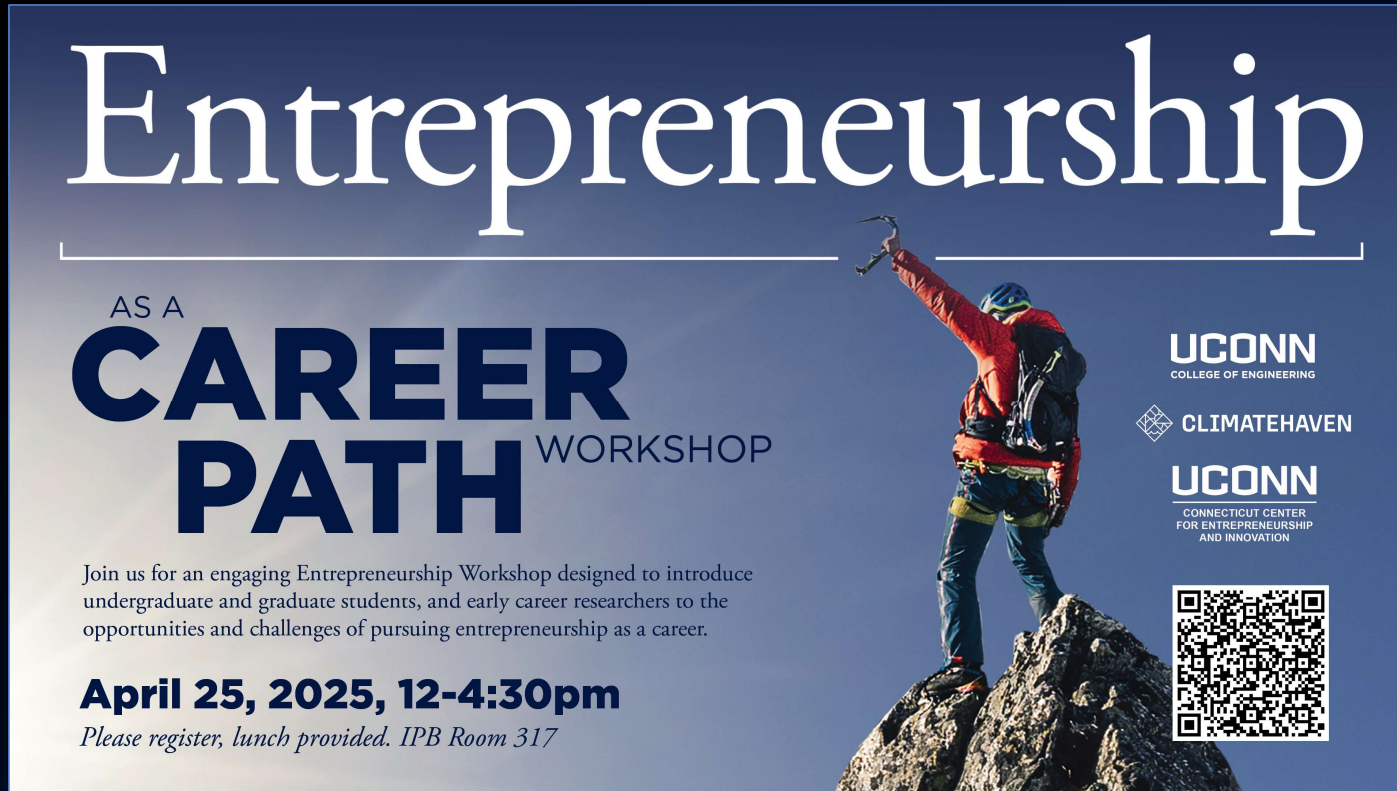
- Charged with conducting a comprehensive review and assessment of entrepreneurship and innovation at UConn.
- College of Engineering participants: Director of Matthew & Margarethe Mashikian Innovation & Entrepreneurship Hub (Leila Daneshmandi) and Assistant Dean (Kylene Perras).
- Proposed subcommittees CoE task force members will serve on:
 - Academic Programs & Curriculum
 - Research & Commercialization
 - Faculty, Staff, and Student Engagement
 - External Partnerships & Industry Engagement
 - Infrastructure & Resources
 - Impact & Evaluation



COE Technology Transfer FY25 Preliminary Data (through April 2025)



COE Sponsored Engagement Events

A poster for an entrepreneurship workshop. The background is a blue sky with a climber in a red jacket and blue pants standing on a dark rock, reaching up with a climbing tool. The word 'Entrepreneurship' is written in large white serif font at the top. Below it, 'AS A' is in small blue font, followed by 'CAREER PATH' in large bold blue font, and 'WORKSHOP' in smaller blue font. A paragraph of text describes the workshop. The date and time are listed in bold blue font. A QR code is in the bottom right. Logos for UConn College of Engineering, ClimateHaven, and UConn Connecticut Center for Entrepreneurship and Innovation are on the right.


Entrepreneurship

AS A
CAREER PATH WORKSHOP


Join us for an engaging Entrepreneurship Workshop designed to introduce undergraduate and graduate students, and early career researchers to the opportunities and challenges of pursuing entrepreneurship as a career.

April 25, 2025, 12-4:30pm
Please register, lunch provided. IPB Room 317

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 CLIMATEHAVEN

UConn
CONNECTICUT CENTER
FOR ENTREPRENEURSHIP
AND INNOVATION



Entrepreneurship Workshop

- Explore the UConn Entrepreneurship Ecosystem, including challenges and opportunities advice from start-up founder
- 40+ participants including 15 guest panelists and speakers, half-day event

Innovation Shop (iShop)



innovationshop.engineering.uconn.edu

Ideation Studio Electronics Shop Machine Shop Prototyping Studio*

*Prototyping Instruction Course Begins Fall 2025

Our Team of Experts



Anthony Beatty, Peter Glaude, Joseph Luciani, and Kenneth Premo prefer a holistic approach to innovative engineering. Together, they educate students on their journey from ideation to creation.

Opportunities

- Artificial intelligence (AI)
- Advanced manufacturing
- Healthcare engineering & medicine
- Energy research, particularly on sustainability & renewable technologies.
- Quantum technologies
- Advanced materials

Challenges and Opportunities Ahead for CoE

- Cross-disciplinary convergence
- Retention & hiring of top-notch faculty
- Grow our strategic initiatives amidst Connecticut and federal budget cuts
- Grow R&D for industry who is struggling as well
- R&D for defense & security
- Graduate student support

High-Power Engineering Lab building is one of the top priorities

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engineering.uconn.edu

HIGH-POWER ENGINEERING LABORATORY

Strategically located alongside UConn's state-of-the-art Innovation Partnership Building, the High-Power Engineering Laboratory will be a hub where world-class faculty, top-tier students, and industry partners come together to push the boundaries of what's possible. This one-of-a-kind facility will unlock research opportunities unmatched anywhere else in the region, empowering local and state businesses to tackle high-impact challenges head-on.

Join us in building the future of engineering innovation—right here in Connecticut.

BUILDING OBJECTIVES

- Install high-power equipment systems to enable unique manufacturing research and development.
- Drive groundbreaking research across civil, electrical, mechanical, and other engineering fields.
- Provide hands-on research training to UConn's brightest engineering students.



For more information and potential partnerships, contact Assistant Vice President of Corporate & Foundation Relations at the University of Connecticut **Sara Mahoney**, smahoney@foundation.uconn.edu



© Jensen Architects Inc.

Preliminary design in progress.
Awaiting UConn Board of Trustee approval.

BUILDING ELEMENTS

- **Connecticut Power Electronics Center of Excellence (CONPEX):** Offers high-power dynamometer testing, and electrical design and testing of industrial electrical components.
- **Metal Casting Foundry:** Enables industrial scale alloy casting for manufacturing partners, while filling a niche for materials science education.
- **Ocean Wave Generators:** Allows experimental simulation of water waves, while filling a naval research niche not available at most universities.
- **Aerospace Engineering Facilities:** Enables research on sustainable aerospace technologies, while expanding the resources of the School of Mechanical, Aerospace, and Manufacturing Engineering.

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HIGH-POWER ENGINEERING LABORATORY BUILDING FOCUS AREAS



CONPEX CENTER

CONPEX is a unique center that spans semiconductor materials to power electronic systems (microgrids, ships, aerospace). There are currently 13 affiliated faculty members from UConn Engineering involved. This facility will be the only megawatt-scale university test facility in New England, and will be available to small and medium companies that do not have the infrastructure to build a megawatt facility.



METAL FOUNDRY

Metal casting is a prevalent manufacturing technology used by many industrial sectors. The UConn foundry is one of the five largest ones on U.S. campuses. In addition to research, the foundry is connected to 12 standard and 2 lab courses at UConn, training 100 students every year.



VIBRATION AND SHOCK

The high-speed vibration and shock test instrument would include test equipment, sensors, and acquisition components. The resulting high-speed broad bandwidth facility will provide a unique testing facility for complex systems. High-power, high bay areas would be able to run multiple pieces of equipment at the same time for a deep research dive.



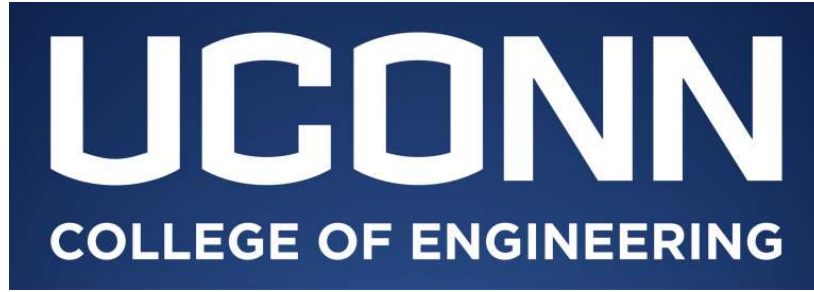
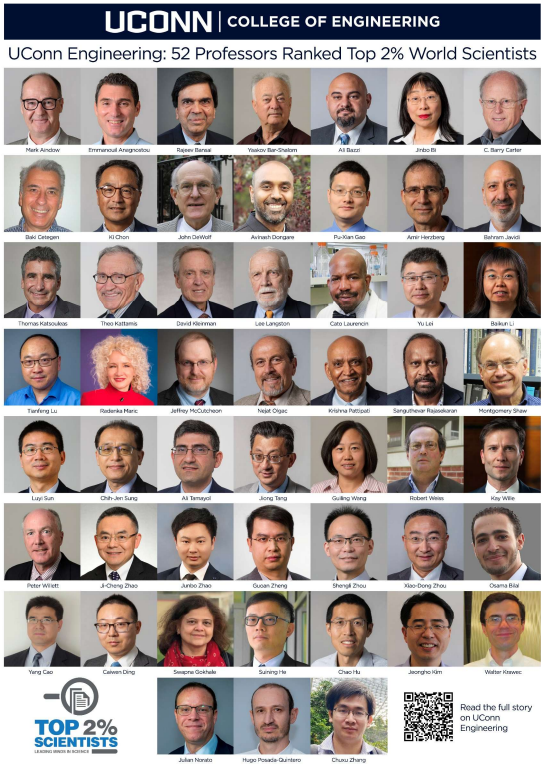
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