

BHEF Innovation Fellowship 2025

Doctor of Design a C-MAR program

Dr. Yin Yu

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Traditional Built Environments

Historically, built environments have been designed primarily in response to visual principles. However, humans explore the world through multisensory perception.



Casa Estudio Luis Barragán

21st-Century Built Environments

“Exploration and Discovery only exist within the context of the **Unknown**.”

– VINCE KADLUBEK, CEO OF MEOW WOLF



Meow Wolf Las Vegas' Omega Mart

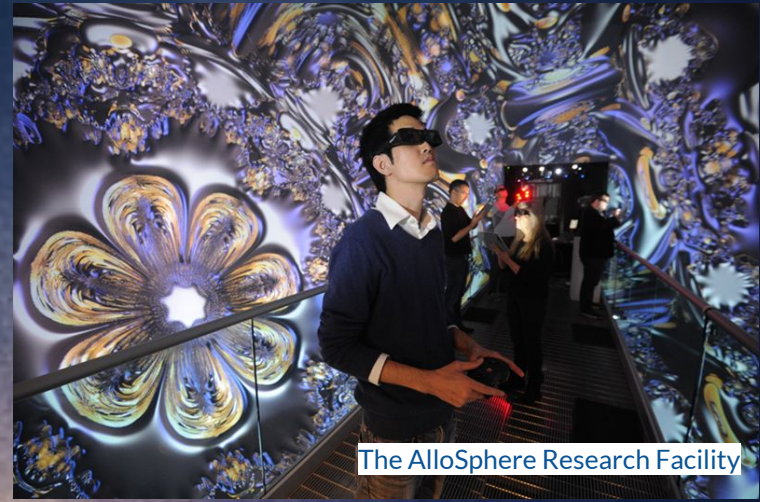
Forward-thinking architectural environments have the potential to offer interactive multisensory experiences.



TeamLab planets: An Interactive Pond of Computer-Generated Koi Fish

21st-Century Building Technologies

Today's architects and designers are able to create fully immersive, responsive spaces through the use of technologies such as AR/VR, sensors, scent diffusers, environmental controls, and projection mapping.



The Allosphere Research Facility



Tijuana Cultural Center

Educational & Industry Gap

Tools & Skills

Sensor-based
Technologies
...
Interdisciplinary
Design

Gap

Experiences

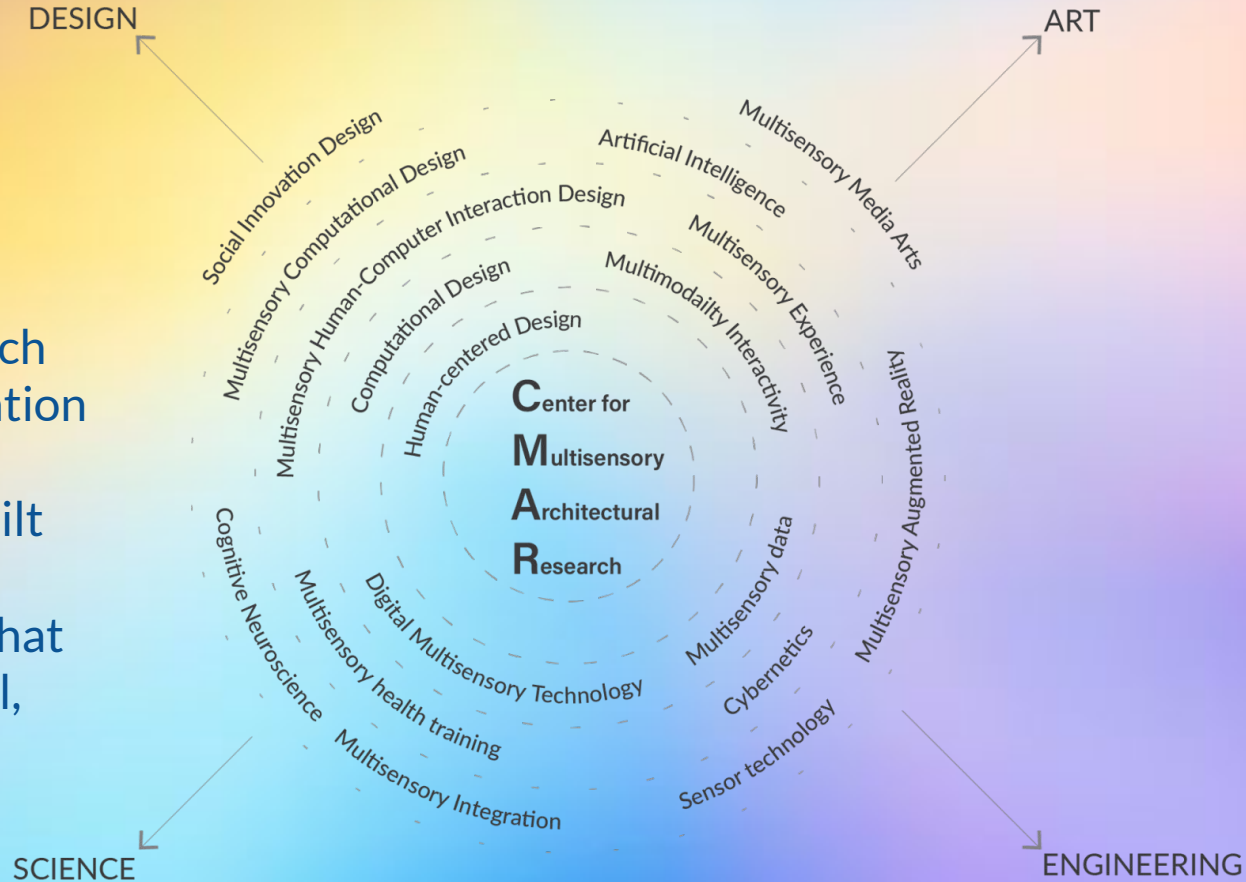
Multisensory
Immersive
Spatialized

How can **interdisciplinary design education** prepare students for an industry that enhances **spatialized experiences in built environments**?

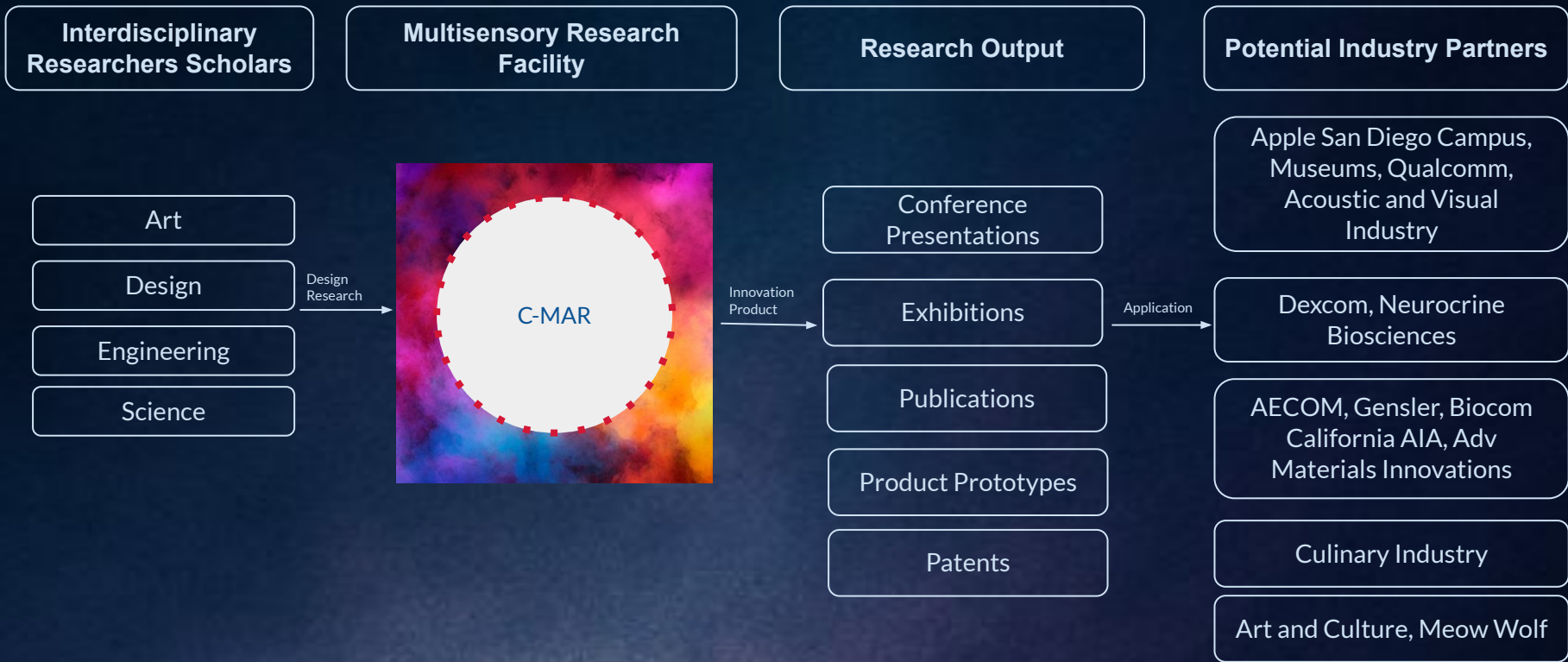
Gap Solution

C-MAR

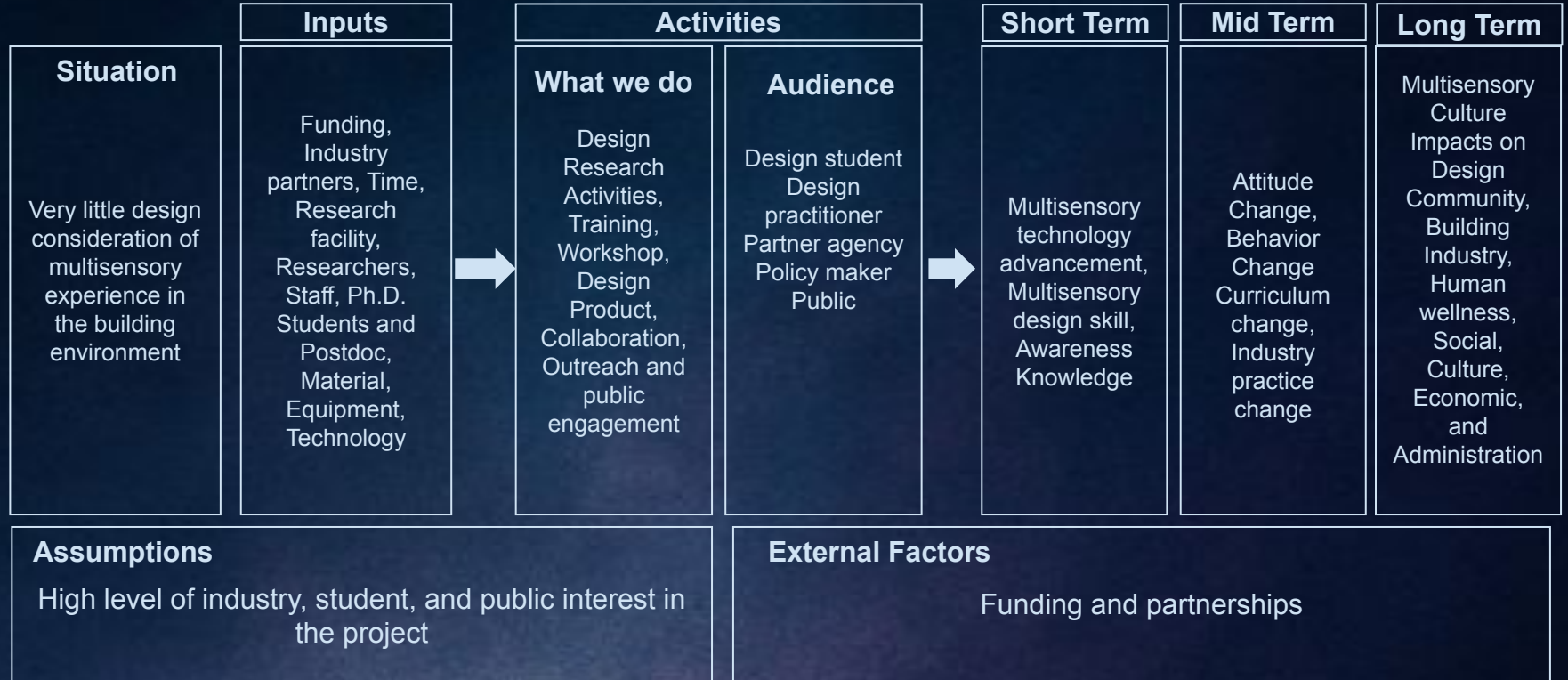
An interdisciplinary research hub for the innovative creation of digital products and commercial services for built environments through multisensory approaches that consider sight, sound, smell, taste, touch, and somatosensation.



C-MAR Roadmap



Project Model



Train Next-Generation Innovators

- Create a doctoral program in Interdisciplinary Design (Doctor of Design).
- Cultivate future innovative architects and designers.
- Train the future leaders in multisensory innovation.



CSU Interdisciplinary Studies

Doctoral Program

San Diego State University

MA

MS

Chico, Dominguez Hills, Fresno, Los Angeles, Sacramento, San Bernardino, San Diego, San Francisco, San Jose, Sonoma, Stanislaus

BA

BS

Bakersfield, Dominguez Hills, Fresno, Humboldt, Los Angeles, Northridge, Pomona, Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo, San Marcos, Stanislaus

Train Next-Generation Innovators

- Create a doctoral program in Interdisciplinary Design (Doctor of Design).
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CSU Design Programs

Doctoral Program

San Diego State University

MA

MS

MFA

MDES

MCRP

East Bay, Fullerton, Long Beach, Los Angeles, Northridge, Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo

BA

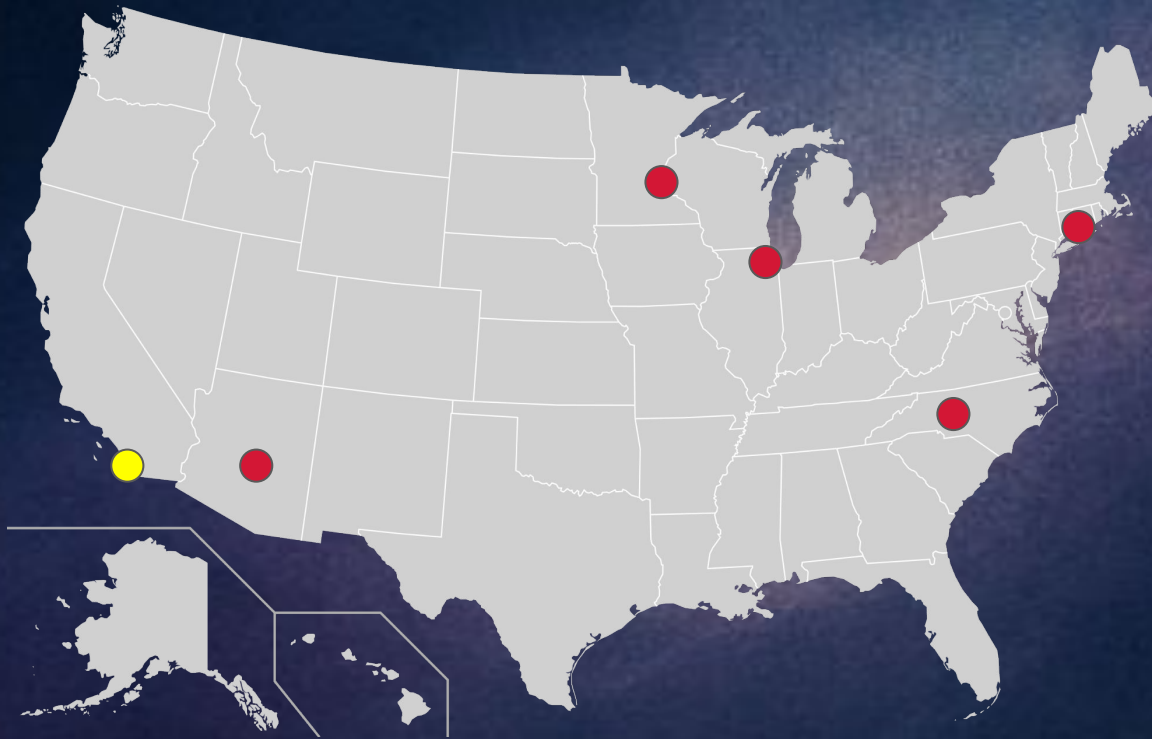
BFA

BM

BS

Chico, Dominguez Hills, East Bay, Fresno, Fullerton, Long Beach, Los Angeles, Monterey Bay, Northridge, Pomona, Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo, San Marcos

Become A Nationally Recognized Leader in Design



Current PhD in Design
programs in the U.S.A (2025)

Arizona State University
Harvard University
Illinois Institute of Technology
North Carolina State
University
University of Minnesota

Future program
San Diego State University

Vision

C-MAR is a next-generation built-environment innovation hub that engages the full spectrum of human perception and emotion to promote worldwide health and well-being.

The Doctor of Design degree at San Diego State University will be a leading design program for interdisciplinary research and innovation.

Goals

- **Foster** interdisciplinary research collaborations.
- **Train** next-generation creative innovators in interdisciplinary design research.
- **Develop** tools for multisensory design innovations.
- **Establish** a Certificate in Multisensory Architectural Design Leadership.

Interdisciplinary Faculty Team



Matthew Anderson
Physics



Sara Saghafi Moghaddam
Art and Design



Qi Wang
Aerospace

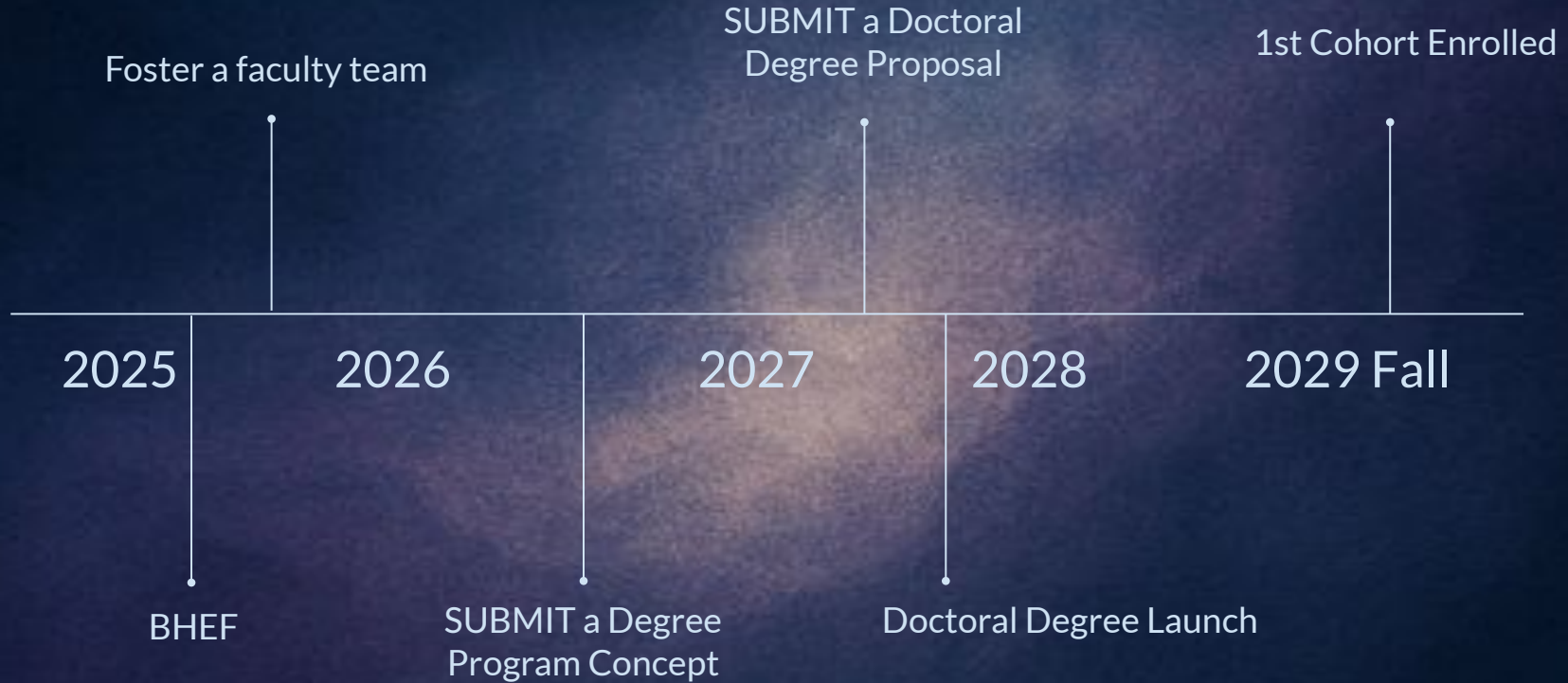


Chris Warren
Music



Yin Yu
Art and Design

Timeline





Thank you!

C-MAR

A next-generation built-environment innovation hub that engages the full spectrum of human perception and emotion to promote worldwide health and well-being.