

Center for Science and Innovation



The University of San Francisco





is poised to usher in a new era of science learning

that will not only benefit its students but the Bay Area and the nation. Evolving global concerns and exciting breakthroughs in science mean the planned Center for Science and Innovation will position USF as a destination for cutting-edge undergraduate study.

State-of-the-art flexible laboratories and sophisticated digital studios will revolutionize the work of the university's science programs and create the perfect platform for launching the next generation of science innovation. Designed by the award-winning architecture firm NBBJ, the project is imbued with a dedication to student discovery, as the design springs from current need to a bold future.

An architectural rendering of a modern building with a facade of vertical panels featuring a perforated pattern. The panels are illuminated from within, creating a warm, golden glow. A paved walkway with a brick-like pattern runs alongside the building, where several people are walking. A large tree with bright yellow autumn leaves stands to the right of the building. The sky is blue with light clouds.

Where need meets opportunity,

“With universities around the country stressing research over teaching, we want to build a space that encourages both. The new Center for Science and Innovation will allow faculty to bring students into the labs, to enhance collaborative and interdisciplinary work. Every undergraduate will be exposed to state-of-the-art science teaching and research facilities.”

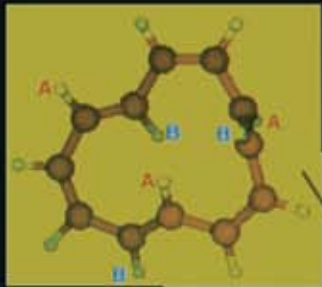
Jenifer Turpin, Dean, College of Arts and Sciences

the university sees more than a building.



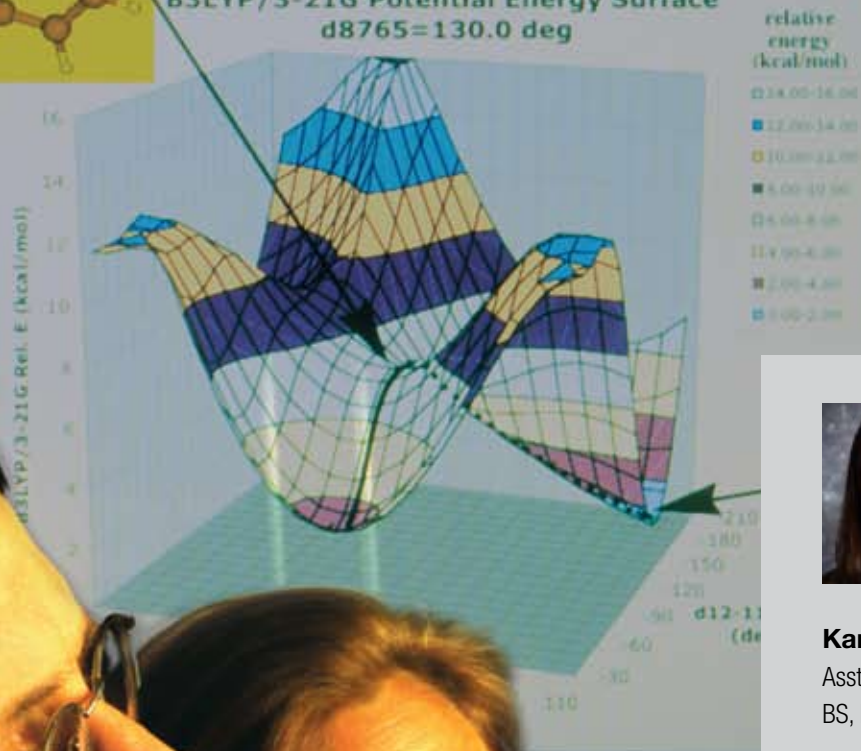
The Harney science center has seen little renovation since it opened in 1965, while the sciences have grown dramatically. The new facility will address current shortcomings while claiming new vistas for the university. As it incubates future minds and programs, the center will:

- Leverage USF's ideal location in the Bay Area's wellspring of technology
- Provide a proper home for the science programs and cutting-edge equipment
- Replace timeworn existing laboratories
- Bolster the university's mission, educating leaders for 21st century problems
- Declare a commitment to the future by remaking the core of the USF campus



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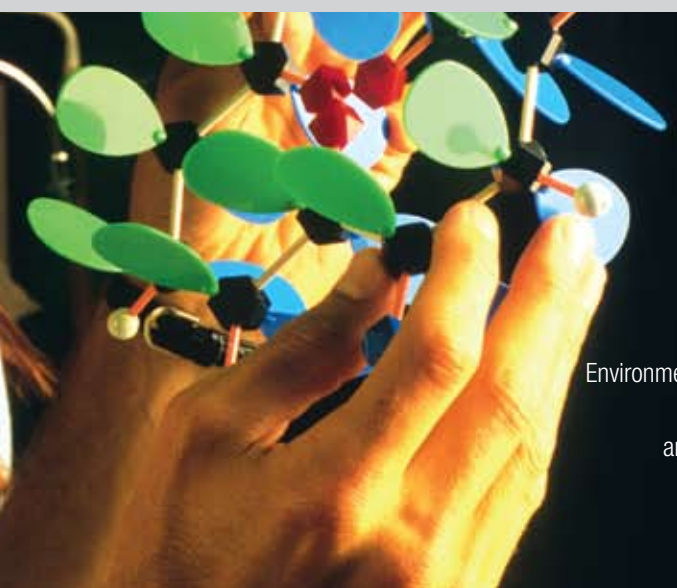
Igniting passion,



“Deciding to attend USF was probably one of the best choices I made as a young adult.... With a strong focus on teaching and students, USF is a great place to learn and grow.”

Kanani Lee '99

Asst. Professor of Geophysics, Yale University
BS, Physics USF 1999, PhD, UC Berkeley 2003, Postdoc Cal Tech



Environmental Science professor
William Karney, PhD,
and Chemistry professor
Claire Castro, PhD

the center embraces student/faculty interaction



Professor Castro with student Colleen McShane

as a primary design principle. Laboratories, classrooms, digital studios, and advanced instrument rooms all focus on student learning and discovery in science. These spaces are designed to:

- Revolutionize basic and translational sciences
- Germinate new boundary-crossing curricula
- Expand student research with faculty
- Prepare *all* students for an increasingly technological world
- Provide critical biology training to nursing majors
- Grow new collaborations between business programs and the sciences

Processes

A process is a program in execution

A process has its own address space

Process elements in user space:

- Code, data, stack, registers

Process elements in kernel space:

- Process ID (PID), priority, status, open files

Processes can create other processes

Processes form a process tree

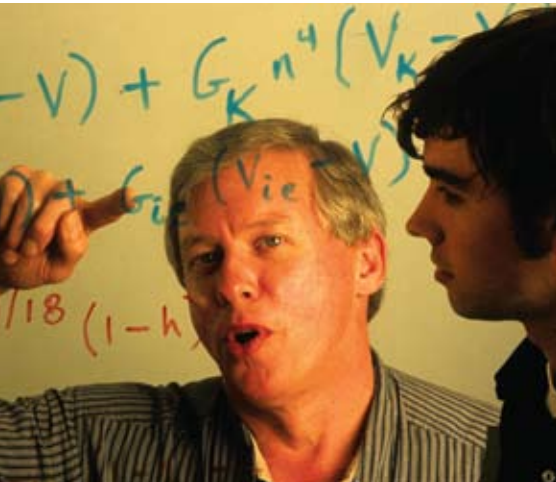
All processes descend from the init process



“Undergraduate-focused programs are a vital part of science in the U.S. I’m very happy to see USF’s plans for their new facility, with an integrated approach, focusing on students’ close work with faculty.”

Dr. Bruce Alberts, UCSF
Editor in Chief, *Science* magazine
Former President, National Academy of Sciences

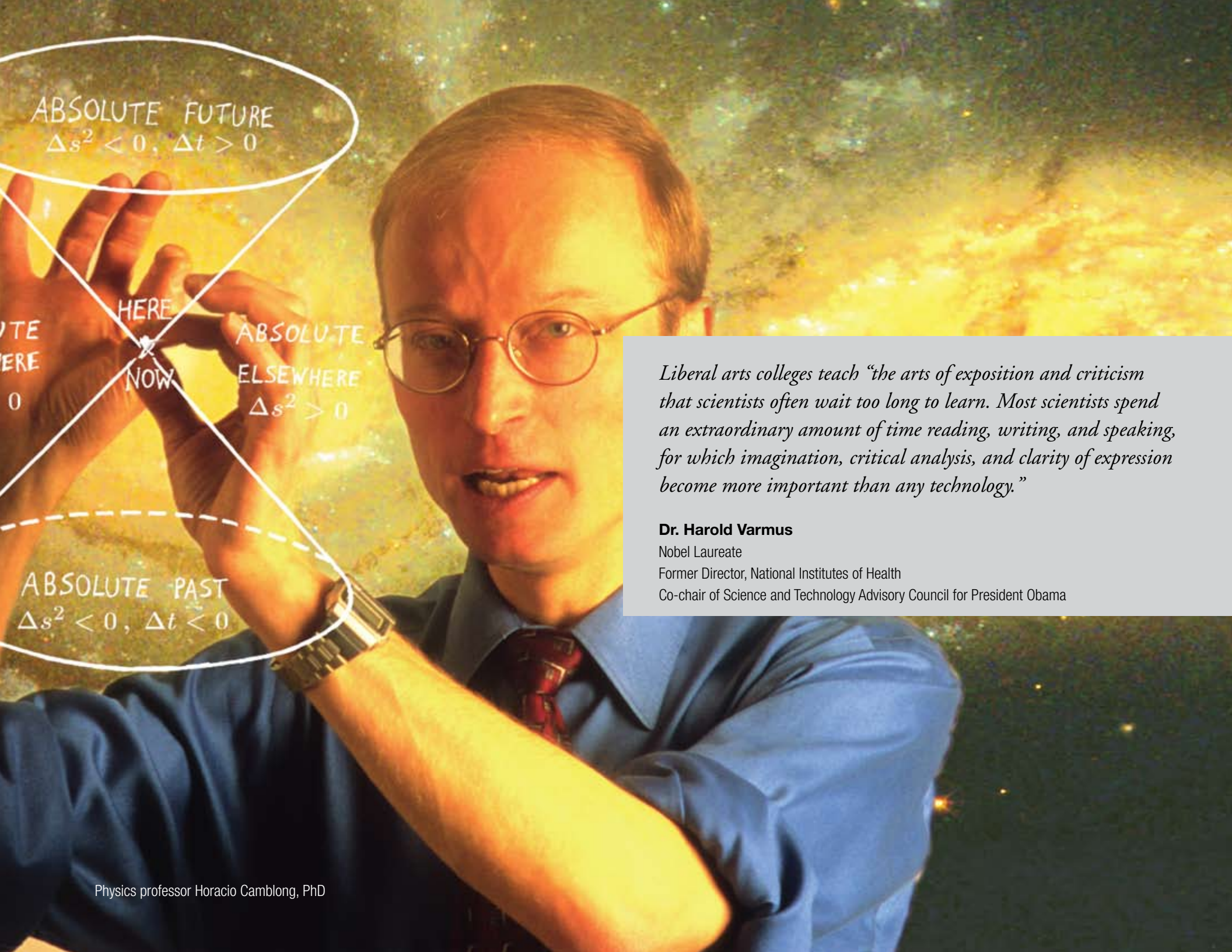
A bold step, carefully considered, **builds** on strength.



Mathematics professor Peter Pacheco, PhD

Twice the national average—that's what our science graduates achieve in terms of their admission rate to medical school and the rate at which they go on to earn PhD's from the nation's leading research institutions. The Center will be built on current pillars of excellence, promising the greatest impact in the following areas:

- **Computation.** “Please send more,” is what our computer science department hears from Silicon Valley. The Center will put the department in an elite position, and expand the role of computational research in other programs.
- **Health.** The Center will strengthen and expand the training of students heading into health professions and research programs, including biotechnology and studies of disease.
- **Environment.** The Center will provide laboratories to thriving and expanding environmental programs including biofuels and wetland restoration work, providing change agents for the green economy.



Liberal arts colleges teach “the arts of exposition and criticism that scientists often wait too long to learn. Most scientists spend an extraordinary amount of time reading, writing, and speaking, for which imagination, critical analysis, and clarity of expression become more important than any technology.”

Dr. Harold Varmus
Nobel Laureate
Former Director, National Institutes of Health
Co-chair of Science and Technology Advisory Council for President Obama

Physics professor Horacio Camblong, PhD

With impact felt beyond the classroom,

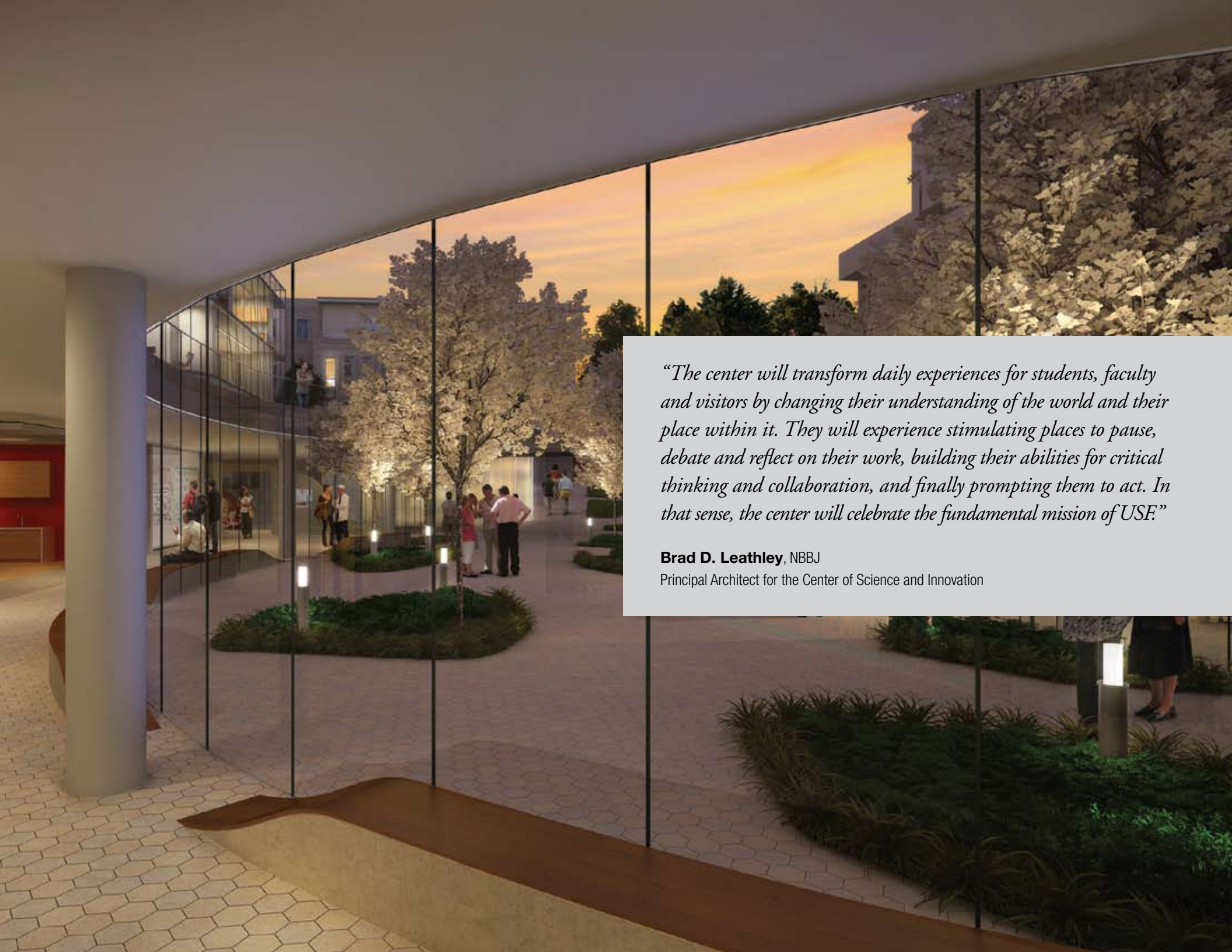


Example of a wet teaching lab

the university plays a critical and expanding role in the area's ecosystem of technology education, research, and business, sparking young scientists, doctors, and innovators.

While research-focused institutions highlight Ph.D. and postdoctoral levels, USF focuses on undergraduates, the critical, formative stage of scientific development. USF's unique graduates are:

- Earning more than their share of MDs and PhDs
- Representing one of the nation's most diverse student bodies
- Infused with Jesuit rigor, emphasizing communication, justice, and global awareness
- Serving local communities as part of their training

An architectural rendering of a modern building interior. The space is characterized by a large, curved glass wall that provides a view of an outdoor courtyard. The courtyard features a paved walkway, several trees, and small, illuminated planters. People are depicted walking and standing in the courtyard, suggesting a vibrant, active environment. The sky outside is a mix of orange and yellow, indicating sunset or sunrise. The interior floor is made of light-colored, hexagonal tiles. A large, white cylindrical column is visible on the left side of the frame.

“The center will transform daily experiences for students, faculty and visitors by changing their understanding of the world and their place within it. They will experience stimulating places to pause, debate and reflect on their work, building their abilities for critical thinking and collaboration, and finally prompting them to act. In that sense, the center will celebrate the fundamental mission of USE!”

Brad D. Leathley, NBBJ

Principal Architect for the Center of Science and Innovation

Pulling the campus together, in green and gold.



Biology and Environmental Science Professor
Deneb Karentz, PhD, with student

From high-performance computing to low-impact contemplation, the Center for Science and Innovation will be anything but just another building. Simultaneously creating the new “living room” for campus, and announcing the university’s commitment to sustainable design, the center will feature:

- Expansive informal study spaces for students
- A targeted LEED Gold rating for environmental design
- Future-focused architecture, putting science on display
- Appealing, multipurpose outdoor gathering spaces
- A reimagined central plaza with an inviting atrium

Combining hands-on science skills with the depth and social focus of a Jesuit education, the Center for Science and Innovation will produce a unique, high-impact stream of citizens and scientists to the Bay Area, the nation, and the world. The time is right, the impact certain, and the need great. Please accept our invitation to make this signature project a reality for future generations.

For more information, or to get involved, contact csi@usfca.edu
www.usfca.edu/giving/csi/



"I transformed from the 'C' student that I was in high school into a medical student who is passionate about science...The countless opportunities to volunteer my time helped me realize that I wanted to enter a service-based profession, such as medicine, where I could also apply my interest in the sciences."

Eric Munoz, MD
BS Biology, 2005
Medical Research Fellow,
Howard Hughes Medical
Institute



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Educating Minds and Hearts to Change the World