



Spring 2025 PUBLIC VISITS

Open Hours:

2025

February 14 - May 25
Friday, Saturday, Sunday
2:00 - 5:00 PM

Location:

CAMLab Cave
Lower Level, 485 Broadway
Harvard University
Cambridge 02138

Admission Fee: \$15 per person

Free for research and pedagogical purposes. Email us at camlab@fas.harvard.edu
in advance to schedule a visit tailored to your needs.



CAMLab
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Department of
History of Art + Architecture

Welcome to CAMLab Cave

As the physical hub of Harvard FAS CAMLab, the Cave fosters innovative forms of knowledge production, pedagogy, and sensorial media practice.

For CAMLab, the term “cave” summons multiple moments across human history. Within the history of art, caves serve as a starting point. Cave paintings are among the earliest forms of artistic production; examples in Spain, Indonesia, and elsewhere date back to the paleolithic period. More broadly, throughout global intellectual history, caves have served as transcendental spaces that set the stage for contemplation and immersion within the inner world of cognition. In European philosophy, Plato crafted the allegory of the cave as a microcosm of metaphysical understanding. For Buddhism, caves across Asia have served as key sites of ritual practice and meditation for over a millennium. A more recent milestone in the history of cave-making occurred in 1992 at the University of Illinois. There, the C.A.V.E. (Cave Automatic Virtual Environment) displayed projections across its three walls and established an early prototype of immersive projection space.

Carrying this history forward into the 21st century, CAMLab Cave opened in 2022 as an experimental stage for instantiating enduring questions of human consciousness within digital, multisensorial media. The Cave transports visitors beyond the here and now, in ways that facilitate immersive-spiritual experiences of cultural history and open new dimensions of knowledge and understanding.





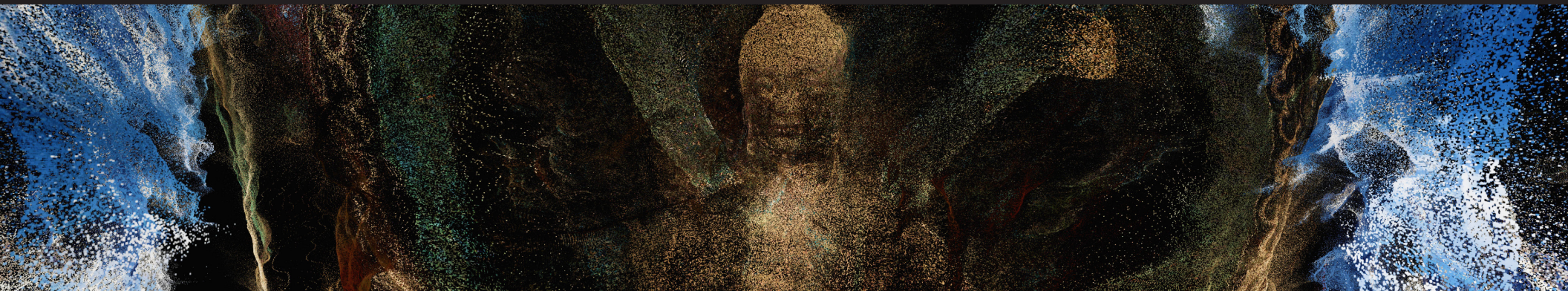
Dunhuang and Beyond

A major milestone and world-renowned heritage site within Silk Road networks, Dunhuang preserves more than 400 embellished Buddhist cave shrines in present-day northwest China.

Dunhuang's cave shrines date from the fifth to fourteenth centuries. Each encloses visitors within murals and carved figures that depict Buddhist legends and paradises. Chronicling innumerable exemplary works of Buddhist artmaking over centuries, Dunhuang forms the largest encyclopedia art collection in situ. More significant than these artistic achievements, the caves offer a glimpse into a universe that rests beyond our known physical reality. Much like the shadowy illusions of Plato's allegorical cave, the pictorial programs across Dunhuang's caves reveal higher truths about life, death, and spiritual transcendence.

In Spring 2025, CAMLab contextualizes Dunhuang within Buddhism's broader currents of space- and art-making that

surged across China during the medieval period. Immersing visitors in confluences of light and sound, the Cave Dance and Shadow Cave projects are case studies of Dunhuang caves that reimagine the rich theatricality conjured by depictions of the dramas of the Buddha's life and dances of transcendent beings. Rebuilding the world's tallest pagoda in a virtual experience, the Embodied Architecture project invokes an 11th century transmission of these dynamics within the towering Shayka pagoda of the Fogang Monastery in present-day Yingxian, China. There, Buddhist pictorial motifs demarcate a journey of ascension toward enlightenment. The Digital Temple project uses an interactive interface to unpack the multiplicity of compositions and multivalent topographies rendered across the murals of Kaihua monastery. By examining Buddhism's three primary contexts in medieval China—the cave, the pagoda, and the temple—these CAMLab projects reveal the dramatic perceptual experiences and invisible force fields embedded by visual programs within Buddhist sites.





Cave Dance

Widely acclaimed as Dunhuang's most representative artistic achievement, scenes of celestial dance performances render beautiful, ethereal figures across numerous Dunhuang caves. CAMLab's Cave Dance project began by considering Dunhuang's thousands of dancer depictions as a data set. Taking over 5000 examples of static murals and carved figures, the Cave Dance team used line drawings to establish a common language of postures and train a machine-learning model, which generated animated motion sequences for the dancing figures. To further augment this data, CAMLab collaborated with trained dancers at the Beijing Dance Academy, who performed the movements of dance notation records also preserved at Dunhuang. As a whole, this human-computer collaborative choreography serves as the foundation of the Cave Dance project.

Applying these movement sequences to animate ethereal motifs, the Cave Dance installation is a reconstruction and reimagination of the celestial dance staged within Cave 220 at Dunhuang. From bringing to life a Bodhisattva sculpture (one of the project's data points) from Harvard Art Museums' collection, Cave Dance's performance cycles through medieval texts' metaphorical accounts of celestial dance. Likening the dancer to a flame in the wind, a fragrance, or a cloud, these texts described celestial dancers as immaterial yet highly sensorial—and as epitomizing the Buddhist transcendent state of the "bodiless body." The infinite horizon of the Cave Dance's mirror-lined space further enacts the bodiless body, opening deeper experiential dimensions, even beyond the room's boundaries. Through this digital performance, Cave Dance elucidates the multifold culture of dance in Buddhist shrines.





Shadow Cave: Dunhuang Mogao Cave 254

CAMLab's Shadow Cave project consists of a series of digital multimedia installations that reinterpret a foundational myth of Buddhism for an international contemporary audience. Around the year 400 CE, a story arose in Nagarahāra (modern-day Afghanistan) that the Buddha had leaped into a cliffside cave and left his "shadow image" there to continue preaching. Radiant like a mirror when seen from afar, it miraculously receded into the rocky surface upon approach. Spread by word and image throughout the Buddhist world, this story inspired pious yearning and ritual visualization, motivating a millennium of icon-making practices and drawing countless pilgrimages along the Silk Road.

Constructed in the late 5th century, Cave 254 at Mogao, Dunhuang, is among the extant Buddhist artifacts closest in time to the shadow cave myth. The cave's program of murals and sculptures bring together otherwise unrelated Buddhist stories to map the transformation between states of being—from an embodied individual, through meditative

concentration, into a disembodied spirit-consciousness. The program ranges between radically different scales of time, from the immediate present to eons past and the infinite future. Indifferent to any particular viewer, the cave turns physical space into virtual space and identifies it with the mind, giving form and structure to the afterlife.

For this episode in the Shadow Cave project, CAMLab animates Cave 254's stories about foregoing the body using theatrical lighting and sound, and simulates its shuttling between real and virtual through particle effects and manipulations of color and speed. The contemporary "black box" is at once reinvented and reconnected to an ancient lineage of caves of the mind. The installation's climax features a rush of Buddha icons generated by artificial intelligence—an aggregate human consciousness, so to speak. Surging across CAMLab's Immersive Theater, this iconography echoes the ambiguities between yearning and doubt, individual and collective, image and imagination at the heart of the original myth.



Embodied Architecture: Buddhist Pagodas of the Liao Dynasty (916-1125)

The Embodied Architecture project unfolds the cultural logic of the eleventh-century Shakya Pagoda of the Fogang Monastery (located in Yingxian, China). One of the tallest wooden structures in the world, the pagoda rises 67 meters above the ground and was built without a single nail. It epitomizes the sophistication of medieval Chinese carpentry—and also set the stage for a series of ritual practices.

Presented within the Infinity Room are a series of excerpts from Buddhist sutras, which CAMLab's research team found encased within the Buddha sculptures that stand at the centers of the Yingxian pagoda's five floors. Serving as clues for deciphering the pagoda's design, these texts indicate that the pagoda maps a process of transcendence from its bottom to top floors. The texts also draw allusions between the pagoda's design and Indra's net, the central metaphor of Avatamsaka cosmology. Describing the universe as a web of jewels so radiant that they infinitely reflect each other, Indra's net defines identity not as discrete, but instead as relative to all other beings. The Infinity Room activates these

texts' reflections to form an infinite matrix, mirroring the cosmology that underpins them.

Through its immersive film, Embodied Architecture navigates a total reconstruction of the pagoda in VR that CAMLab built by combining an array of technologies (from photogrammetry to architectural modeling and computer-generated imagery). The film approaches then ascends the pagoda, unfolding the ways in which rituals transformed each floor into mindscapes of meditative visualization. The stairway follows the path of circumambulation (a practice of repeatedly walking around a central point, transmitted from South Asian stupa worship); a moon disk emerges from within a Buddha sculpture; incense smoke summons the presence of the Buddha as a series of mudra hand gestures. Throughout, a soundscape of bells and chanting reverberates. As it narrates the arc of the pagoda's existence—from the formation of its structure and continuance of its icons, to the decay of its materials and its decomposition into the landscape—the film evokes the multisensory spiritual experience embodied by the pagoda.



Digital Temple: Kaihua Monastery (c.1096)

Nestled into the western foothills of the Taihang range in China's Shanxi province, Kaihua Monastery (c. 1073/1092–96) was once a large complex of structures. However, today only one Northern Song building still stands: its main Buddha hall (the Mahavira hall). With an interior rich in pictorial iconographies, this Buddha hall's visual program transformed it into a virtual theater by embedding both temporal and spatial transformations within its representations. By unpacking the artistic and religious underpinnings of the temple's visual program, CAMLab stages a virtual experience of the temple's transformative process, through which an array of semiotic and sensorial media reconstruct—and facilitate—the transcendence of embodiment.

Through an immersive online experience, CAMLab invites audiences to explore Kaihua Monastery's main Buddha hall. Visitors first approach the hall and see its setting on the mountainous landscape, which served as a backdrop for the mural stories within the temple. Entering the temple's space, visitors can explore the intricate murals of the temple's interior. There, ethereal light emanates from the Buddha in its various forms, reimagining the ritual experience of practices such as meditative visualization within the temple.

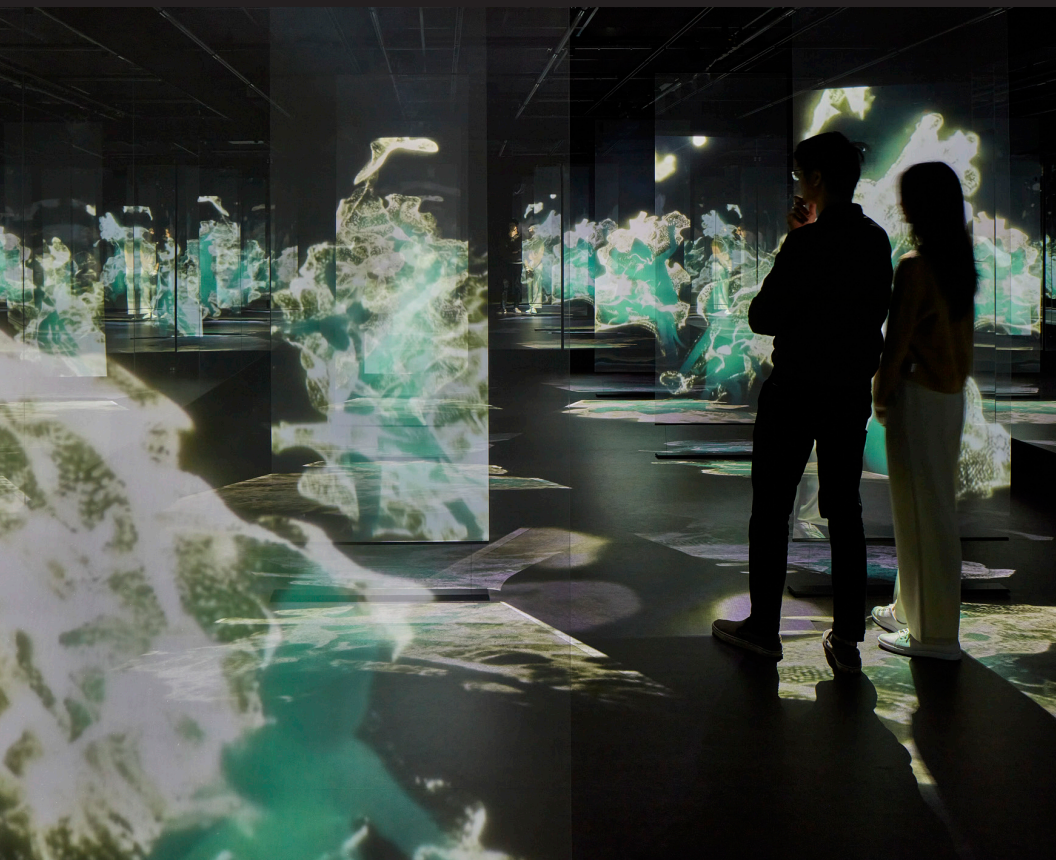
Further exploration of the Kaihua Monastery is available at www.digitaltemple.art.



About Harvard FAS CAMLab

The Harvard FAS CAMLab fosters cutting-edge research, design, and exhibition projects fueled by both humanistic inquiry and multisensorial technology. Our innovative and interdisciplinary experiments probe and elucidate art and culture through immersive installations, exhibitions, films, digital and print publications, and other digital formats.

For more information, visit camlab.fas.harvard.edu.



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