

# ARCHITECTURAL RECORD

## Calit2, University of California San Diego

La Jolla, California

NBBJ

### Wireless communication dictates choice of materials



Photo © John Durant

As part of a statewide initiative to keep California at the forefront of technological innovation, the University of California envisioned a network of four institutes that would use collaboration to address large-scale societal issues. It established the second of these institutes, Calit2, in San Diego. This Institute houses some of the most advanced communications research facilities in the nation including clean rooms, micro-electro-mechanical labs, immersive virtual reality, and an ultra-high-definition digital cinema.

In designing every aspect of the building, NBBJ was inspired by the vision of interconnected, ubiquitous broadband wireless communication—and the Institute’s mission to develop new strategic applications through public-private partnerships. A dynamic balance between the building’s forms and mass expresses the coexistence of related but opposing forces. A rectangular form, facing onto a courtyard, houses support systems and lab functions; a curvilinear form, by contrast, responds to the natural boundary of a canyon and provides flexible, open-plan spaces for collaboration.

But collaboration can occur throughout the spaces: in one-on-one meetings within an office or laboratory, in chance encounters in the hallway, in lounges, research clusters, conference rooms, a black-box theater, and a courtyard. Around the perimeter of the building’s upper floors, faculty offices define a research cluster. This space’s orthogonal form contains mechanical functions and responds to man-made site conditions. A series of large, clear-glazed windows along this façade define interior circulation pathways.

Technology, embraced as a unifying element, informs the building’s character and appearance. To this end, NBBJ discovered that ordinary metal and glass both weaken wireless signal transmission. Thus, the design team developed an innovative composite façade that minimizes electromagnetic interference, as well as a steel structural system that makes it easier for researchers to map interference points. Features such as these ensure that as wireless communications continue to transform the world around us, Calit2 and its technological research will continue to evolve and meet new needs.

#### Formal name of Project:

California Institute of Telecommunications and Information Technology (Calit2), University of California San Diego

#### Location:

La Jolla, California

#### Gross square footage:

220,000 sq. ft.

#### Total project cost:

\$57 million

#### Owner:

University of California, San Diego