

Revamped SFMOMA theater gets acoustic tune-up

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Photo: Courtesy Richard Barnes Photography

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The vastly expanded San Francisco Museum of Modern Art includes a renovated Phyllis Wattis Theater with a state-of-the-art sound system.

Among other things that had to be demolished to make way for the hugely expanded San Francisco Museum of Modern Art was half the museum's old Phyllis Wattis Theater, cut in two by the structural needs of the 10-floor addition built on top of it.

That required a major and much-needed renovation of the 275-seat theater, a multipurpose room that worked fine for lectures, meetings and screenings but was acoustically inadequate for live music and more sophisticated multimedia.

Turning the Wattis into an optimal place for many uses was the charge of the team led by **Duncan Ballash**, principal of the San Francisco architectural firm EHDD, which has designed such notable cultural projects as the Monterey Bay Aquarium, the Exploratorium at Pier 15 and the new Berkeley Art Museum Pacific Film Archive. The firm served as associate architect for the Snøhetta-designed SFMOMA expansion, designing renovations in the museum's original Mario Botta building.

Overall, the old theater "performed pretty well," Ballash says, but as the museum began expanding its programs, "acoustically it was challenged."

He worked with San Francisco theater designer Len Auerbach and acoustic engineers from the firm Arup to get the sound right in the renovated theater. Key to that was installing Meyer Sound's Constellation, an extraordinarily flexible sound system that can give a room the acoustics of a recital hall, a cathedral and countless other places.

The system is now being used in the San Francisco Symphony's new Soundbox, at Berkeley Rep's new Peet's Theatre, the Exploratorium theater and elsewhere around the country and abroad.

"Using their software, you can tune the room and get the perfect acoustics for whatever you're using the space for," says Ballash, who will talk about acoustics and architecture when he appears on a panel called Sound Matters in the Wattis on June 9.

Presented by Meyer Sound, which is based in Berkeley, the discussion is part of the San Francisco Design Week festivities. It brings Ballash together with UCSF cognitive neuroscientist **Dr. Adam Gazzaley**, chef/restaurateur **Gabriela Cámara**, Stanford's Director of Classroom Innovation **Robert Smith** and SFMOMA Deputy Director **Ruth Berson**. Yerba Buena Center for the Arts Executive Director **Deborah Cullinan** will moderate.

Ballash initially thought he could essentially replicate the theater Botta had designed, which used natural acoustics, and upgrade the sound and media technology. But then his team learned that big beams being installed to support the new addition “would reduce the effective height of the space, screwing up the geometry and making good natural acoustics more challenging.” Ballash says.

He and Auerbach went instead for the Constellation system, which uses “virtual acoustics,” sending sound at precisely calibrated speeds from speaker to speaker, back and forth across a room, rather than having it reflect off the architectural surfaces.

The museum, Auerbach says, wanted to do more live music and media presentations, which require different acoustical environments.

“Music calls for a dry space, and you need a more reverberant space for cinema,” Auerbach says. With this system, “you get both, and everything in between.”

The designers raked the seating slightly higher than before and framed the audience with “transoncent” — acoustically transparent — aluminum walls that allow sound to pass freely through their slats.

“We wanted to create a sense of intimacy and enclosure,” says Ballash, who thinks his profession is becoming more attuned to acoustics and “what a big impact sound has on how people perceive and experience spaces.”

For more information on Sound Matters, go to www.2016.sfdesignweek.org/category/?s&events