Apertures reflect a current architectural discourse of digital ecologies, emphasizing the relationship between the natural world and advances in digital technology, which leads to a new type of interactive, organic buildings. The installation focuses on a symbiotic relationship between nature, building morphologies, and material expression.
Rooted in Baumgartner+Uriu’s work and ongoing research, Apertures challenges the notion of an architectural opening as a static object. Moreover, it aims to redefine the DNA of a window both in terms of its appearance and materiality, as well as its nature as an object in continuous flux, responding to its environment through movement or sound. The pavilion and its apertures are designed to physically engage the visitor with the architectural work through sensors and sound feedback loops, creating an immersive spatial environment in which the visitor can experience their own biorhythms.

The 16 foot tall, thin shell structure was designed to solely rely on its extremely thin surface (1/8") as support, requiring no additional structural elements. Structure and surface are collapsed into a single component supported through its shape, creased surfaces and material strength only. Each one of the 233 panels is unique in terms of its shape. They are CNC milled from polyurethane foam, heat formed out of thermoplastic polymer resin, and then laminated together into a single object.

Unique to this project is the proposal of building as organism, challenging how architecture can interface with its users and its environment in which the boundary between the human body and architectural object dissolves into an immersive, interactive environment. This entails both the use of technology to augment its performance and a design aesthetic that is incongruous and can incorporate analog features into a digital design process.
IMAGE CREDITS
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HERWIG BAUMGARTNER is a licensed architect and principal and co-founder of the Architecture firm BplusU, based in Los Angeles. He received his diploma in Music and New Media from the University of Music and Performing Arts in Vienna in 1992 and graduated with honors with a Master’s degree in Architecture from the University of Applied Arts in Vienna in 1996. Baumgartner is a professor currently teaching design for the graduate and undergraduate programs at the Southern California Institute of Architecture (SCIARC) and has previously taught a graduate design studio at the University of California in Los Angeles (UCLA). In 2000, he co-founded BplusU, for which he is both Design Principal and Partner.

SCOTT URIU is a licensed architect based in Los Angeles. He received his Bachelor of Architecture degree from California State Polytechnic Pomona in 1993 and studied at the Architectural Association in London, Diploma Unit 7 from 1992-1993. Uriu is a professor and teaches design and applied studies the University of Southern California and at the Southern California Institute of Architecture (SCIARC). Uriu worked as an architect at Gehry Partners for over 7 years. In 2000, he co-founded BplusU, for which he is both Design Principal and Partner.