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PRESENTER ABSTRACTS

ACADEMY OF NEUROSCIENCE FOR ARCHITECTURE

Case for an Architectural Singularity Through Robotically Actuated Motion and Neuro-Sensensory User Interaction (or how to become a building)

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1. ABSTRACT:

By fusing neuro-sensing technology, robotics and coding in unison with architectural form designed to move and reconfigure itself, a new kind of architecture that goes through a formal transformation in interaction with the user can be imagined and devised. Aiming to merge human presence with space through technology, this new architecture defines space as an extension of the human consciousness rather than one that regulates and controls it. Similar to terminology in the discipline of Artificial Intelligence, where human consciousness merges with computation, such a condition can be called Architectural Singularity, where architecture becomes the host rather than the body itself.

Through historic examples, theoretical vantage points from art, architecture and media theory as well as built design experiments, in particular the “Cerebral Hut”; the first spatial scale experimental architecture that goes through formal transformation based on data from EEG, this paper aims to problematize the conclusive notion of architectural form and agency. In Cerebral Hut, as the user concentrates, the EEG device activates an electromechanical system that changes the formal configuration of the space physically. This transformation influences the source of the EEG data in return, creating a symbiosis between space and consciousness. Therefore the user becomes architecture, code becomes form and robot becomes the user in continuous feedback loops.

2. AUTHOR BIO:

Güvenç Özel is an architect, artist and researcher. He is the Technology Director of IDEAS, a multidisciplinary research and development platform at UCLA Department of Architecture and Urban Design; and the principal of Ozel Office Inc., an interdisciplinary design practice located in Los Angeles, working at the intersection of architecture visual arts, technology and research on urban culture. A native of Turkey, Özel studied architecture, sculpture and philosophy in Bennington College. In addition, he holds a Masters of Architecture degree from Yale University, where he graduated with multiple awards. Prior to establishing his own practice and research, he worked in the architecture offices of Rafael Vinoly, Jürgen Mayer H. and Frank Gehry, among others. His projects and experimental installations were exhibited worldwide, including Istanbul Museum of Modern Art and The Saatchi Gallery in London. He formerly taught at Yale University, Woodbury University and University of Applied Arts in Vienna, where he was teaching with visionary architect Greg Lynn. His recent work has been heavily published in online and print media such as CNN, Wired, Huffington Pos, Boston Globe, Architectural Digest, Gizmodo, Creators Project/ Vice, Dwell, Designboom, and others. At UCLA IDEAS, Besides determining the overall pedagogical objectives and technological trajectories for the master’s program, he continues his experimental research on robotics and sensing devices as they relate to Art and architecture for the creation of reactive, intelligent environments.