In an innovative collaboration between scientists and artists, ?Your Brain on Art? is a series of studies that seek to understand what happens in the brain as people create and contemplate art.

To explore this mystery, Jose ?Pepe? Luis Contreras-Vidal, professor of electrical and computer engineering at UH and director of the University?s Non-Invasive Brain Machine Interface Systems Laboratory, has teamed up with Houston-based sculpture installation artist Jo Ann Fleischhauer in an 18-month-long study on the creative process.

For the study, Fleischhauer wears a mobile brain-body imaging (MoBI) system comprised of a portable electroencephalography (EEG) headset, motion sensors, and a videocamera, while researching and working on her current art project and conducting her daily activities, such as going to the gym and cleaning her house ? activities that can sometimes lead to creative inspiration for Fleischhauer. The goal of the project is to spatial and temporal maps of neural activity in Fleischhauer?s brain linked to the aesthetic and creative experiences.

?This is the first experiment, at least to my knowledge, that researchers have been tracking EEG data for such a long period of time,? said Ph.D. student and UH-Houston Methodist Fellow Jesus Cruz-Garza. ?We are collecting data in a very unconstrained setting, which is not typical in neuroscience.?

Contreras-Vidal is hopeful that the results of this study will further bridge the gap between art and science, and lead to broader impacts in science, technology, engineering, art and math (STEAM) education, medicine, and neurotechnology development.

?We know that creativity is important in the arts. What we would like to say is that creativity is also important in engineering and science,? he said.
Click here to watch our video about this study!

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