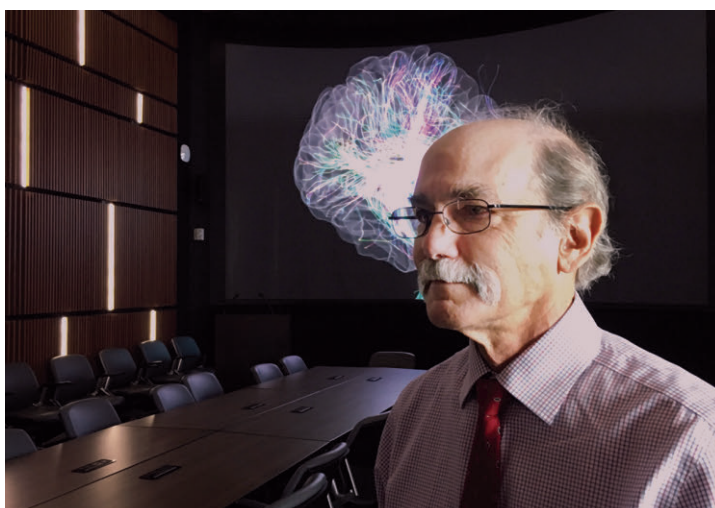


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Brain boost: USC launches cutting-edge neuroscience center



The USC Mark and Mary Stevens Hall will house the USC Mark and Mary Stevens Neuroimaging and Informatics Institute, where researchers will conduct advanced studies on brain diseases like epilepsy and Alzheimer's disease. *Assasi Productions, Courtesy of SmithGroupJJR; Arthur Toga, PhD, provost professor of ophthalmology and director of the USC Stevens Neuroimaging and Informatics Institute. Photo by Sanden Totten/KPCC*

By Sanden Totten

On Thursday, the University of Southern California opened the doors to its newest hub of research, the Stevens Hall for Neuroimaging.

This state of the art center hopes to foster collaboration between neuroscientists around the world.

It's the brain child (pun intended) of Arthur Toga, PhD, director of USC's Neuroimaging and Informatics Institute. Toga helped design the building and will be spearheading many of the projects there.

One of its central features is a room full of humming, glowing servers housing one of the largest repositories of brain

data in the world.

Toga says any researcher can apply for an account to access the hundreds of thousands of brain scans in the collection.

"The goal here is to share the wealth, the wealth in data," he said. "Since we still have so much to learn, the more minds that are examining this data, the better off we'll all be."

So far researchers from more than 200 countries have worked with the database which includes magnetic resonance imaging (MRI) and positron emission tomography (PET) scans, genome data and records of blood and cerebrospinal fluid samples.

Toga hopes this robust collection will help scientists gain a better understanding of how things like Alzheimer's disease and schizophrenia take hold in the brain.

The University of Southern California has been trying to raise its reputation as a center for cutting-edge neuroscience in recent years. In 2013, USC acquired Toga's lab from UCLA, and last year the school was embroiled in a legal battle over another brain researcher who came over from UC San Diego.

The new facility is the latest move in USC's effort to burnish its credentials in the hard sciences.

In addition to the brain scan collection, the center houses a massive MRI machine, and Toga hopes to add another soon.

The building also includes a conference room tricked out with a theater-sized LED screen that will be used to display high definition renderings of the brain.

“We need to get close to the data, and visualizing it is critical to doing that,” Toga said.

Much of Toga’s work is funded by federal grants, including a \$21.7 million award from the National Institutes of Health to study epilepsy.



The first floor of USC Stevens Hall houses the world’s largest brain research data repository, currently holding 2,867 terabytes of information from every continent except Antarctica. *Photo by Richard Carrasoc/Keck Medicine of USC*