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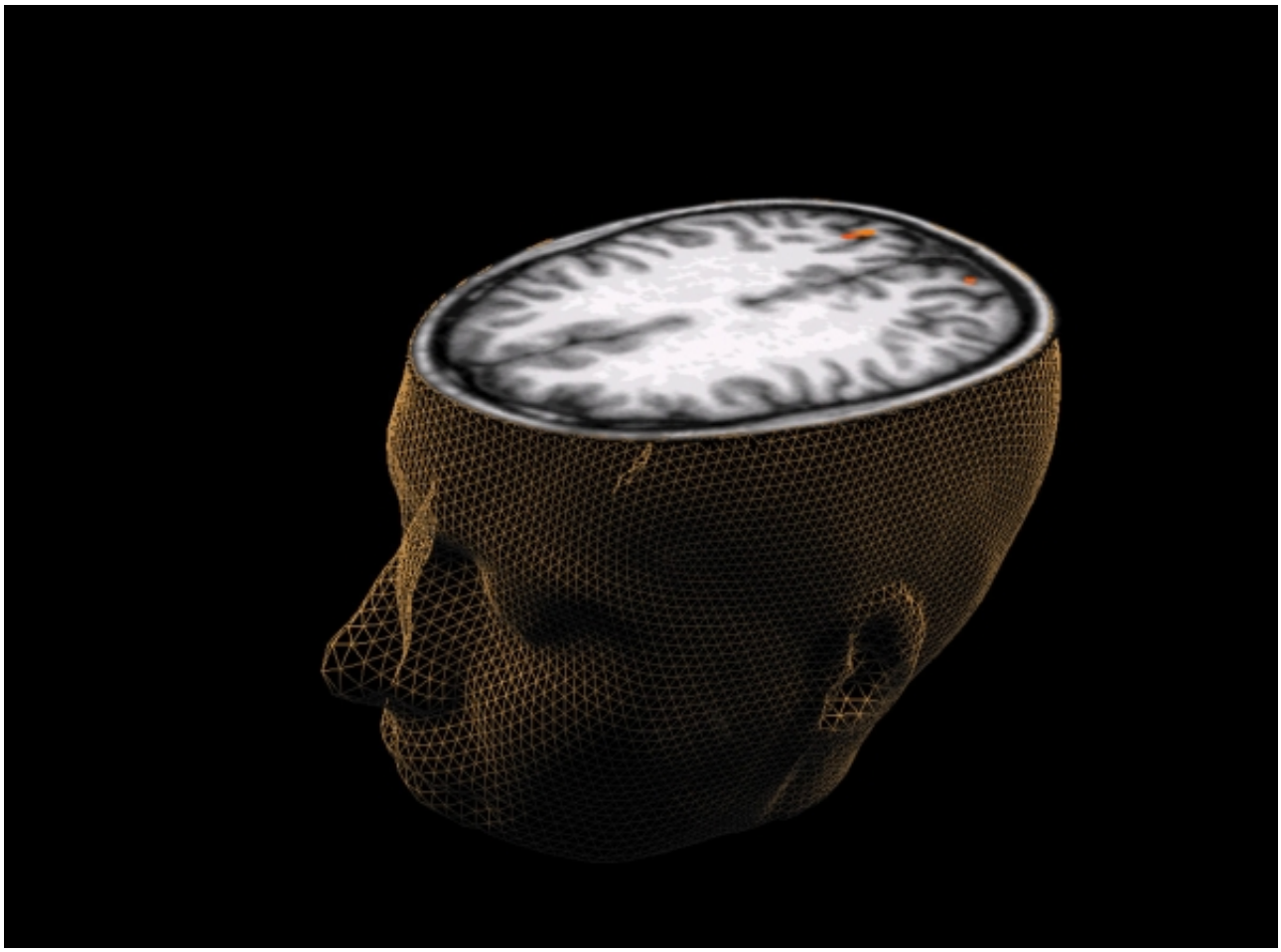
Einstein's Brain Hemispheres were Unusually Well-connected, Study Reveals

By James A. Foley



Brain

Albert Einstein's corpus callosum, the bundle of fibers that connects the brain's two hemispheres and facilitates inter-hemispheric communication, was unusually well-connected, according to a new study published in the journal *Brain*, which suggests that Einstein's high level of cranial connectivity may have contributed to his brilliance.

Florida State University evolutionary anthropologist Dean Falk participated in the study led by Weiwei Men of East China Normal University. Falk said this study, more so than any other to date, "really gets 'inside' Einstein's brain."

After his death in 1955, Einstein's brain was preserved, although the fact remained hidden until 1986.

The researchers used a new technique for measuring brain connectivity developed by Men.

"Men's technique measures and color-codes the varying thicknesses of subdivisions of the corpus callosum along its length, where nerves cross from one side of the brain to the other," said a Florida State University statement. "These thicknesses indicate the number of nerves that cross and therefore how 'connected' the two sides of the brain are in particular regions, which facilitate different functions depending on where the fibers cross along the length. For example, movement of the hands is represented toward the front and mental arithmetic along the back."

Men's research on Einstein's brain connectivity was done by photographs of Einstein's brain published by Falk and others in 202.

To make comparisons of Einstein's brain's connectivity versus that of others, the researchers used samples taken from a group of elderly men and a larger group of men who were 26 years old. In 1905, when Einstein was 26, he had his so-called "miracle year" where he published four papers that significantly contributed to the foundation of modern physics.

Compared to both the younger and older control groups, Falk and Men found that Einstein's brain had more extensive connections between certain parts of the cerebral hemisphere.

"This technique should be of interest to other researchers who study the brain's all-important internal connectivity," Falk said.