Brain plasticity and what we can do with it

David Eagleman, Ph.D. Stanford University

The brain is typically portrayed as an organ with different regions dedicated to specific tasks. But that textbook model doesn't capture the full picture, because the brain dynamically modifies its own circuitry to match the demands of the environment and the body in which it finds itself. This talk will cover plasticity in general, as well as my laboratory's work to feed sensory signals into the brain through atypical sensory pathways. For example, we can address deafness by turning auditory information into a series of vibrating patterns on the skin. This is done via Buzz, a small wristband with vibratory motors in the band. But Buzz isn't only for hearing loss: we're using it to feed in all kinds of information streams, from infrared to olfactory information to the stock market. Using this approach of sensory substitution, we can translate and feed almost any kind of data through the skin, expanding the human sensory experience.

The online lecture can be followed online from your computer, tablet or smartphone, in **Zoom**. The zoom link is accessible via the C-STAR website: <u>http://cstar.sc.edu/lecture-series/</u>

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