

Dr. Adam Gazzaley

Professor in Neurology, Physiology and Psychiatry, Founder & Executive Director of Neuroscape.

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About Dr. Adam Gazzaley

Dr. Adam Gazzaley obtained an M.D. and a Ph.D. in Neuroscience at the Mount Sinai School of Medicine in New York, completed Neurology residency at the University of Pennsylvania, and postdoctoral training in cognitive neuroscience at University of California, Berkeley. He is now Professor in Neurology, Physiology and Psychiatry at University of California, San Francisco and the Founder & Executive Director of Neuroscape, a translational neuroscience center engaged in technology creation and scientific research.

He designs and develops novel brain assessment and optimization tools to impact education, wellness, and medicine practices. This novel approach involves the development of custom-designed, closed-loop video games integrated with the latest advancements in software (brain computer interfaces, GPU computing, cloud-based analytics) and hardware (virtual/augmented reality, motion capture, mobile physiological recording devices, transcranial electrical brain stimulation). These technologies are then advanced to rigorous research studies that evaluate their impact on multiple aspects of brain function and physiology. This utilizes a powerful combination of neurophysiological tools, including functional magnetic resonance imaging (fMRI), electroencephalography (EEG), transcranial magnetic stimulation (TMS).

Dr. Gazzaley is also co-founder and Chief Science Advisor of Akili Interactive, a company developing therapeutic video games, and co-founder and Chief Scientist of JAZZ Venture Partners, a venture capital firm investing in experiential technology to improve human performance. Additionally, he has been a scientific advisor for over a dozen companies including Apple, GE, Nielsen, Deloitte, Magic Leap, and the VOID, as well as the President's Council on Fitness, Sports & Nutrition. Dr. Gazzaley has filed multiple patents for his inventions and authored over 130 scientific articles. His research and perspectives have been consistently profiled in high-impact media, such as The New York Times, New York Times Magazine, New Yorker, Wall Street Journal, TIME, Discover, Wired, PBS, NPR, CNN and NBC Nightly News. He wrote and hosted the nationally-televised PBS special "The Distracted Mind with Dr. Adam Gazzaley," and co-authored the 2016 MIT Press book "The Distracted Mind: Ancient Brains in a High-Tech World," winner of the 2017 PROSE Award in the category of Biomedicine and Neuroscience. Dr. Gazzaley has received many awards and honors, including the 2015 Society for Neuroscience – Science Educator Award.

For over a decade, Dr. Gazzaley has delivered over 600 invited presentations around the world. His keynotes presented in five continents and over two dozen countries (Germany, France, Italy, Spain, China, Hong Kong, Malaysia, Saudi Arabia, South Africa, Cuba, Brazil, Holland, Israel, Singapore, India, Australia...) have captured the imagination of diverse audiences: academics, entrepreneurs, investors, educators, lawyers, bankers, doctors, judges, children, healthcare professionals, technologists, engineers and congressmen. The venues have been just as wide-ranging: universities, hospitals, retirement communities, prisons, music festivals, elementary schools, museums, Apple stores, White House, Congress, conferences (SXSW, TED, DreamForce, CES, Exponential Medicine, Fortune Brainstorm Health, Wired Health, Milken Institute...) and companies (Apple, Google, Amazon, Sony, Microsoft, GE, Deloitte, RedBull, Samsung, NVIDIA, Salesforce...). His extensive contribution to the public education of science was awarded with the 2015 Society for Neuroscience - Science Educator Award.

Select Keynotes

- **The Promise of Virtual Reality and the Brain**

New keynote with description forthcoming.

- **The Distracted Mind: Ancient Brains in High-Tech World**

We are living in extraordinary times. Rapid advances in information technology continuously transform our lives in countless ways. But we are now aware that our increasingly information-saturated world, coupled with growing expectations of constant availability and immediate responsiveness, place excessive demands on our brains. The consequences are detrimental effects on our safety, education, workplace, and relationships with family and friends. Dr. Adam Gazzaley, a neuroscientist and trailblazer in the study of how our brains process information, will take us on a journey into how and why we struggle with interruptions and distractions that emerge from both our inner and outer worlds. He will present a unique evolutionary perspective that the very essence of what has evolved in our brains to make us most human—our ability to set high-level goals—collides headfirst with our brain’s fundamental limitations in cognitive control. He will conclude by offering practical strategies for modifying our behavior, as well as sharing his labs latest innovations in enhancing our brain's function, so that we can better survive and thrive in the information age.

- **Technology meets Neuroscience: A Vision for the Future of Education**

We are living in extraordinary times. Rapid advances in information technology continuously transform our lives in countless ways. But we are now aware that our increasingly information-saturated world place excessive demands on our brains. The consequences are detrimental effects on our safety, education, workplace, and relationships with family and friends. Dr. Adam Gazzaley, a neuroscientist and trailblazer in the study of how our brains process information, will take us on a journey into how and why we struggle with interference that emerge from both our inner and outer worlds. He will then share a novel approach out of his research center at UCSF - Neuroscape - that uses custom-designed video games to achieve cognitive enhancement via personalized closed-loop systems. He will show how these new technology tools, which integrate virtual reality, motion capture and physiological devices, can help improve classroom assessments and learning, with their implications for the future of education, as well as better ways for students to live in this distracting, high-tech world.

- **Technology meets Neuroscience - A Vision of the Future of Brain Optimization**

A fundamental challenge of modern society is the development of effective approaches to enhance brain function and cognition in both the healthy and impaired. For the healthy, this should be a core mission of our educational system and for the cognitively impaired this is the primary goal of our medical system. Unfortunately, neither of these systems have effectively met this challenge. I will describe a novel approach out of our lab that uses custom-designed video games to achieve meaningful and sustainable cognitive enhancement via personalized closed-loop systems (Nature 2013; Neuron 4014). I will also share with you the next stage of our research program, which integrates our video games with the latest technological innovations in software (e.g., brain computer interface algorithms, GPU computing, cloud-based analytics) and hardware (e.g., virtual reality, mobile EEG, motion capture, physiological recording devices (watches), transcranial brain stimulation) to further enhance our brain’s information processing systems with the ultimate aim of improving quality of life.

- **A New Era of Experiential Medicine**

When it comes to enhancing our cognition we are tragically lacking. And we are paying a great price: Half a billion people around the world suffer debilitating effects of anxiety & depression; and attention & memory deficits. And the burden is rising; notably, dementia in our seniors; and attention and emotional control deficits in our youth. Dr. Gazzaley presents a unique perspective on "experience as medicine". Starting with framing in ancient experiential approaches like meditation, and then moving to the opportunities with modern technologies, like therapeutic video games, and powerful molecules that induce transformative experiences, like psychedelics. Dr. Gazzaley shares his views on the future of medicine for the mind; an approach based on experience-induced neuroplasticity, with broad implications across the fields of neurology, psychiatry and psychology.

Select Book Titles

- **2016:** "The Distracted Mind: Ancient Brains in a High-Tech World"

Select Articles

- [Can a Neuroscience Video Game Treat ADHD?](#)

On the homepage of the health technology company Akili Interactive, there sits an intriguing line of copy: “Time to Play Your Medicine.”

- [Can't put down the phone? How smartphones are changing our brains — and lives](#)

And one estimate suggests that Americans touch their mobile devices more than 2,600 times a day on average.

- [Brain Games: How thoughtfully designed tech is addressing cognitive health](#)

With people now spending more and more of their time inundated with information and other digital stimuli, Gazzaley said that he sees humanity in the midst of a “cognition crisis” that is affecting how people perceive, think, feel, and make decisions. Now more than ever, he argued, it’s vital that healthcare reassert its focus on brain function and the ways in which digital technologies could help improve mental health, long-term wellness, and education.