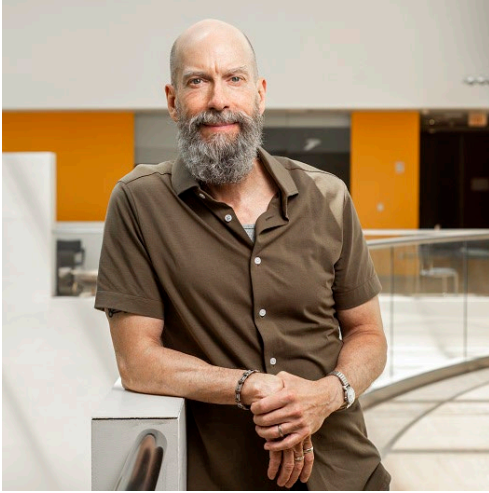


Short Biography – Earl K. Miller



Earl K. Miller is the Picower Professor of Neuroscience at the Massachusetts Institute of Technology. He has academic appointments at The Picower Institute for Learning and Memory, and The Department of Brain and Cognitive Sciences at MIT.

Professor Miller earned his B.A. (summa cum laude, with honors) from Kent State University in 1985, and his M.A. (1987) and Ph.D. (1990) from Princeton University. In 2020, he received an honorary Doctor of Science degree from Kent State University.

Professor Miller's work has been pivotal in understanding the neural basis of cognition. He has made significant discoveries in areas such as working memory, attention, categorization, and top-down 'executive' control. He developed a key theory in cognitive neuroscience, emphasizing the role of the prefrontal cortex in rule learning and goal maintenance. Professor Miller pioneered the study of multifunctional 'mixed selectivity' neurons, marking a departure from traditional views. He has provided new insights into the role of neural dynamics in shaping perception, thought, and action. By combining experimental, theoretical, and computational methods, his work offers vital insights for understanding cognition and its disorders in conditions such as autism, schizophrenia, and attention deficit disorder.

Professor Miller has received numerous awards and serves in editorial roles for major neuroscience journals. He also serves on international advisory boards. His 2001 paper with Jonathan Cohen, introducing a novel theory for understanding executive brain functions, is the fifth most-cited paper in the history of neuroscience.

Selected Honors and Awards:

- Doctor of Science (honoris causa), Kent State University, 2020
- George A. Miller Prize in Cognitive Neuroscience, 2019
- Elected to the American Academy of Arts and Sciences, 2017
- Goldman-Rakic Prize for Outstanding Achievement in Cognitive Neuroscience, 2016
- MERIT Award, National Institute of Mental Health, 2010.
- Elected Fellow, American Association for the Advancement of Science, 2005
- Picower Professorship at MIT (endowed chair), 2003
- Society for Neuroscience Young Investigator Award, 2000
- National Academy of Sciences Troland Research Award, 2000
- Tenured at MIT two years ahead of schedule (1999)
- Phi Beta Kappa, 1985