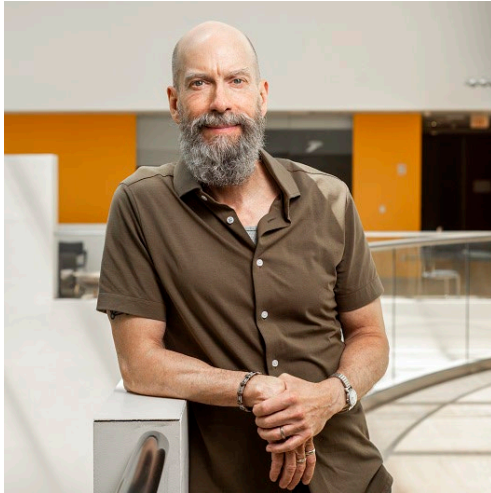


Short Biography – Earl K. Miller



Earl K. Miller is the Picower Professor of Neuroscience at the Massachusetts Institute of Technology. He is a faculty member in 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) from Kent State University in 1985, followed by an 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 research focuses on the neural mechanisms of cognition, particularly in areas such as working memory, attention, and executive control. He is known for developing a significant theory highlighting the prefrontal cortex's role in rule learning and goal maintenance. His pioneering work on multifunctional 'mixed selectivity' neurons has reshaped our understanding of how the brain processes information. His work on neural dynamics has revealed how different brain wave frequencies contribute to cognitive processes, advancing our understanding of how the brain coordinates and manages cognitive tasks. By integrating experimental and computational methods, he has advanced knowledge of cognition and its disorders, including autism and schizophrenia.

Professor Miller has received numerous accolades and serves advisory boards as well as on editorial boards for major neuroscience journals. His influential 2001 paper with Jonathan Cohen is among the most cited in neuroscience history.

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