Short Biography – Earl K. Miller

Earl K. Miller is the Picower Professor of Neuroscience at MIT’s Picower Institute for Learning and Memory. He earned his B.A. in Psychology with honors from Kent State University in 1985, and his M.A. (1987) and Ph.D. (1990) in Psychology and Neuroscience from Princeton University. In 2020, he received an honorary Doctor of Science degree from Kent State University.

Professor Miller explores the neural basis of executive brain functions, including working memory, attention, decision-making, and learning. His research has revealed insights into how categories and concepts form, the role of versatile ‘mixed-selectivity’ neurons in neural computation, and how neural dynamics regulate top-down control of perception, thinking, and action. This work lays the foundation for understanding cognition and its dysfunction in conditions such as autism, schizophrenia, and attention deficit disorder.

Professor Miller has received numerous awards and holds editorial roles in major neuroscience journals as well as international advisory boards. His 2001 paper with Jonathan Cohen, introducing a novel framework for understanding executive brain functions, stands as the fifth most-cited paper in the history of neuroscience.