

Haim Sompolinsky - Short Biosketch – June 2026

Haim Sompolinsky is a theoretical physicist and neuroscientist whose research has shaped theoretical and computational neuroscience at the intersection of physics, neuroscience and AI. He is Professor Emeritus of Physics and Neuroscience at the Hebrew University of Jerusalem, and Professor of Molecular and Cellular Biology and of Physics (in Residence) at Harvard University. He received his B.Sc. in physics and mathematics and his M.Sc. and Ph.D. in physics from Bar-Ilan University, and completed postdoctoral research at Harvard.

Sompolinsky introduced methods from statistical mechanics and dynamical systems to explain memory, information processing, perception and cognition in neural circuits. His contributions include theories of associative memory and attractor dynamics, the excitation-inhibition balance of cortical circuits, spike-timing-based learning, and geometric approaches to representations in brains and artificial neural networks in vision and language. At the Hebrew University he co-founded the Interdisciplinary Center for Neural Computation and the Edmond and Lily Safra Center for Brain Sciences. His current research effort in NeuroAI seeks to turn the interface between brain science and artificial intelligence into a transformative framework for neuroscience and a source of new principles for AI. His honors include the Brain Prize (2024), Gruber Prize in Neuroscience (2022) and EMET Prize (2016). In 2026 he was elected a member of the Israel Academy of Sciences and Humanities.