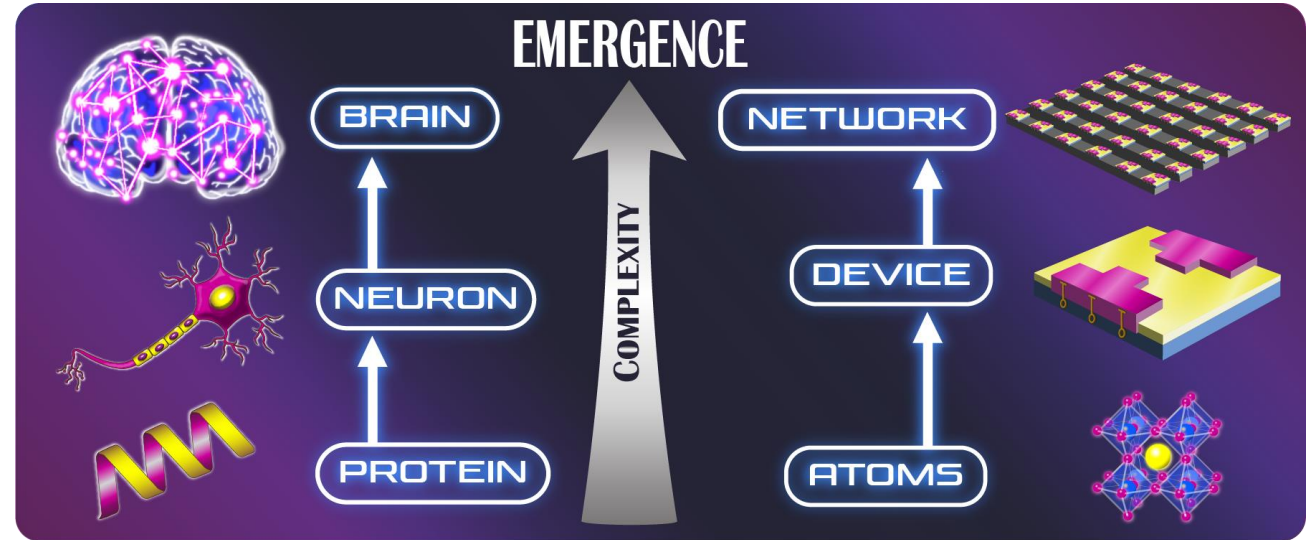


Quantum Materials for Energy-Efficient Neuromorphic Computing (Q-MEEN-C)

Ivan K. Schuller (UCSD); Class: 2018-2026

MISSION: To lay down the quantum-materials-based foundation for the development of an energy-efficient, fault-tolerant computer that is inspired and works like a brain (“neuromorphic”).



RESEARCH PLAN: Synthesize promising new quantum materials for neuromorphic functionalities. Understand their microscopic and mesoscopic behavior due to natural and/or artificial inhomogeneities, develop novel contactless connectivity using collective or frequency selective mesoscopic coupling, and define new benchmarks for relevant materials properties and energy efficiency.



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