

Seminar

Quantum Mechanics without Foundational Problems from Modified Hamiltonian Mechanics

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Quantum mechanics is believed to be the universal theory of physical phenomena. Its empirical success and reach are unprecedented. Yet, there is no satisfactory interpretation and physical understanding of quantum mechanics, which is beset with several foundational problems. Well known among its 'birth defects' are the 'collapse of the wavefunction' and the 'quantum measurement problem'. These issues swell to a bizarre and irrational plane with the 'nonlocality' associated with quantum entanglement. Besides, there is the quantum-classical divide between microscopic and macroscopic worlds. Recently, I achieved a reconstruction of quantum mechanics that liberates the theory from ALL its vexing foundational problems in one leap, starting from a reasoned modification of Hamiltonian action mechanics and a decisive deviation from de Broglie's wave-particle amalgam of matter. Now we can not only calculate, but also understand quantum mechanics. My reconstruction, which preserves the empirical reach of the theory, marks a definite closure to the 'quantum debates' after the long history of excitement, laments, insights, and confusion.

Tuesday, Sep 10th 2019

11:30 AM (Tea/Coffee at 11:00 AM)

Auditorium, TIFR-H