



سمینار هفتگی گروه اطلاعات کوانتومی سهشنبه ۱۳۹۴/۷/۷، ساعت ۱۵:۰۰، اتاق شورای دانشکدهی فیزیک

Quantum phenomena in macroscopic world

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Abstract

Since the early days of quantum theory, the inconsistency between the quantum world and the classical one has been puzzling. Schrodinger's cat is a thought experiment that manifests the discrepancy between the classical and quantum physics.

Here I review some of my recent works on this topic. First, I present a conjecture on the measurement of macroscopic quantum systems. Next I present a new approach to observe and measure quantum phenomena at macroscopic level, which has also been exploited experimentally. I follow up with two other related works that can potentially be useful for understanding quantum phenomena in macroscopic regime.