



Department of Physics and Astronomy Presents

Quantum Weirdness



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Thursday March 29th, 2018
1:40 pm, Room C640, U Hall

Lecture Abstract:

Quantum mechanics is a complete success (so far) as an explanatory and predictive theory of physics at small length scales. Nevertheless, it is considered to be very weird, as I will try to explain in simple terms. First, I will indicate how quantum mechanics is much stranger than other theories describing extreme physics, using special relativity as an example. Then I will describe aspects of quantum weirdness, including the singular classical limit of quantum mechanics; the quantum clash between realism, locality and completeness; and quantum contextuality. Finally, I will mention how imagined systems that are even more mysterious than quantum mechanics are being studied in the hopes of simplifying our understanding of the foundations of quantum theory.

EVERYONE IS WELCOME