



PHYSICS COLLOQUIUM



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Quantum Mechanics, a world of infinite possibilities

Abstract

Since the formulation of the celebrated Schrödinger equation in 1926, we have an entirely new way to look at the universe, and, almost a century later, we are only scratching the surface of the implications of such a theory. I will give a brief introduction, in simple words, to quantum mechanics and its interpretation. I will discuss the challenges that we have nowadays in leveraging the first principles of quantum mechanics to face the big challenge of unraveling the behavior of physical systems and the relevance of computational physics in this context. In addition, I will focus on some of the most challenging philosophical questions that the theory raises: in particular, we will explore how quantum mechanics challenges our understanding of locality and realism. Might it be that the universe where we live behaves very differently from what we have always thought of?

3:00 p.m. - 4:30 pm, Friday, February 17th,
In-Person: McLane 162