

UM Physics Department

Miami 2020 Physics Conference (Online)

Name: Djordje Minic

Title: From quantum mechanics to quantum spacetime and beyond

Abstract:

Starting from the well known facts about quantum mechanics I will introduce the concept of modular (quantum) spacetime that underlies general quantum non-locality that is consistent with causality. Next, I will discuss a realization of quantum spacetime in quantum field theory via the new concept of "metaparticles". Finally, I will discuss dynamical quantum spacetime in quantum gravity, and present a new understanding of dark matter and dark energy in this new formulation of quantum gravity.