PHYSICS AND ASTRONOMY

SEMINAR

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"Cosmology with Massive Neutrinos"

Abstract

"Ghostly neutrino particles continue to bring surprises to fundamental physics, from their existence to the phenomenon of neutrino oscillation which implies that their masses are nonzero. Their exact masses, among the most curious unknowns beyond the Standard Model of particle physics, can soon be probed by the joint analysis of upcoming cosmological surveys including LSST, Euclid, WFIRST, Simons Observatory, and CMB-S4. In this talk, I will first discuss ongoing work studying the effects of massive neutrinos. I will then turn the focus to my major efforts of modeling the challenging nonlinear regime of cosmic structures (<10 Mpc) where neutrino effects are the strongest. Finally, I will draw a roadmap to pin down the neutrino mass over the next decade".

Tuesday, April 16, 2019

11:00 a.m.

Elliott Building – Room 162