

# PHYSICS DEPARTMENT COLLOQUIUM

“Cosmological insights on particle physics”

BY

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The results of the last decade on the Cosmic Microwave Background (CMB) and the large scale structure have set major milestones in our understanding of the Universe. We now know the main cosmological parameters with very high precision and we are able to constrain particle physics with cosmology. I will review the theoretical interplay between particle physics and cosmology paying particular attention to neutrinos. I will show four different examples of interplay between particle physics and cosmology, and show that cosmology now provides the tightest upper limit for the neutrino mass. I will discuss how large scale structure, clusters of galaxies in particular, complement the cosmic microwave background experiments in determining cosmological parameters.

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4:00 PM IN 102 JFB  
REFRESHMENTS AT 3:30 PM IN 219 JFB