



# CU Physics Department Colloquium

Monday, February 16, 2009 4:10 PM 428 Pupin Hall



**Karsten Heeger, University of Wisconsin**

## Probing New Physics in Neutrino Experiments

Neutrino mass and mixing are amongst the major discoveries of recent years. The discoveries at Super-Kamiokande, SNO, and KamLAND have provided unambiguous evidence for neutrino mass and demand that we make the first significant revision of the Standard Model in decades. Many important questions remain: Are neutrinos their own antiparticles? What is their mass scale? Can we use neutrinos to search for CP violation? Precision measurements of neutrino oscillation parameters and the search for neutrinoless double beta decay are now underway to determine the pattern of neutrino mixing and their masses. I will describe the latest results from KamLAND, discuss the prospects for understanding neutrino mass with the bolometric CUORE experiment, and outline future opportunities in neutrino oscillation physics.

**Hosted by Emlyn Hughes**

**Meet the Speaker will be held at 3:30 PM in 705 Pupin**