

## PHYSICS AND ASTRONOMY SEMINAR

## Dr. We-Fu Chang

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## "Minimal Majoronic model for dark matter and dark radiation and its signal at the colliders"

## <u>Abstract</u>

We construct a minimal model which employs the global U(1) lepton number to accommodate the dark matter, the dark radiation, and the neutrino masses at the same time. The vacuum stability and all the experimental bounds demand the scalar dark matter to be in the TeV mass range. The model also predicts a light singlet Higgs, <100GeV, which mixes with the SM Higgs. We discuss the possible signals and probes of this model at the LHC and in the future  $e^+e^-$  colliders.

Tuesday, April 24, 2018 1:30 p.m. HSD Building – Room A250