LPC TOPIC OF THE WEEK

The Quest for Naturalness in Supersymmetry

Raman Sundrum is a distinguished University Professor and director of Maryland Center for Fundamental Physics at UMD. His research is in theoretical particle physics and focuses on theoretical mechanisms and observable implications of extra space-time dimensions, supersymmetry, and strongly coupled dynamics.

Sanjay Padhi is a scientist at UCSD. His research focuses on supersymmetry for the past several years. Currently he is the CMS SUSY representative, co-organizer for the LHC Physics Centre at CERN workshops on the characterization of new physics at the LHC, as well as co-convener of the CMS Generator Physics group.

Nov, 5th, 2012
Seminar 1 by R. Sundrum @ 2:00 p:m
Seminar 2 by S. Padhi @ 3:15 p:m
Venue: WH11NW (Sunrise), FNAL

Nov, 7th, 2012
Workshop by S. Padhi @ 8:00 a:m
Venue: WH11NW (Sunrise), FNAL

ABSTRACT

The quest for naturalness has been a guiding principle for centuries and still continues to play a major role in understanding the masses of fundamental particles in the Standard Model. With the observation of a Higgs-like boson at the LHC, along with an absence of evidence for new physics, the subject of naturalness takes on renewed urgency. These talks will review the motivations, minimal structure and latest search status of the natural SUSY scenario, as well as future experimental topologies and signatures at the 8 and 13 TeV LHC. Emphasis will be given to the signatures involving the Higgs boson in the final state.

Sarah Malik, Sadia Khalil, Jason St. John, Alexey Ferapontov, Shabnam Jabeen, Pratima Jindal, Mike Albrow, Christopher Silkworth, Nhan Tran, **Rick Cavanaugh**, Ian Shipsey