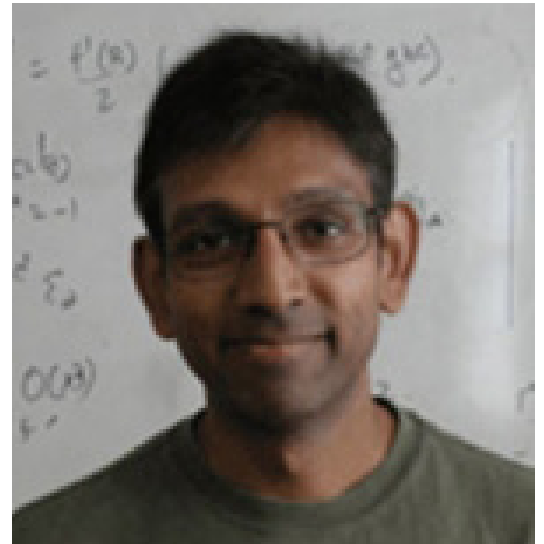


PHYSICS AND ASTRONOMY COLLOQUIUM

Raman Sundrum, Ph.D. University of Maryland

The Hierarchies of Particle Physics, the LHC and Beyond

The central successes and puzzles of particle physics will be reviewed, the discovery of the Higgs boson at the CERN Large Hadron Collider (LHC) illustrating both aspects. The grand principle of Naturalness will be introduced as the dominant organizing principle behind many searches for new physics beyond the Standard Model. The challenging task of testing naturalness will be summarized, especially the interplay between deep theoretical ideas, such as Supersymmetry, Compositeness, Extra Dimensions and Hidden Naturalness, and experimental strategies at the LHC and even more powerful future colliders. The LHC is beginning its second phase of operations, at significantly higher energies than before, and this talk will give a satellite view of the big issues at stake in the coming years.



THURSDAY, DECEMBER 3, 2015 | 4:00 PM | HAWKING AUDITORIUM



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