

Thursday, February 1, 2024

Refreshments at 3:15pm in PSF 101

Colloquium from 3:30pm - 4:30pm outside PSF 101

Highs and Lows in the Search for Dark Matter

Professor Pearl Sandick

University of Utah



Abstract:

The question of the identity of the dark matter in the Universe is one of the most important outstanding puzzles in modern physics. Though observations indicate the abundance and astrophysical distribution of dark matter, conclusive evidence of its identity or how it behaves, apart from its gravitational effects, remains elusive. Many of the potential explanations proposed involve one or more new species of elementary particles. To explore these possibilities, a variety of techniques are being used, from terrestrial experiments buried deep underground to satellite experiments looking for signals from space. I'll discuss some interesting observations that could turn out to be important hints and the prospects for "discovering" dark matter.

Biography:

Pearl Sandick is a Professor in the Department of Physics and Astronomy and Associate Dean for Faculty and Research in the College of Science at the University of Utah. She earned a Ph.D. from the University of Minnesota in 2008 and was a postdoctoral fellow in the Theory Group at the University of Texas at Austin before moving to Utah in 2011. Professor Sandick is a theoretical particle physicist studying physics beyond the Standard Model, including possible explanations for the dark matter in the Universe. In addition to her research, she's passionate about teaching, mentoring, and science communication. She has given a TEDx talk and been interviewed on KCPW's Cool Science Radio and NPR's Science Friday. She has been recognized for her teaching and mentoring work with a University of Utah Early Career Teaching Award, a University of Utah Distinguished Mentor Award, and the Linda K. Amos Award for Distinguished Service to Women. Sandick has also been recognized as a University of Utah Presidential Scholar. Professor Sandick has recently served on the American Physical Society (APS) Committee on the Status of Women in Physics and as the Chair of the National Organizing Committee for the APS Conferences for Undergraduate Women in Physics (CUWiPs), and chaired the APS Four Corners Section in 2021-2022.

Host: Prof. Patricia Rankin

View our Spring 2024 Physics Colloquium schedule at <https://physics.asu.edu/colloquia>