



Friends of the Kavli Institute for Theoretical Physics

Chalk Talk

Mapping the Dark Cosmos



Risa Wechsler

Associate Professor
Stanford University

Risa Wechsler is an Associate Professor of Physics at Stanford and at SLAC. Her work combines theory and simulations to understand how quantum fluctuations in the early universe developed into the patterns of galaxies we see today. In particular, this means coming to grips, both in theory and computation, with dark matter, which is estimated to comprise about 85 percent of all mass in the cosmos. Large-scale surveys are another passion of hers: she is a founding member of the Dark Energy Survey, a member of the Large Synoptic Survey, and the co-spokesperson for the Dark Energy Spectroscopic Instrument collaboration.

Prof. Wechsler earned her PhD in Physics from UCSC and did postdoctoral work at the University of Michigan, Ann Arbor, and at the University of Chicago, before moving to Stanford in 2006.

We are at the beginning of a new generation of massive surveys of the sky, that will observe as many as 10 billion galaxies, including galaxies from the earliest epochs of their formation. We will use these surveys to answer some of the most profound questions about what the universe is made of, how it began, and how it evolves. At the heart of these questions is the link between the galaxies we observe, and the underlying matter that controls their evolution. I will describe this new generation of cosmological surveys, how we use numerical simulations and modeling to understand this link between galaxies and matter, and how we can use these two tools together to probe the physics of the dark cosmos as well as the physics of galaxy formation.

Wednesday, July 12, 2017

Kohn Hall, UCSB

5:30 Courtyard Reception

6:15 - 7:15 Presentation and Discussion

Attendance by Reservation Only

RSVP by Monday, July 10:

On-Line: <https://www.kitp.ucsb.edu/chalk-talk-rsvp>

Phone: (805) 893-6307 or friends@kitp.ucsb.edu

Lot 10 parking

As you enter campus from Hwy 217, turn right onto Mesa Rd, merge into the left lane, and at the stop light turn left into Parking Structure 10. Park, buy a permit from the dispenser (near the elevator and stairs), and display the permit on your dashboard. The KITP is right next door to the parking structure.