



# Friends of the Kavli Institute for Theoretical Physics

## Chalk Talk

### Behind the Scenes of the Universe:

### The Worldwide Race to Discover Dark Matter

An extraordinary discovery has recently shaken the foundations of cosmology and particle physics: the Universe is filled with an unknown, elusive substance that is fundamentally different from anything we have ever seen with our telescopes or measured in our laboratories. It is called dark matter, and identifying its nature constitutes one of the most pressing challenges of modern science. In my talk, I will argue that we may be about to witness a pivotal paradigm shift in physics, as we set out to test the existence of some of the most promising dark matter candidates with a wide array of experiments, including the Large Hadron Collider at CERN, as well as with a new generation of astroparticle experiments underground and in space.

Wednesday, June 19, 2013

Kohn Hall, UCSB

5:30 pm Courtyard Reception

6:15 - 7 pm Presentation

7 - 7:15 pm Questions & Discussion

**Attendance by Reservation Only**

**RSVP by June 14**

*On-Line:* [www.kitp.ucsb.edu/chalk-talk-rsvp](http://www.kitp.ucsb.edu/chalk-talk-rsvp)

*Phone:* (805) 893-6371 or [events@kitp.ucsb.edu](mailto:events@kitp.ucsb.edu)



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Dr. Bertone received his PhD at Oxford University and the Institute of Astrophysics in Paris. He has held teaching and research positions at the Fermilab, the University of Padova, the University of Zurich, and the CNRS Paris. In 2011 he joined GRAPPA, the new center of excellence in Gravitation and Astroparticle Physics at the University of Amsterdam.

His research areas of interest include Particle Dark Matter, High-Energy Astrophysics, Ultra-High Energy Cosmic Rays, Theories with Extra-Dimensions, Intermediate and Supermassive Black Holes, Physics beyond the Standard Model, Physics of Compact Stars and General Relativity. He is the editor-in-chief of the journal "Physics of the Dark Universe," editor of "Particle Dark Matter: Observations, Models and Searches," and author of the book "Behind the Scenes of the Universe, From the Higgs to Dark Matter."

#### 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.