

CSU PHYSICS COLLOQUIUM

“Hunting dark particles at colliders”

Professor Stefania Gori

University of California Santa Cruz

Monday, February 8th at 4:00 pm

Virtual via Zoom (see announcement for link)

Abstract

Dark matter is believed to make up most of the matter of our Universe, but its particle origin remains a mystery. So far experimental searches for dark matter particles have largely focused on the mass window at around the Higgs boson mass. At the same time, lighter dark matter candidates in a dark sector are theoretically well-motivated and arise generically in many theories beyond the Standard Model. In this colloquium, I will first present an overview of the most recent progress exploring light dark matter candidates at high-energy and high-intensity colliders, highlighting the role of the Higgs boson in this endeavor. Then I will motivate new searches and new collider experiments that will have a unique opportunity to broadly explore viable light dark matter models.

Biography

Stefania Gori is an assistant professor at the University of California Santa Cruz, working on theoretical particle physics beyond the Standard Model. Prof. Gori received her PhD in 2010 from Technical University of Munich. She was a postdoctoral fellow at the University of Chicago and at Perimeter Institute. Before joining UCSC, she was an assistant professor at the University of Cincinnati. Professor Gori's research broadly covers several aspects of particle physics, including Higgs physics, Dark Matter, neutrino and flavor physics. Prof. Gori was a recipient of the NSF CAREER award in 2017.