

# Physics Colloquium

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Monday, March 2, 2020 / Pupin Hall Theory Center, 8<sup>th</sup> Floor / 12:30 PM

*Lunch will be available for attendees*

## "Hunting dark particles at colliders"

**Stefania Gori - UC Santa Cruz**



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.