

# Light dark matter detection in the lab: new tools and new ideas

*Wednesday, September 20, 2023 9:00 AM (30 minutes)*

I will discuss some possible avenues to hunt for sub-GeV dark matter in the lab. Specifically, for dark matter in the MeV to GeV range, I will discuss the possibility of employing the so-called Migdal effect in semiconductors. For dark matter in the keV to MeV range, instead, I will discuss the possibility of taking advantage of collective excitations in superfluid He-4 and anti-ferromagnets. In all these instances, I will show how the most convenient way of tackling the problem is through an effective field theory approach.

**Author:** ESPOSITO, Angelo (Sapienza University of Rome)

**Presenter:** ESPOSITO, Angelo (Sapienza University of Rome)