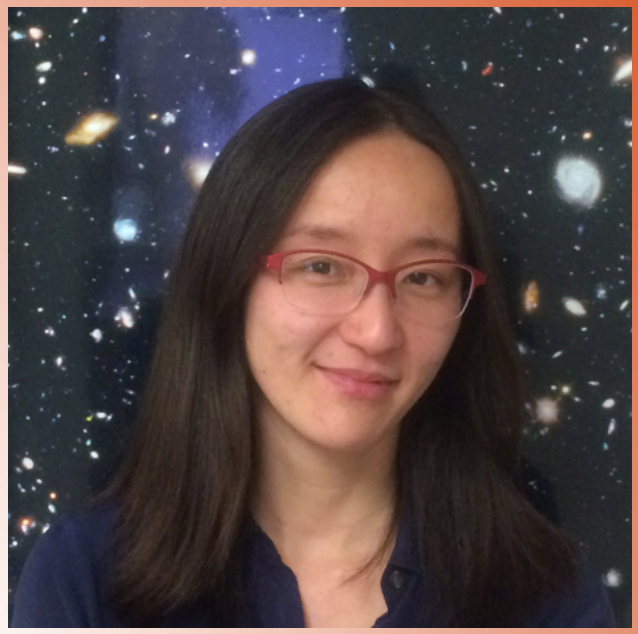
Theoretical Elementary Particle (TEP) Physics Seminar

UCLA

Monday, March 6 @ 10:45 AM
Physics & Astronomy Building (PAB) 4-330



Exploring the low mass frontier in dark matter direct detection

Tongyan Lin (UC Berkeley)

A major challenge in decoding the particle physics of dark matter is its unknown mass scale. I will present new ideas and prospects to search for low mass dark matter, going below the typical thresholds of current direct detection experiments. In the sub-GeV mass range, there are a variety of interesting and well-motivated models, and detecting them will require new kinds of low-threshold targets. I will discuss several proposals for dark matter direct detection, showing that they can be sensitive probes of low mass dark matter in the coming years.

Bio: I am currently a postdoctoral scholar at Berkeley; previously, I was a postdoctoral fellow in the KICP at the University of Chicago and completed my PhD at Harvard University. My research centers on the particle physics and cosmology of dark matter, as well as signals of new physics in collider experiments.