

## Cosmology and stellar physics with strongly lensed supernovae from Rubin-LSST

Supernovae (SNe) that are gravitationally lensed into multiple images offer interesting avenues to probe stellar physics and cosmology. Firstly, the time delays between the multiple images of a lensed SN allow to measure the Hubble constant ( $H_0$ ) independently from other probes, in order to assess the current tension on  $H_0$  and the possible need for new physics. Secondly, these time delays also help constrain the SN progenitor scenarios by facilitating follow-up observations in the first hours after explosion. In this talk, I will show the advantages of measuring  $H_0$  with lensed SNe compared to lensed quasars, and I will present forecasts on the precision achievable with lensed SN samples drawn from Rubin-LSST. I will then describe our deep learning methods to search for lensed SNe in current and future wide-field time-domain surveys. I will finally introduce our recent efforts to mitigate for the impact of microlensing and to develop new strong lens modeling techniques with deep learning.