Multi-messenger astronomy is a boon for the astronomical sciences, but it is also a boon for nuclear physics -- in particular the physics of hot and dense strongly-interacting matter. In this talk, I will begin by describing how the combination of electromagnetic and gravitational wave observations which to constraints on neutron star masses and radii constrain the equation of state of cold dense matter. Those constraints, in turn, have been important for developing hot equations of state for core-collapse supernovae and neutron star mergers. Future multi-messenger observations of neutron star mergers, via both photons and gravitational waves, will continue to be an important library of nuclear physics. This progress will, however, only be possible through a combined effort between nuclear physicists, astrophysicists -- including those who simulate neutron star mergers.