Colliding neutron stars (NSs) are strong sources of gravitational radiation, and one of the most promising candidates for direct detection by advanced LIGO. Following the spectacular observations of gravitational waves from GW150914 - produced by the collision of two black holes - we can now expect that the direct detection of NS collisions is just around the corner. Growing observational evidence shows that NS collisions also produce bright electromagnetic signals: gamma-ray bursts, and kilonovae.

The former are brief flashes of gamma-ray radiation, the latter are short-lived infrared transients powered by the radioactive decay of heavy nuclei. The simultaneous detection of both electromagnetic and gravitational radiation arising from NS collisions would be a revolutionary observation. This exciting prospect makes these systems prime targets in the era of multi-messenger astronomy. In this talk, I present ongoing observational efforts to characterize the electromagnetic signatures of NS collisions, and outline future initiatives aimed at exploring the gravitational wave sky.