Proposal Abstract:

Searching for MSPs pulsars among Fermi-LAT gamma-ray pulsar candidate unassociated sources is a highly efficient approach. We hence selected 19 gamma-ray pulsar candidates that Zhu et al. used various machine learning (ML) methods to classify unassociated sources for radio certification observations. The benefit of finding new MSPs in gamma-ray sources is that gamma-ray pulsations can often be directly detected and timed in Fermi-LAT data and the new MSPs discovered using this method can be added to the gamma-ray Pulsar Timing Array (PTA) project to detect gravitational waves. This proposed has not only increased the population of pulsars but has also facilitated multi-band studies of these pulsars, and it can also deepen our understanding of the high-energy emission processes and geometrical shapes of gamma-ray pulsars.