

**Proposal Abstract:**

Stellar-mass black holes are widely distributed throughout the universe, some of them occurring in binary systems. In the FAST sky, there are 12 stellar-mass black holes or candidates, whose masses are uncertain and they may be massive neutron stars. The proposal aims to use the sensitive FAST to observe these sources and search for potential radio bursts or pulsars in binary systems. The hypothesis that a black hole may induce periodic activity of a repeat FRB through precession of an accretion disk, as well as the potential binary system of a pulsar rotating with a massive star, will be investigated.