Proposal Abstract:

The geometry of pulsar radio beams, which is critical for deciphering their radio emission region, is generally determined using the practical rotating vector model (RVM). However, it is invalid when the polarisation position angles (PAs) of pulsars swing irregularly. Recently, some studies have found that highly linear polarised single-pulses, which were supposed to reflect the intrinsic radiation on pulsars, tend to have disciplinary S-shaped PA. Thanks to the exceptional sensitivity of FAST, we are able to investigate the magnetospheric geometry in detail, focusing on single-pulses rather than the average pulse profile, thereby also reducing pulsar samples with erratic PA swings.