Proposal Abstract:

Despite of long radio timing observations, most of the pulsar binaries have not obtained precise measurements even on their component masses. We propose to observe two pulsar binaries which are considered to host heavy compact companions (NS+WD and NS+NS) and have Shapiro delay. Thanks to its exceptional sensitivity, FAST offers a substantial reduction in time baselines for mass measurements compared to other available radio telescopes. More stringent mass constraints would lead us to know how close the WD in the NS-WD system can reach the Chandrasekhar limit. For the other one, which is considered to be a NS-NS system due to its large orbit eccentricity, a possible detection of a second pulsation signal and mass measurement are needed to conclude its nature.