The Standard Model of elementary particles (SM) predicts the existence of a neutral scalar Higgs boson. However, there are also extensions of the SM (such as the MSSM) in which a number of Higgs bosons is predicted. Especially the additional presence of pseudoscalar and charged Higgs bosons represents one of the crucial differences between the SM and its extensions. This work develops a method for determination of the spin and parity of the Higgs boson in several H $\to \tau\tau$ decays, namely: H$\to \tau^+\tau^- \to (h^+\nu_\tau)(h^-\bar{\nu}_\tau)$, H$\to \tau^+\tau^- \to (\ell^+\nu_\tau\bar{\nu}_\ell)(\pi^-\bar{\nu}_\tau)$ and H$\to \tau^+\tau^- \to (\ell^+\nu_\tau\bar{\nu}_\ell)(\ell^-\bar{\nu}_\tau\nu_\ell)$, where h denotes π or ρ meson. The method is based on the angular and energy correlations of charged final products from the decays mentioned above. Additionally, the work studies the possibility of signal (Higgs boson decay) and background ($Z \to \tau\tau$ decay) discrimination, when one considers a decaying boson with spin 1. All calculations are done in the leading order of perturbation theory.