Robust Wald-Type Test Statistics Based on C-Divergence

The Reserve Bank of India today placed on its website a Working Paper titled "Robust Wald-Type Test Statistics Based on C-Divergence" under the Reserve Bank of India Working Paper Series. The paper is authored by Avijit Maji and Leandro Pardo.

One shortcoming of the C-divergence estimators is that their asymptotic distribution, in general, is not a chi-square distribution but a linear combination of chi-square distributions. This paper proposes Wald-type test statistics based on minimum C-divergence estimators to overcome this shortcoming. It further establishes that this family of test statistics is a chi-square distribution and computes an approximation of the power function under the simple null hypothesis and composite null hypothesis.