**Goodness of Fit Testing via fixed points of distributional transforms**

**Ebner, Bruno**

**Karlsruher Institut für Technologie (KIT)  
Institut für Stochastik**

**We propose new tests for the goodness of fit problem to parametric families of distributions. The new procedures are based on weighted $L\_2$-distances of empirical distributional transforms to the empirical distribution function. The method will be illustrated for well-known goodness of fit problems as testing for normality or for gamma distributions. Weak convergence results are derived under the null hypothesis as well as under fixed and contiguous alternatives. A comparative finite sample power study shows the competitiveness to classical procedures.**