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Abstracts of Short Communications and Posters

Section:

12. Probability and Statistics

1991 MS Classification: 62G10, 62G20, 62G30, 60G15
Cabaña, Alejandra and Cabaña, Enrique M.
Goodness-of-Fit Tests based on Transformed Empirical Processes.
We present Goodness-of-Fit tests, like the classical Kolmogorov-Smirnov, where the empirical process is replaced by $w_n^{(a,\mathcal{T})}$, a process based on the sample (TEP). It depends on a functional parameter a and an isometry $\mathcal{T}$, and is defined to produce tests with better power than the classical ones for detecting given families of contiguous alternatives.
They were introduced in : Ann. Statist **25**, 2388-2409, to design K-S type G-O-F tests, consistent against any alternative "$F \neq F_0$".
Moreover, a can be chosen in order to enhance the power against arbitrarily given sequences of contiguous alternatives.
Families of Cramér-von-Mises tests based on TEPs can be designed, with the same consistency and efficiency properties.
The isometry can be suitably chosen by reducing its range, to produce tests of composite hypotheses, like tests of symmetry.