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Semi-parametric estimation of shifts

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Abstract

We observe a large number of functions differing from each other only by a translation parameter. While the main pattern is unknown, we propose to estimate the shift parameters using *M*-estimators. Fourier transform enables to transform this statistical problem into a semi-parametric framework. We study the convergence of the estimator and provide its asymptotic behavior. Moreover, we use the method in the applied case of velocity curve forecasting.

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