On the tail index inference based on scaling functions method

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Abstract

In [3] a new method has been presented for making inference about the tail of unknown heavy-tailed distribution. Method is is based on the asymptotic properties of the empirical structure function, a variant of statistic that resembles usual sample moments. Using this approach one can successfully inspect the nature of the tail of the underlying distribution, as well as provide estimates on the unknown tail index. Here we briefly describe the method and test its performance on some simulated and real world data by comparing it with the well known Hill estimator.

Keywords: heavy-tailed distributions, tail index, empirical structure function, scaling functions, Hill estimator.
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