

Murad Taqqu, Boston University

A unified approach to self-normalized block sampling

Joint with Shuyang Bai and Ting Zhang

The inference procedure for the mean of a stationary time series is usually quite different under various model assumptions because the partial sum process behaves differently depending on whether the time series is short or long-range dependent, or whether it has a light or heavy-tailed marginal distribution. We develop an asymptotic theory for the self-normalized block sampling, and prove that the corresponding block sampling method can provide a unified inference approach for the aforementioned different situations in the sense that it does not require the priori estimation of auxiliary parameters.