

**Title:**

Generalized entropies in empirical time series: inherent properties  
and forecasting intervals

**Abstract:**

A theoretically as well as practically powerful outcome of dynamical systems theory is the possibility to determine dynamical invariants by virtue of a long-term integration. This admits also application to empirical (scalar and vector) time series, where the signal generating mechanism may well stay unknown. We present complexity indicators, above all Kolmogorov entropies that serve also as an inverse forecasting range in the spirit of an  $1/e$ -decay. On this score, our underlying signals originate from the neurosciences and financial markets.