



Detecting Nonlinear Granger Causality via the kernelization of Partial Directed Coherence

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Abstract

Though by now classic for inferring causal relations between time series, linear vector autoregressive models fail to capture certain types of nonlinear coupling. Here we explore a new concept *kernel-nonlinear-Partial Directed Coherence* and its ability to overcome those limitations, via a simulated example of its asymptotic behaviour.

Keywords: Nonlinear-Granger causality; Partial Directed Coherence; Inference; Detection; Kernel Processing.