

Interactive comment on “Finding recurrence networks’ threshold adaptively for a specific time series” by D. Eroglu et al.

Anonymous Referee #2

Received and published: 28 August 2014

p806 l13-14 I don’t understand ‘extreme points in the time series could break the connected components in the network’, and what ‘biasing the recurrence analysis’ means. Does ‘standardisation method’ refer here to what was called ‘normalisation’ above?

l17 What is a ‘spectral property’ of a network? Please provide reference at least.

p808 l18 Do you do your calculations for a range of epsilon’s, or you find epsilon_c more efficiently by, say, iterative bisection?

l20-21 Please provide a reference for the theorem ‘If the network is connected. . .’

eq. (4) Instead of \in (by latex notation for ‘element of a set’) I believe that $=$ is the correct symbol for defining the set T of thresholds.

C422

p809 l15-19 The result of what is called a ‘regular threshold selection method’ is called e.g. in Fig. 2 and throughout the paper a ‘constant threshold’. This is contrasted to the ‘adaptive threshold’ (calculated the way newly proposed in this article). However, the first one can also be called an adaptive threshold: adaptively chosen based on the requirement of $RR = 5\%$. Please reconsider your terminology that you want to introduce in this paper.

p812 l7-15 Please reconsider the use of terms ‘confidence interval’ and ‘statistical test’, both of which have a standard meaning different from what they are used for here.

p813 l6-13 Perhaps the following is the main point regarding the merit of the paper. I believe that the regularity and irregularity of segments of the time series can be ‘seen’, or can be quantified by FFT, or by the method of Prasad et al. (2004). Why not apply those methods first to identify the events missed (?) by Prasad et al. – instead of using recurrence networks?

Interactive comment on Nonlin. Processes Geophys. Discuss., 1, 803, 2014.

C423