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Subject: time series analysis - request for ideas?

Posted by [oxfordenergyservices](#) on Tue, 21 Sep 2010 11:01:46 GMT

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Hi

I have a number of experimental time-series data (say 100) each of which consists of a number of readings at 10 second intervals for a year.

I want to simulate many thousand of these time-series but they must agree statistically with the experimental data.

Does anybody have any ideas of how this might be done or the types of fields that this problem has come up in?

My initial thoughts were

- a) the distribution of values of the simulated must agree with experimental
- b) the distribution of (the change in each 10 seconds) must agree with experimental
- c) the autocorrelations of the simulation must agree with experimental

The experimental data does not look like it can be used with fourier analysis - there are lots of spikes, lots of plateaus and lots of very low contiguous values etc.

Any ideas appreciated

Cheers!

Russ

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