

In the name of God

Department of Physics
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ADVANCED TOPICS IN STATISTICAL PHYSICS II

Exercise Set 5

(Date Due: 1395/02/01)

1. Generate Gaussian data set with given correlation function (e.g. the shape of correlation function follows a scale invariant behavior ($C \sim \tau^{-\gamma}$) and show that your generated data is Gaussian and has got mentioned correlation function.
2. Generate Non-Gaussian data set with desired correlation function. As an example suppose that the shape of correlation function follows a scale invariant behavior ($C \sim \tau^{-\gamma}$) and show that your generated data is Non-Gaussian and has got mentioned correlation function.
3. Calculate Bias factor for TPCF at the threshold instead of above threshold. What about non-Gaussianity correction of mentioned bias?

Good luck, Movahed
