

In the name of God

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COMPUTATIONAL PHYSICS

Exercise Set 5

(Date Due: 1396/12/27)

1. Base on simple algorithm for un-weighted Two-Point correlation function, calculate un-weighted two-point correlation of peaks for 1D data set at 0,  $+2\sigma$  and  $-2\sigma$  levels. **Hint: "0" level means threshold at the average of data. In other word, we set the mean value of input data to zero,  $\langle x \rangle = 0$ . Also  $\sigma = \langle x^2 \rangle$ , therefore  $+2\sigma$  represents the threshold with value  $2 \times \sigma$  and so on. See the plot on the next page.**

Good luck, Movahed

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