Circular statistical methods in dispersion of clusters in a cell-cycle coupling model

by
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Abstract: In this talk, the speaker will give an introduction on basic circular statistical methods to deal with angular data. Angular data are used in biology, meteorology, geography, and in many other areas; for examples, ocean current directions, orientation of fracture planes, and departure directions of animals. Because angular data have no true zero value, and the designation of high and low values is arbitrary, this type of data cannot be analyzed with commonly used statistical techniques. The speaker will use circular statistical methods to study the effects of random perturbations on collective dynamics of a large ensemble of interacting yeast cells. Two biologically motivated mechanisms of dispersion will be considered and compared with additive Gaussian white noise perturbations. The results can be used to predict the strength of coupling among the cells from experimental data.

Thursday, February 5, 2015
2:50-3:00 Refreshments
3:00-4:00 PM
BohH 90
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