

1077-VE-2286

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([flora.xushujing@gmail.com](mailto:flora.xushujing@gmail.com)). *Linear Tests of Uniformity for Data Defined on Distance Transitive Graphs*. Preliminary report.

Suppose respondents in a survey are asked to choose an element from a finite set  $X$ . If we assume their responses are governed by an underlying probability distribution  $P$ , then it is natural to wonder whether  $P$  is actually the uniform distribution defined on  $X$ . In this talk, we present the results of our study of linear tests of uniformity when  $X$  is the set of vertices of a distance transitive graph. In particular, we construct several straightforward tests of uniformity, derive formulas for their associated degrees of freedom, and run the tests on example data sets to demonstrate their usefulness. (Received September 22, 2011)