

Meeting: 1003, Atlanta, Georgia, MAA CP X1, MAA General Contributed Paper Session, I

1003-X1-255 **Gerald W. Kruse*** (kruse@juniata.edu), 1700 Moore St., Huntingdon, PA 16652. *How Google Relies on Discrete Mathematics*. Preliminary report.

The recent media attention during its Initial Public Offering served to underscore Google's position as the most ubiquitous search engine. The main reason for Google's popularity is its uncanny ability to provide useful search results. Although there have been many attempts to manipulate these search results, including the well known "Google Bombs," it is safe to assume that most people are not aware that Google's PageRank is determined using linear algebra and graph theory. In this talk we will show how the developers of Google exploit the link structure of the World Wide Web and how their rank of each page depends on the calculation of an eigenvector. (Received September 03, 2004)