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A superintroduction to Google matrices for undergraduates.

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Summary: In this paper, we consider so-called Google matrices and show that all eigenvalues λ of them have a fundamental property $|\lambda| \leq 1$. The stochastic eigenvector corresponding to $\lambda = 1$ called the PageRank vector plays a central role in the Google's software. We study it in detail and present some important problems. The purpose of the paper is to make the heart of Google clearer for undergraduates.

Classification: H65 R55

Keywords: Google matrices; eigenvalue 1; PageRank vector; linear algebra

<http://www.pphmj.com/abstract/9087.htm>