Leadership groups on Social Network Sites based on personalized PageRank

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Abstract

The Online Social Networking phenomenon is growing rapidly all around the world. As a consequence, in recent years, several studies have been devoted to the analysis of Social Network Sites (SNSs). A specific issue that has been addressed is the identification of leaders based on well-known algorithms such as PageRank [1], [2], [3]. In this talk we give a new method to identify leaders on an SNS. The method is based on the number of times that a node appears as a winner when computing the PageRank vector in some prescribed way. We also introduce some concepts such as "my best current friend" and "my best potential friend". We provide formal definitions, algorithms and some experiments for these issues.

References.

[1] M. E. J. Newman, *Networks. An introduction*. Oxford University Press. 2010.

[2] L. Page, S. Brin, R. Motwani, and T. Winograd, *The PageRank Citation Ranking: Bringing Order to the Web*, Stanford Digital Libraries Technologies Project, 1999.

[3] F. Pedroche, *Competitivity Groups on Social Network Sites*, Mathematical and Computer Modelling, 52 (2010), p. 1052-1057.