**What is Twitter, a social network or**

**a news media**

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**Abstract**

Twitter, a microblogging service less than three years old, commandsmore than 41 million users as of July 2009 and is growingfast. Twitter users tweet about any topic within the 140-characterlimit and follow others to receive their tweets. The goal of thispaper is to study the topological characteristics of Twitter and itspower as a new medium of information sharing.We have crawled the entire Twitter site and obtained 41.7 million user profiles, 1.47 billion social relations, 4262 trending topics,and 106 million tweets. In its follower-following topology analysiswe have found a non-power-law follower distribution, a short effective diameter, and low reciprocity, which all mark a deviation fromknown characteristics of human social networks. In order toidentify influentials on Twitter, we have ranked users by the number of followers and by PageRank and found two rankings to be similar.Ranking by retweets differs from the previous two rankings,indicating a gap in influence inferred from the number of followers and that from the popularity of one’s tweets. We have analyzed the tweets of top trending topics and reported on their temporal behavior and user participation. We have classified the trending topics based on the active period and the tweets and show that the majority of topics are headline news or persistent news in nature. A closer look at retweets reveals that any retweeted tweet is to reach an average of 1 000 users no matter what the number of followers is of the original tweet. Once retweeted, a tweet gets retweeted almost instantly on next hops, signifying fast diffusion of information after the 1st retweet.To the best of our knowledge this work is the first quantitative study on the entire Twittersphere and information diffusion on it.

**About the speaker**

Xiangyu Yi received the Bachelor degree from Harbin Institute of Technology in 2010 and 2014, majoring in Software Engineering . Now,he is a graduate student in Fudan University.His research interests include Financial Informatics, Social Network.And now his work point is rumor spreading and social gaming networks.