

# Measuring the spreadability of users in microblogs

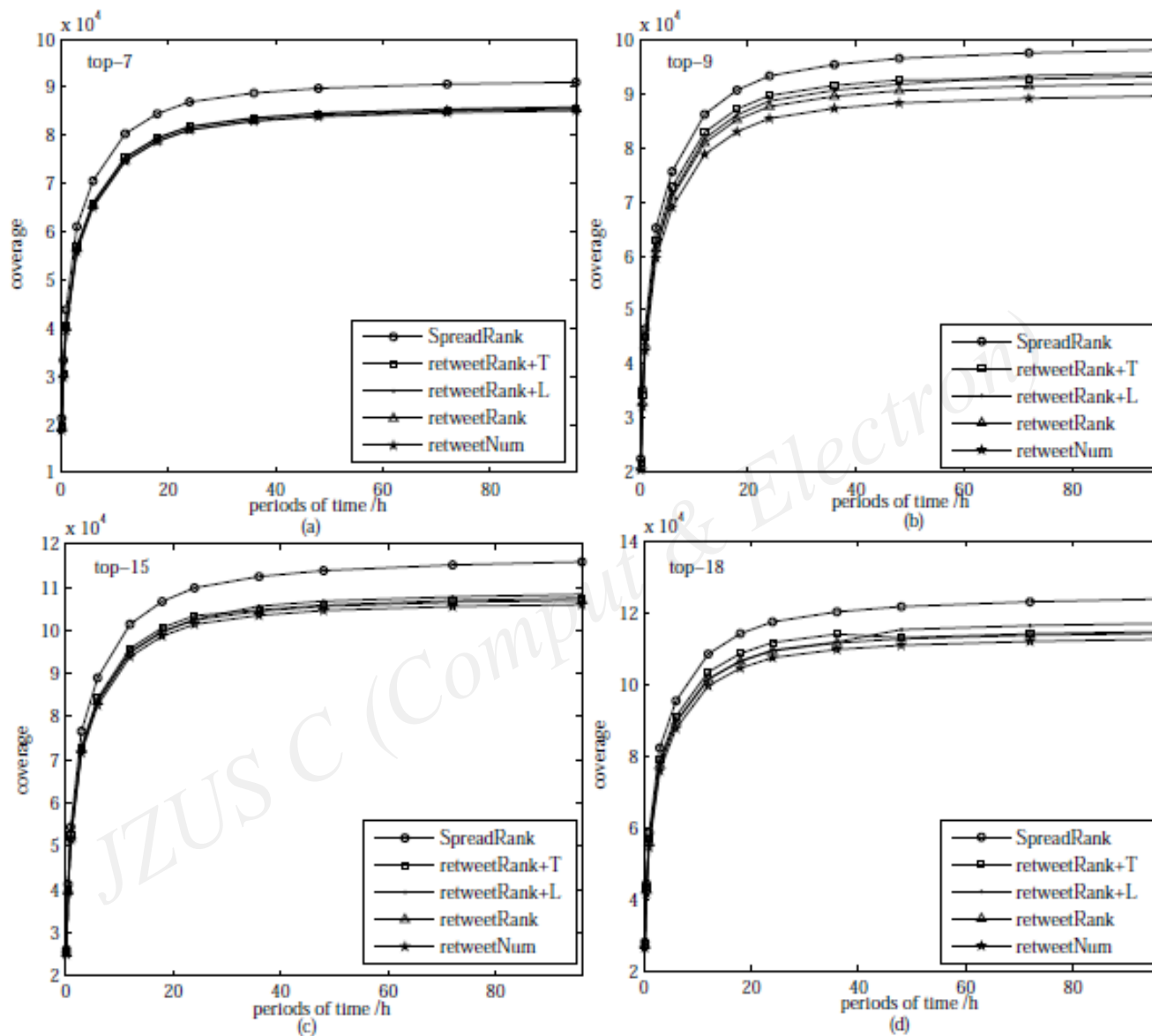
## 微博中个体扩散能力度量研究

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- Traditional methods to measure the spreadability of users consider only the link out such as the number of retweets, and the time interval of retweets and the location of users in information cascades are neglected
- In this paper, we propose a novel variant PageRank method called *SpreadRank* to measure the spreadability of users in microblogs, taking advantage of the time interval of retweets and the location of users in information cascades

- 1: Compute the transition matrix  $P$  of the network  $G$
- 2: Compute the teleport vector (the factor of restart)  $x$
- 3: Initialize ranks  $r_0 = s$
- 4: **while**  $\delta \geq \ell$  **do**
- 5:        $r_{k+1} = \alpha Pr_k + (1 - \alpha)x$
- 6:        $\delta = \|r_{k+1} - r_k\|_1$
- 7: **end while**



The coverage with different periods of time for the top-7, top-9, top-15, and top-18 users, at the 12 periods of time of 0.2, 0.5, 1, 3, 6, 12, 18, 24, 36, 48, 72, and 96 h