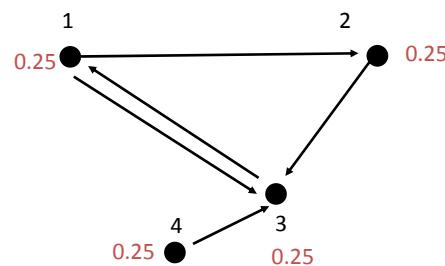


## Lecture 18: PageRank and HITS

INFO 2950:  
Mathematical Methods for Information  
Science

### An example

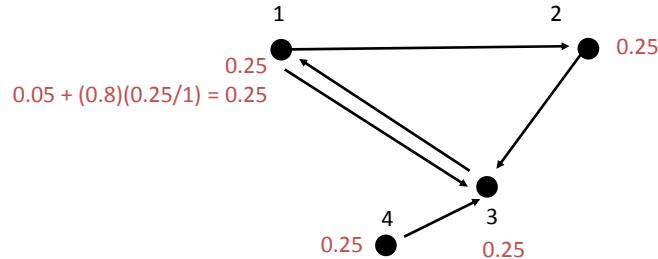
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



2

## An example

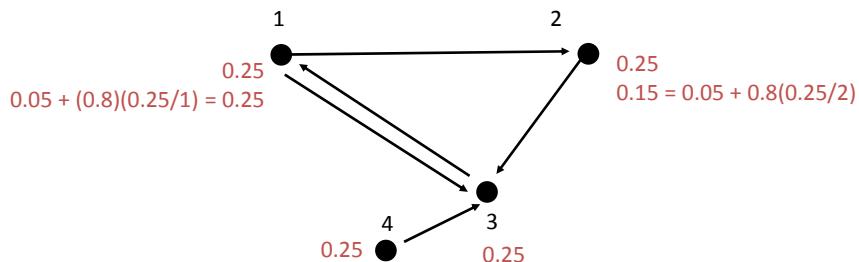
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



3

## An example

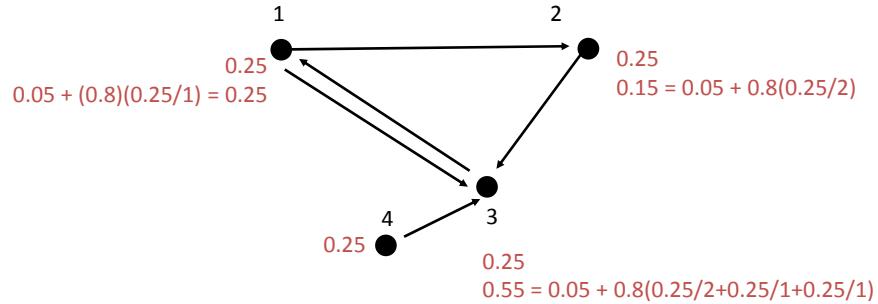
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



4

## An example

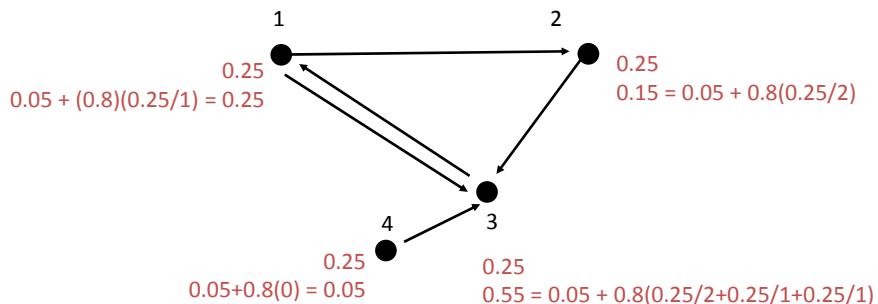
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



5

## An example

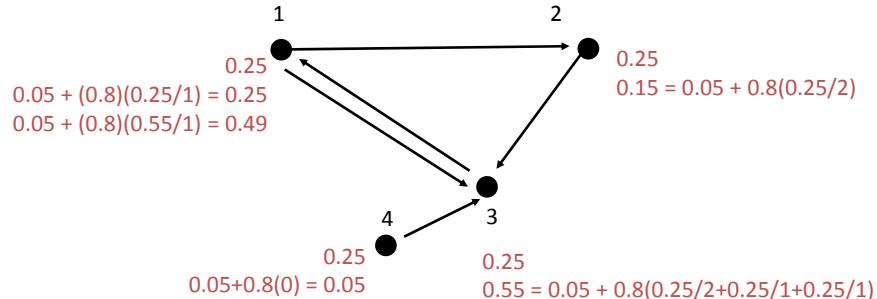
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



6

## An example

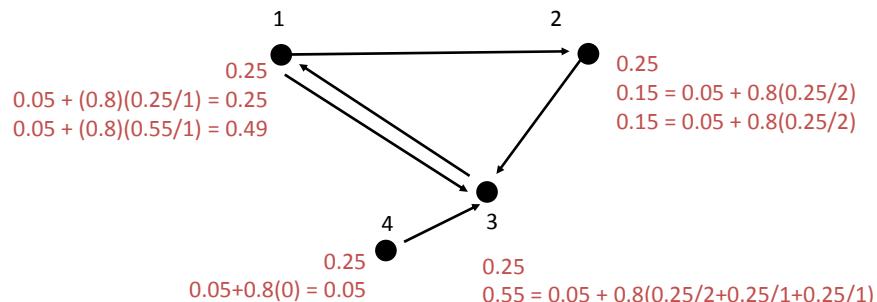
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



7

## An example

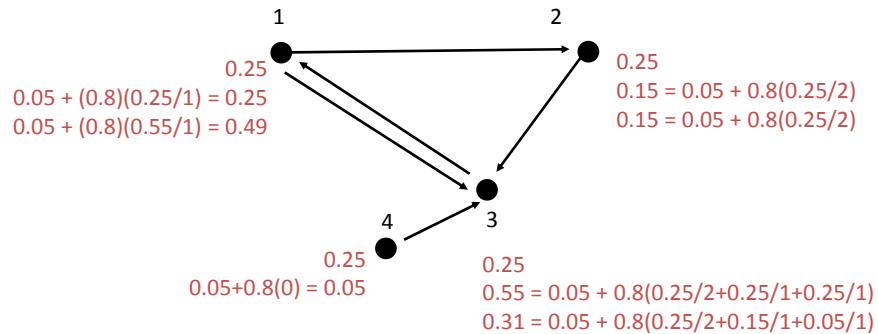
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



8

## An example

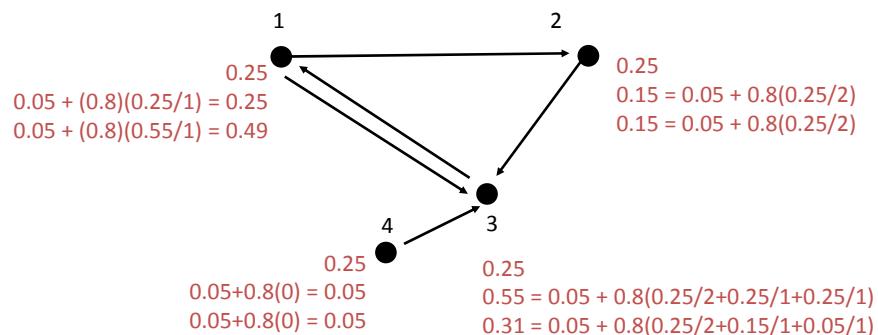
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



9

## An example

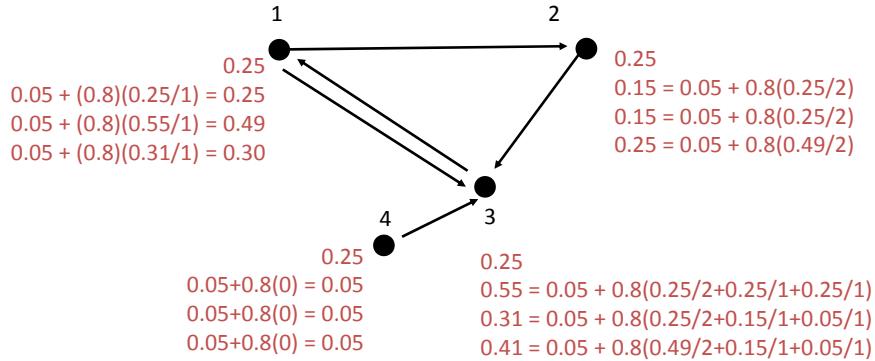
$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



10

## An example

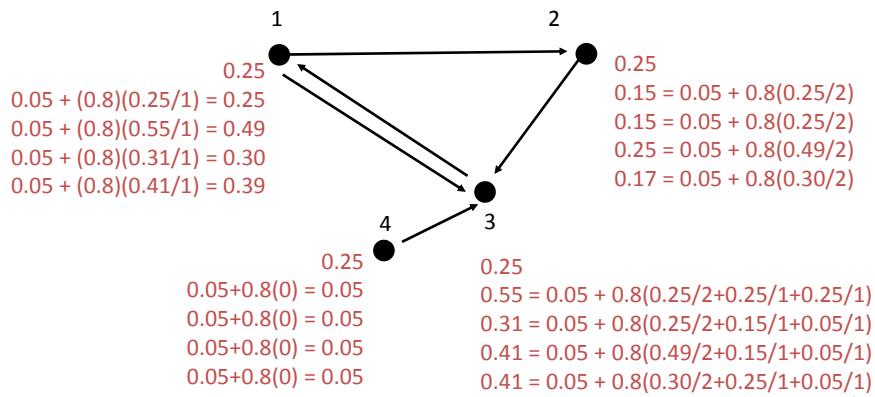
$$r_j = \frac{p}{n} + (1-p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



11

## An example

$$r_j = \frac{p}{n} + (1-p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$



12

## An example

$$r_j = \frac{p}{n} + (1 - p) \sum_{i|i \rightarrow j} \frac{r_i}{d_i}$$

