In viral marketing, merchants
- pay k influencers
- hope word-of-mouth promotes the product
- create a cascade of influenced individuals

Influence Maximization (IM)
For a fixed k, how to pick k influencers to maximize the eventual influence spread \( \#(\text{influencer}) + \#(\text{influenced}) \)

New Problem: Capacity Constraint Influence Maximization

Input: d initial adopters and a capacity constant k
Output: k influential friends (seeds) for each of d initial adopters
Objective: maximize the spread of the set of all selected seeds

Greedy Algorithms and Scalable Implementations

CIM solutions
Local competitors:
- Degree, PageRank, IMM, OPIM-C

Greedy solutions:
- MG-Greedy, RR-Greedy

Scalable implementations:
- MG-OPIM, RR-OPIM, RR-OPIM+

RR-OPIM+ outperforms all other solutions on 5 public datasets in terms of spread and running time.

Experiments

Scalable implementations: follow the framework of OPIM-C and redesign the constants with rigorous analysis
Instances: first-cut versions (MG-OPIM, RR-OPIM) and final version (RR-OPIM+)