Clustering and Collaborative Filtering

- Goal: predict what movies/books/… a person may be interested in, on the basis of
  - Past preferences of the person
  - Preferences of other people
- One approach based on repeated clustering
  - Cluster people based on their preferences for movies
  - Then cluster movies on the basis of being liked by the same clusters of people
  - Again cluster people based on their preferences for (the newly created clusters of) movies
  - Repeat above till equilibrium
  - Given new user
    - Find most similar cluster of existing users and
    - Predict movies in movie clusters popular with that user cluster
- Above problem is an instance of **collaborative filtering**