- Learning convolutional Neural Networks for graphs

  works for directed, undirected graph with both discrete and continuous node and edge attributes
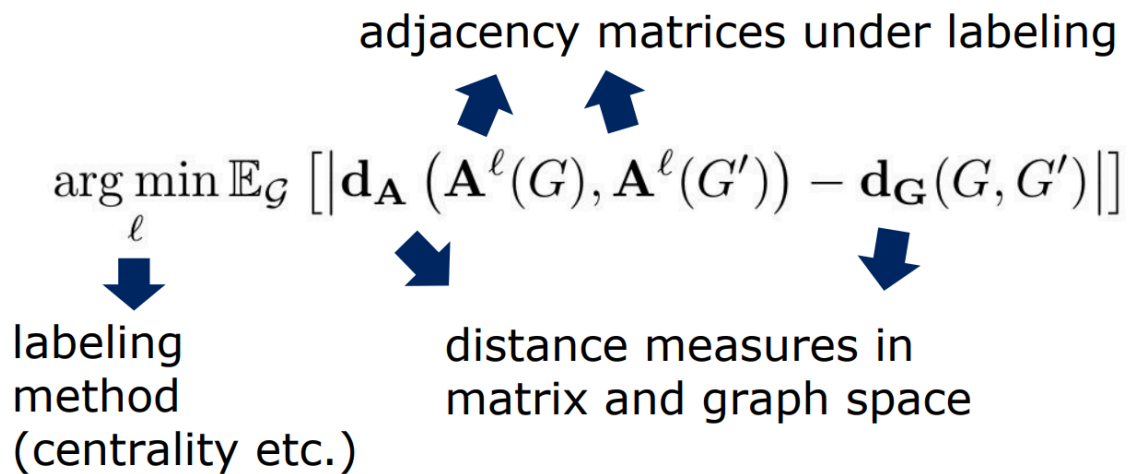
  learning a representation for classification/regression

  state of the art: graph kernels based on substructures: shortest path, random walk, subtree...

  Patchy: 1)node sequence selection(use centrality measures to generate node sequence)

  2) neighborhood assembly(breadth-first search until k nodes are added)

  3) neighborhood normaization, served as receptive fields(unclear)

  node and edge attributes correspond to channels(?)

adjacency matrices under labeling

$$\arg\min_{\ell} \mathbb{E}_{\mathcal{G}} \left[\left| \mathbf{d_A} \left(\mathbf{A}^{\ell}(G), \mathbf{A}^{\ell}(G') \right) - \mathbf{d_G}(G, G') \right| \right]$$

labeling
method
(centrality etc.)

distance measures in
matrix and graph space

4)