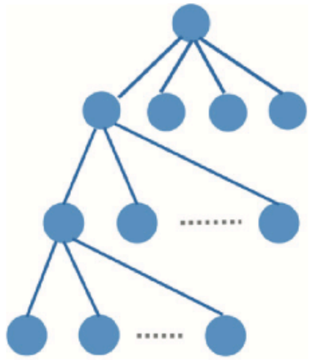
Introduction

Recent Studies

- Some studies have tried to involve the information from the structures of rumor dispersion by invoking CNN-based methods.
  - CNN-based methods can obtain the correlation features within local neighbors but cannot handle the global structural relationships in graphs or trees.
  - The global structural features of rumor dispersion are ignored in these approaches.
  - CNN is not designed to learn high-level representations from structured data
    - But GCN is

Introduction

GCN approaches



(a) UD-GCN

- GCN (Undirected GCN, UD-GCN) only aggregates information relied on the relationship among relevant posts but loses the sequential order of follows.
  - Although UD-GCN can handle the global structural features of rumor dispersion, it does not consider the direction of the rumor propagation.
- In previous work already prove two major characteristics of rumors
  - deep propagation along a relationship chain (Han et al. 2014)
  - wide dispersion across a social community (Thomas 2007)