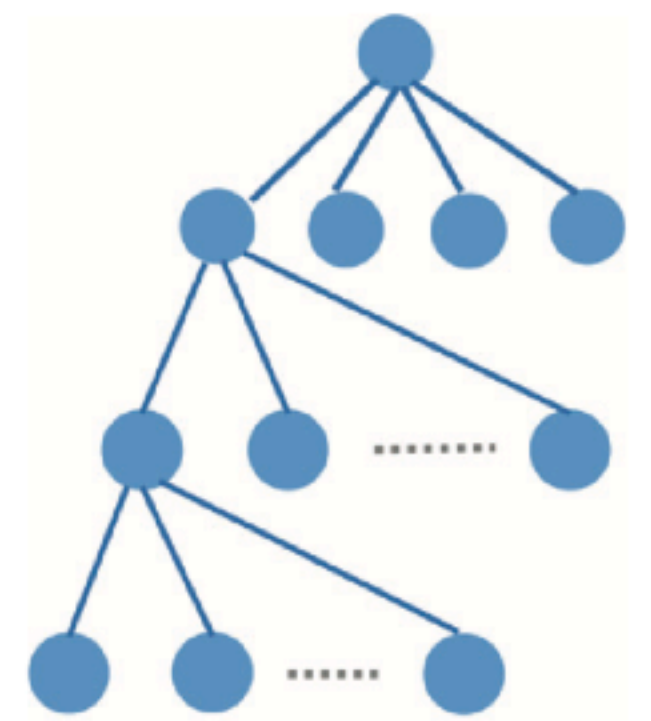


Introduction

GCN approaches

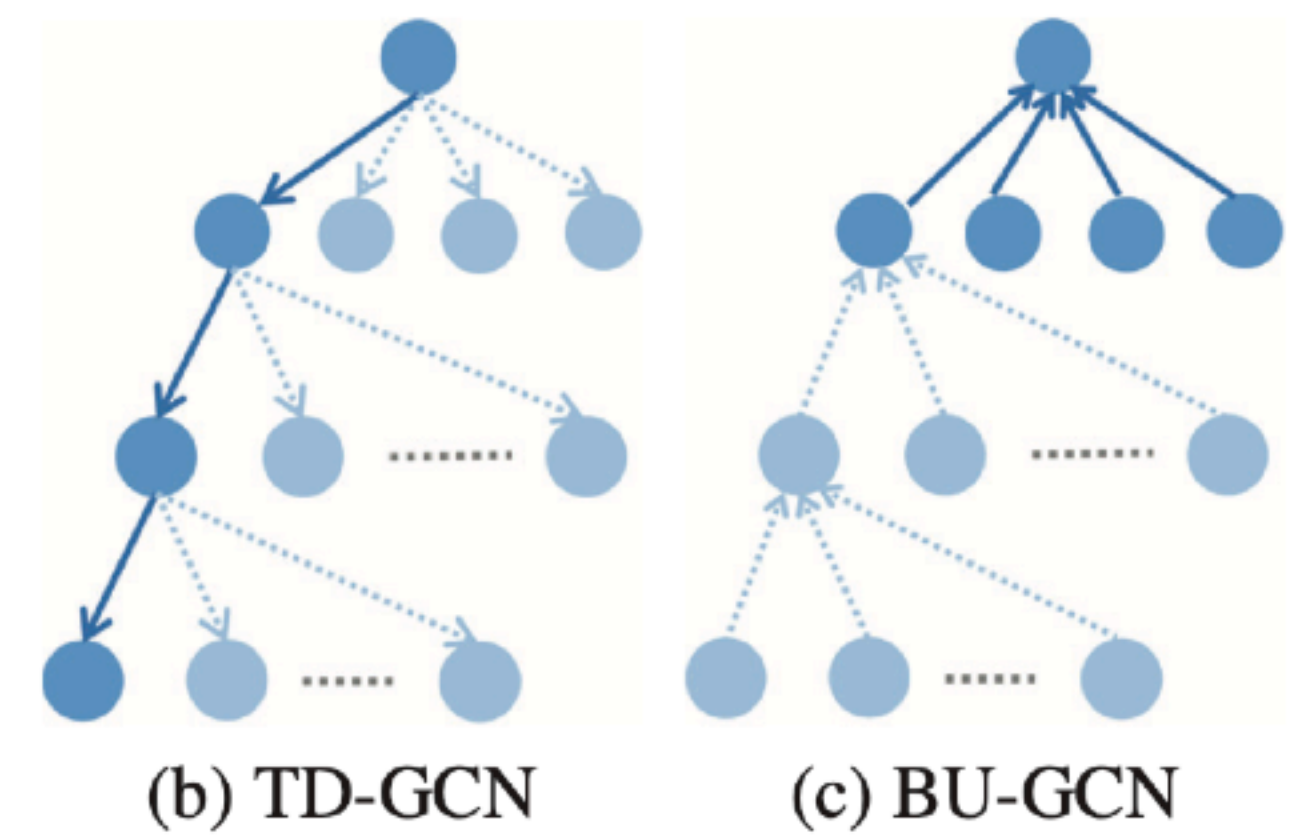


(a) UD-GCN

- 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)

Introduction

Bi-directional GCN (Bi-GCN)



- To deal with both propagation and dispersion of rumors, proposed Bi-GCN.
- Obtains the features of
 - **Propagation** via **Top-Down** GCN (TD-GCN)
 - TD-GCN forwards information from the parent node of a node in rumor tree to formulate the rumor propagation
 - **Dispersion** via **Bottom-Up** GCN (BU-GCN)
 - BU-GCN aggregates information from the children nodes of a node in a rumor tree to represent rumor dispersion