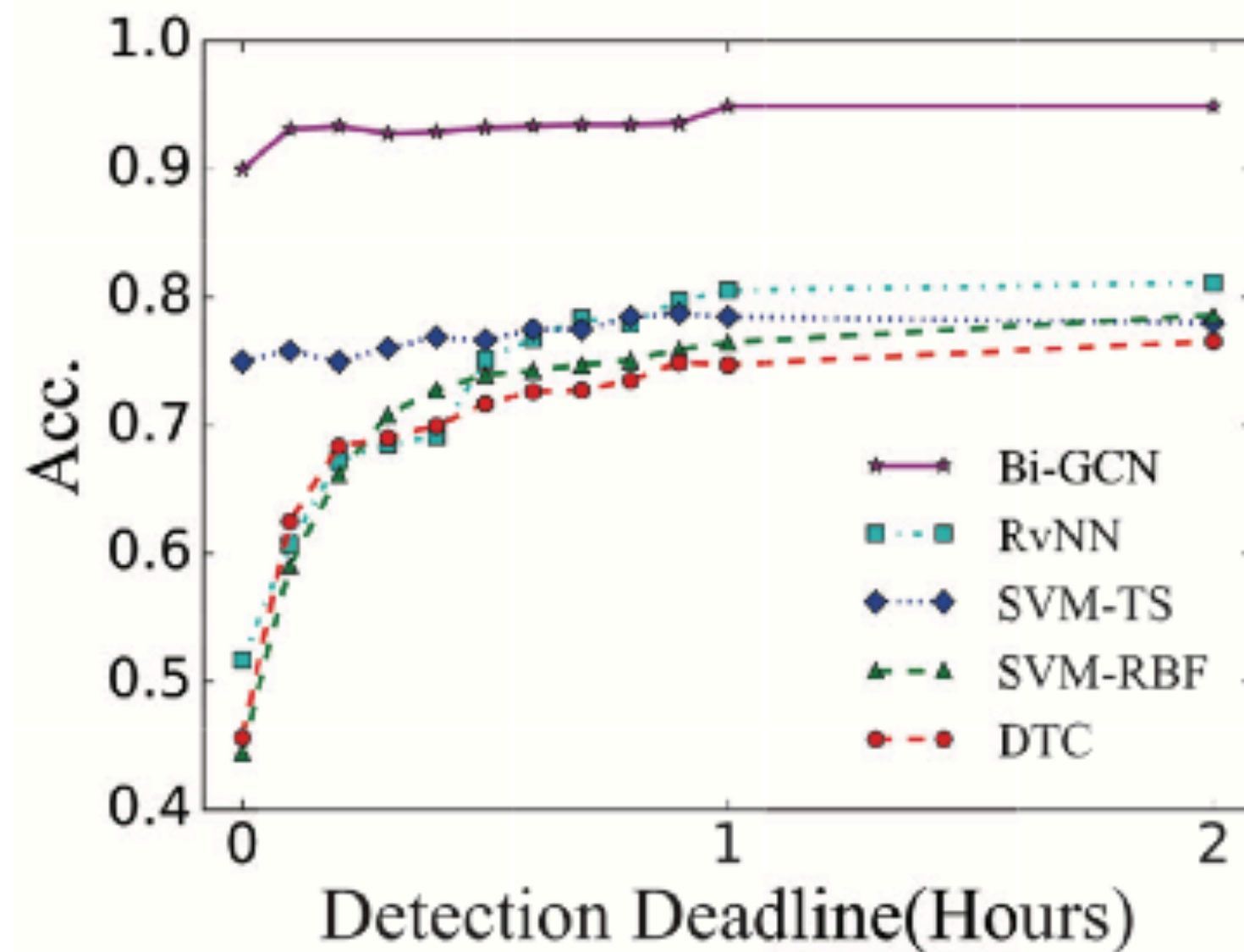
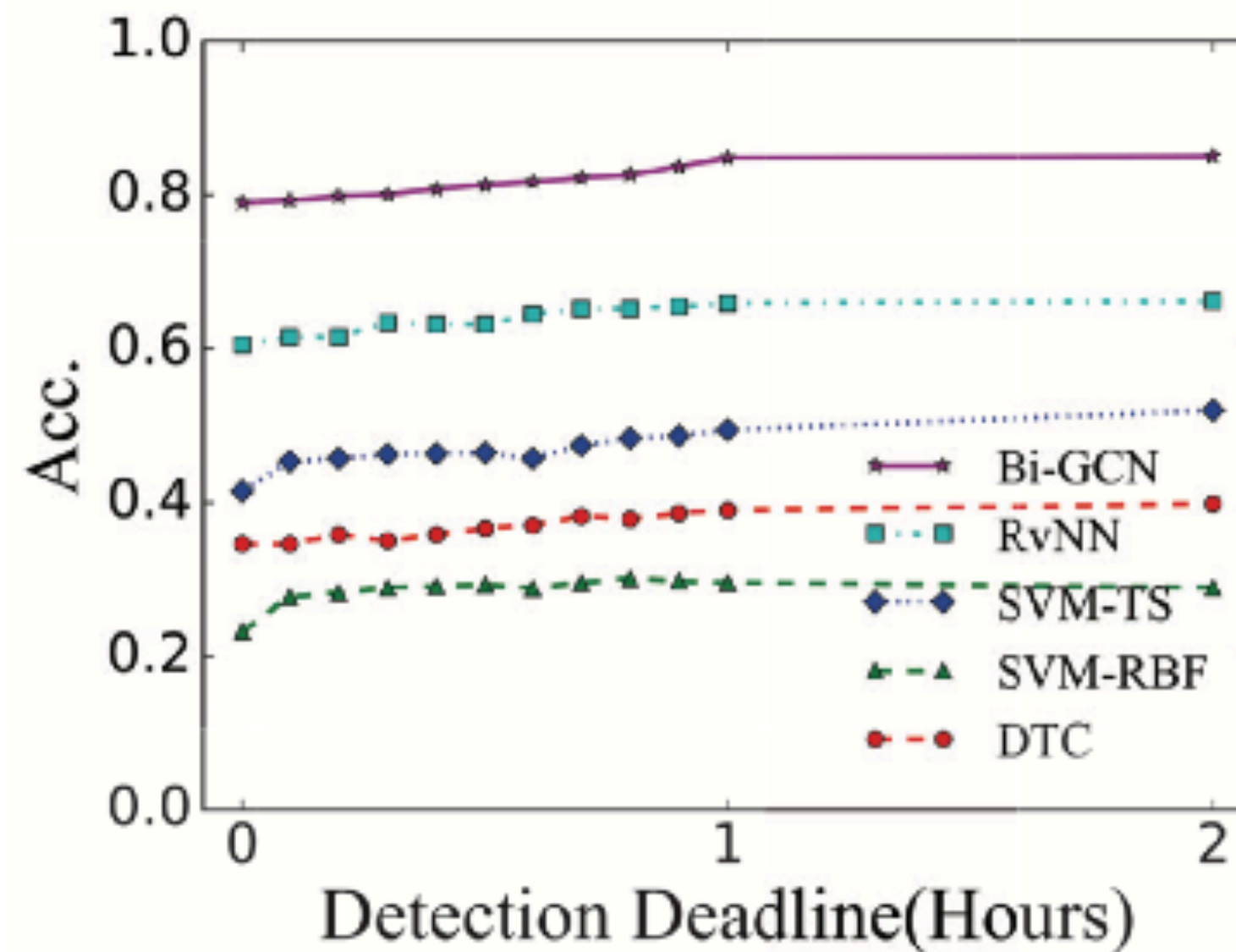


Experiments

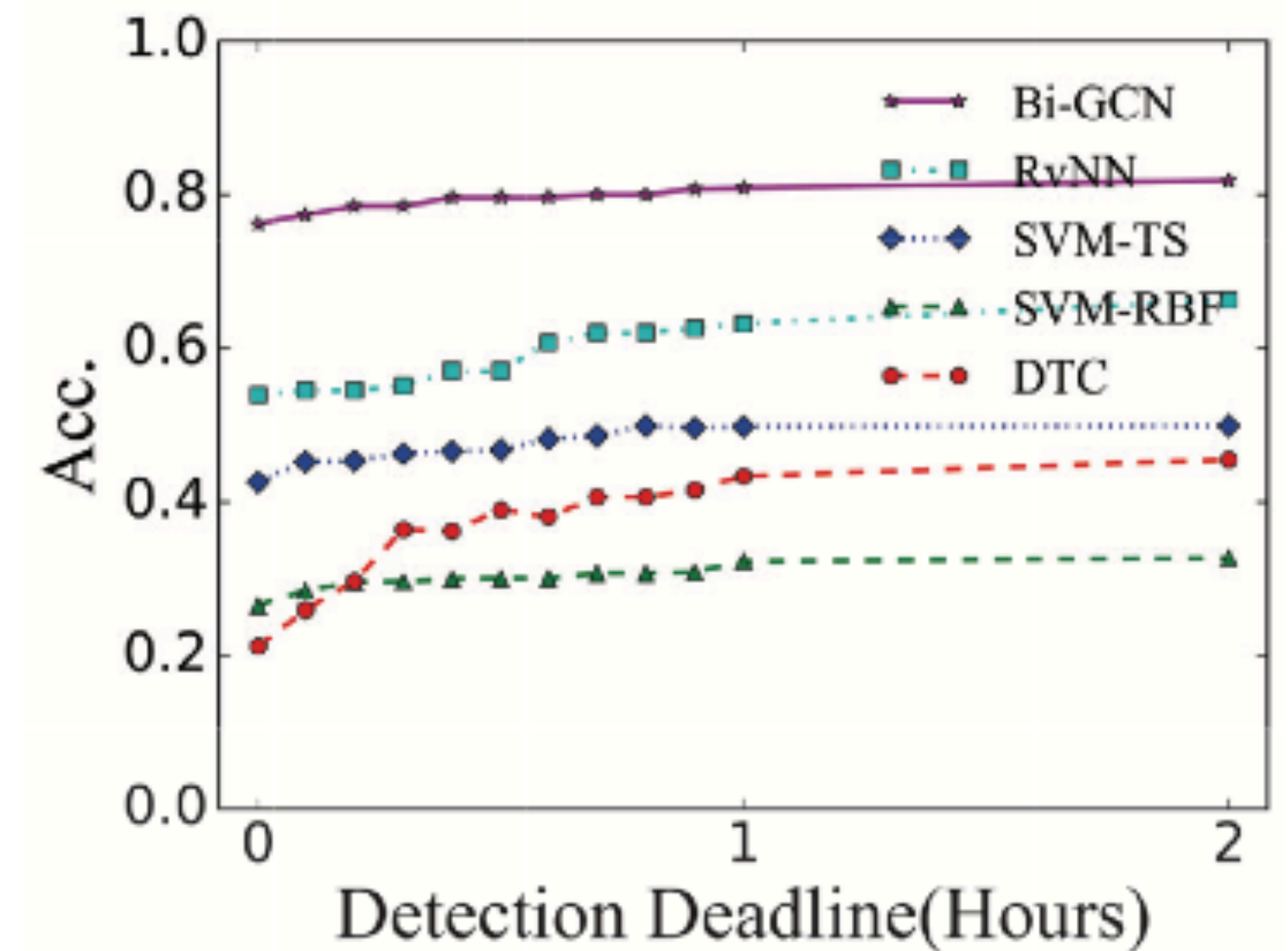
Early Rumor Detection



(a) *Weibo* dataset



(b) *Twitter15* dataset



(c) *Twitter16* dataset

Result of rumor early detection on three datasets

- Bi-GCN reaches relatively **high accuracy at a very early period** after the source post initial broadcast.
- Observe that structural features are not only beneficial to long-term rumor detection, but also helpful to the early detection.

Conclusions

- Proposed a **GCN-based** model of rumor detection on social media, called Bi-GCN.
- Bi-GCN achieves the best performance by considering both
 - **Causal features of rumor propagation** along relationship chains from top to down propagation pattern
 - **Structural features of rumor dispersion** within communities through the bottom-up gathering.
- Improve the effectiveness of the model by **concatenating the features of the source posts** after each GCL of GCN.