1135-92-611	**Haiyan Wang*** (`haiyan.wang@asu.edu`). *Combining networks and PDE models to improve influenza predictions.* Preliminary report.

The rich and big data generated by millions of users on social media can be used for predictions in a rapid and accurate fashion. In recent years many researchers have explored real-time streaming data from Twitter for a broad range of applications such as predicting flu trends. In this talk, we present our design and implementation of a prototype system to collect flu related twitter data. Further we use partial differential equation models describe/predict epidemic outbreaks based on the twitter data. We correlate the results with official statistics from Center for Disease Control and Prevention (CDC). These results demonstrate that the system can be used to real-timely monitor the spread of influenza (Received September 10, 2017)