Connecting Online and Offline Worlds with Social Media Big Data

Abstract

The increasing availability of data across different socio-technical systems, such as online social media, mobile phone networks, and collaborative knowledge platforms, presents novel challenges and intriguing research opportunities. As more online services permeate through our everyday life and as data from various domains are connected and integrated with each other, the boundary between ‘real world’ and ‘virtual online world’ becomes blurry. Such data cover both online and offline activities of people, as well as multiple time scales, prompting a variety of research questions on human behavior in these two dimensions. In this talk I will discuss three examples of how online and offline worlds interact and affect each other.

In the first example, I will talk about persuasion campaigns on Twitter, how they spread (often supported by exogenous stimuli), and how we can promptly detect and potentially hinder their diffusion. The second example will illustrate how information diffusion on social media connects to the real world, showing that the emergence of local and global trends is affected by human mobility. The third example will describe the characteristics of Twitter conversations, and the behavior of users therein involved, triggering in response to real world social protests like Occupy Wall Street or Gezi Park.