

Abstract:

As we navigate the modern world, human beings leave digital traces. Our phones collect detailed location. Our credit card transactions reveal our consumption patterns. Internet searches capture mundane questions alongside our deepest fears. Through online social network like Facebook and Twitter, or through phone-calls and text messages we reveal our social networks. And these are just a few examples. As the world becomes more connected, more and more aspects of our lives become measurable and we can begin to understand more complex topics, such as sleep, personality, or mood. My scientific work focuses on analyzing such massive data-sets and extracting information about their patterns. These patterns can be thought of as organizing principles which are invisible to us as individuals, but which characterize and shape our behavior. In the lecture, I will highlight a few of the most striking results from the past few years, emphasizing recent work on dynamic networks and human mobility.