

Invited Talk

Security and Privacy in Social Analytics

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Abstract

People rely on a diverse personal network of friends and contacts to get trusted information; help filter and interpret information; and get referrals to other people. In practice, connecting people of mutual interests helps them to work together and share social resources to achieve common goals. While online social networking tools can help individuals be more productive, there are more problems concerning security and privacy. For example, highly private information can be more easily leaked and spread in social media. In addition, adverse outcomes may also occur at any time and spread much faster when malicious users spread rumors and misinformation.

In this talk, I present some of our work along the two dimensions. First, I discuss the privacy issues in social analytics and how we address them in both Internet and enterprise settings. Specifically, I introduce SmallBlue, an info-social sensing, analysis and visualization system designed to unlock valuable collective intelligence within organizations. It has been successfully fostering collaborations of IBMers in over 70 countries. SmallBlue also enables us to advance our understanding of organizational social networks, such as the information spreading, social correlation and culture factors.

Next, I present our social-analytics-based approaches to enhancing the security of social systems. The ability to influence is now democratized by social media platform. Yet, such influence is susceptible to the ever growing hacking of social interaction such as bots. We aim to understand and detect such social media behavior towards the goal of prevent adverse outcome. In particular, we have investigated the detection of anomalous information spreading in social media. Such anomalous information spreading could potentially be rumors or real emergent events, both of which are important to notify human analysts for further investigation.

Biographical Sketch

Dr. Zhen Wen is a staff architect at Alibaba Group. He leads the efforts to protect big data security and privacy in Alibaba cloud computing. Before joining Alibaba, Dr. Wen was a senior data scientist at Google working in social analytics; and a Research Staff Member at IBM Research after receiving PhD from University of Illinois at Urbana-Champaign in 2004. His work focuses on big data security and privacy, social analytics, and their applications in collaboration and security. He was the analytics research lead of IBM Research's Social Cognitive Analytics projects. Dr. Wen was the analytics lead and project manager of the largest DARPA-funded social media research program, focusing on anomaly detection and understanding. His work received 2011 Association of Information System ICIS Best Theme Paper Award, the best paper award at ACM Conference on Intelligent User Interfaces (IUI) 2005, IBM Outstanding Innovation Award in 2014 & 2013, IBM Research Accomplishment Award in 2005 & 2012, and IBM invention achievement award in 2007, 2010-2013. Dr. Wen is the Associate Editor of IEEE Transactions on Multimedia, and a senior member of IEEE.