

**\*\*\*Call for Papers\*\*\***  
**Special Issue on Theoretical Foundations for Big Data Security and Privacy**  
**IEEE Transactions on Big Data**

Big data is one of the hottest research topics in science and technology communities, and it possesses a great application potential in every sector of human society. However, security and privacy, especially theoretical foundations of them, are critical barriers for extensive applications of big data. We have seen the vulnerability of the available privacy preserving data publishing methods against the dramatic development of mining techniques. We also meet the challenges to apply strict privacy protection frameworks (e.g., differential privacy) in practice. In terms of cryptography, we are experiencing the extraordinary efficiency problem given the volume and scale of big data. Moreover, we have to handle the existing and emerging attack methods in the big data environment. In summary, it is time for us to face the challenges. We have to improve or adjust the existing security and privacy techniques, even invent new tools and techniques, to accommodate the new problems and challenges in the age of big data.

The purpose of this special issue is to solicit the latest outputs of theoretical foundations and mechanisms in big data security and privacy. Topics of interests include, but are not limited to:

- Privacy awareness of data mining in big data
- Threat and Vulnerability Analysis in Big Data
- Architecture for Security and Privacy in Big Data
- Encrypted Information Retrieval in Big Data
- Cryptanalysis and Applications in Big Data
- Lightweight Cryptographic Algorithms in Big Data
- Network Security, Privacy in Big Data
- Network Forensics in Big Data
- Anonymous Communication in Big Data
- Physical Layer Security in Big Data
- Privacy and Security in Cloud Data
- Privacy and Security in Data Center Networks
- Attacks and Counter Measures in Big Data
- Information Forensics in Big Data
- Identity Management and Key Management in Big Data
- Intrusion Detection and Response in Big Data
- Security and Privacy in Complex Networks
- Malware and Virus Detection in Big Data
- Biometric Security and Forensics in Big Data
- Reliability and Availability in Big Data
- Network Security and Privacy in Big Data

**Submission Instructions**

Before submitting your manuscript, please ensure you have carefully read the [Instructions for Authors](#) for *IEEE Transactions on Big Data* (TBD). The complete manuscript should be submitted through TBD's [submission system](#). To ensure that you submit to the correct special issue, please select the appropriate section in the drop-down menu upon submission. In your cover letter, please also clearly mention the title of the SI.

**Important Dates (tentative)**

01/12/2016	Paper submission due
01/02/2017	1st round review due
01/04/2017	1st revision due
01/05/2017	2nd round review due
01/06/2017	2nd revision due
01/07/2017	Final due

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