

Privacy and Security of Information Systems

Call for papers

2020 IEEE JSAIT - Special Issue on Privacy and Security of Information Systems

This special issue will focus on exploring the intersection of privacy and security with information and coding theory, as well as applications in communication theory, cryptography, computer science, machine learning, and hardware security. The early work of Shannon on perfect secrecy systems paved the way for the development of information-theoretic security and has led to deep insights regarding the role played by coding for security. Information-theoretic security now encompasses a broad range of security notions, from secrecy, authentication, covertness and privacy, applied to a wide variety of models, including wiretap channels, source and channel models for key generation, context-aware privacy models, secure and private learning, as well as distributed storage and computations systems. This special issue aims to attract contributions further exploring information theoretic security and privacy and investigating fundamental limits or practical code constructions/algorithms in contexts including but not limited to: secret message transmission, secret key agreement, authentication, identification, data anonymization, private retrieval, and privacy-preserving machine learning.

IEEE Journal on Selected Areas in Information Theory (JSAIT)

Editor-in-Chief: Andrea Goldsmith (Stanford University)

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Previously unpublished contributions in security and privacy methods for biometrics, 6G, machine learning, IoT, and database search based on information- and coding-theoretic methods are solicited, including but not limited to:

- Biometric secrecy systems and physical unclonable functions
- Secrecy capacity and secret-key capacity of wireless channels
- New attack models and information theoretic defense mechanisms
- Covert and stealthy communication
- Code constructions for security and privacy
- Differential privacy and privacy-preserving mechanisms
- Code designs for physical layer security in emerging applications
- Private information retrieval
- Secure multi-party computation, private computation
- Privacy amplification with extractors and hash functions
- Security and privacy guarantees in distributed and federated learning

Important Dates

Paper Submission Deadline ~~August 1, 2020~~ Extended to Aug. 15, 2020

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Submission Guidelines

Submitted papers should be of sufficient length and detail for review by experts in the field. Prospective authors must follow the *IEEE Journal on Selected Areas in Information Theory* manuscript submission guidelines in JSAIT Author Information webpage. All papers should be submitted through <https://mc.manuscriptcentral.com/jsait-ieee>