Distributed Coding and Computation

Call for Papers

This special issue will focus on information theoretic aspects of distributed coding and computing. While applications and platforms such as distributed learning, cloud storage and computing, content delivery networks, and distributed ledgers are increasingly popular, there is a tremendous need to evaluate the fundamental limits of the existing solutions and develop efficient approaches to run them. This is particularly important considering the growing list of constrains and requirements in terms available resources, scalability, privacy, security, fault tolerance, speed, accuracy, and verifiability. In this context, information theory and coding can play a major role in expanding and employing various tools and techniques to deal with those challenging tasks. This special issue aims to attract contributions investigating the fundamental limits of distributed information systems and developing efficient coding techniques to meet those limits, satisfying the essential constraints. Prospective authors are invited to submit original manuscripts on topics within this broad scope including, but not limited to:

- Distributed coding for network and storage
- Distributed coded computing
- Distributed private information and function retrieval
- Distributed and federated learning and optimization
- Distributed cache networks
- Distributed ledgers/Blockchains
- Distributed secret sharing, multiparty, and verifiable computing

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Submission Guidelines

Prospective authors must follow the *IEEE Journal on Selected Areas in Information Theory* guidelines regarding the manuscript and its format. For details and templates, please refer to the *IEEE Journal on Selected Areas in Information Theory* Author Information webpage. All papers should be submitted through Scholar One according to the following schedule:

Manuscript Due: January 1, 2022 (extended from Dec. 15, 2021)
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