



The 1st International Conference on Big Data and Security

Nanjing, China • December 20-22, 2019



Workshop

Title:

Application and Security of Edge Computing and Complex Networks

Abstract:

Today, edge computing is among the most active research fields. Edge computing deploys cloud functions in edge nodes such as base stations, access points, routers and smart phones, which is a promising expectation to provide low latency, low cost, proximity and high bandwidth network service. Hence it produces unprecedented amounts of Big Data. However, in certain areas, we are confronted not only with extremely Big Data, but also with complex data. The data analysis tasks are significantly involved. In smart grid systems, there are emerging concerns on recognizing energy users' behavior patterns so that the energy trading companies are able to provide customized services. To understand users' usage patterns, efficient grouping methods are required such as clustering or nonparametric Bayesian models in machine learning field. In wireless communication field, a hot topic of locating personal devices and trajectory analysis is drawing more and more attention with the development of advanced personal devices such as the smart phones. This workshop will be devoted to the present and demonstrate existing and pioneering works of edge computing and complex networks.

Scope and Topics:

The proposed workshop on application and security of Edge Computing and Complex Networks aims to provide a platform to academia researchers as well as industry partners where they can exchange ideas and solutions on recent research and future



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directions for the applications of data science in the field of Edge Computing and Complex Networks. This workshop solicits original research papers that addresses the following non-exhaustive list of topics:

Topics:

- Trends and challenges of integrating edge computing and caching
- Edge computing model, infrastructure and applications
- Edge computing enabled network architectures
- Edge computing and caching models in communication networks
- Machine learning/AI for edge computing
- Big data for edge computing and caching
- Security and privacy for edge computing and caching
- Complex Networks and Epidemics
- Community Structure and Discovery
- Link Prediction
- Multiplex Networks
- Information Spreading in Social Media
- Recommendation Systems and Networks
- Financial and Economic Networks

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