Special Session Call for Papers

ICACI'18 Special Session on Intelligent Computing Methods for Big Data Analytics

Special Session Organizer

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Important Dates

December 15, 2017: Deadline for submission of full-length papers to special sessions.
December 30, 2017: Acceptance/Rejection Notification.
January 15, 2018: Final camera-ready papers due in electronic form.

Submission

Manuscripts for a Special Session should **NOT** be submitted in duplication to any other regular or special sessions and should be submitted to ICACI 2018 main conference online submission system on ICACI 2018 conference website.

All submitted papers of Special Sessions have to undergo the same review process. The technical reviewers for each Special Session paper will be members of the ICACI 2018 Program Committee and qualified peer-reviewers to be nominated by the Special Session organizer.

Introduction

Big data refers to a collection of data sets which is huge and complex to be directly processed using on-hand database management tools or traditional data processing techniques. With the rapid development of information technology and the decrease of cost on collecting and storing data, big data has been generated from scientific fields, industry, business sector, governmental department, and internet. Usually, the important issue in data processing is to harness relevant data and use it to make the best decisions. However, for big data, it is difficult to find the most valuable pieces of information from a huge amount of data. Therefore, it is desired to develop a new generation of technologies and architectures to economically extract value from huge volumes of a wide variety of data by enabling high velocity capture, discovery, and analysis.

As a set of nature-inspired computational methodologies and approaches, intelligent computing methods enable intelligent behaviors in complex and dynamic environments. It generally includes, but not limited to, artificial neural networks, fuzzy systems, evolutionary computing, swarm intelligence and rough sets, and also embraces broader fields such as image processing, data mining, and natural language processing. In practice, intelligent computing methods have been applied successfully to solve complex real-world problems to which traditional approaches are time-consuming and ineffective. Therefore, they are regarded as promising techniques for big data analytics.

This special session aims at discussing and presenting the latest development on intelligent computing methods for big data analytics. Original contributions that provide novel theories, frameworks, and solutions to challenging problems of big data analytics will be solicited for this special session.

Indicative Topics/Areas

- Application of neural networks, fuzzy logic, rough sets, evolutionary computing, and swarm intelligence in big data analysis
- Deep learning for big data processing
- Nature-inspired techniques for big data analytics
- Parallel and distributed methods for knowledge discovery
- Adaptive and evolving learning methodologies for big data analysis
- Uncertainty modeling in learning from big data
- Multiple learning models
- Active and semi-supervised learning strategies
- Data stream mining
- Interactive learning and imbalance learning on big data
- Intelligent data preprocessing
- Random weighted networks and transfer learning on big data
- Data size and feature space adaptation
- Intelligent techniques in big data classification/clustering