Special Session on
"Hybrid and Intelligent Decision Making Systems for Big data, IoT and Cloud applications"
at
21st International Conference on Hybrid Intelligent Systems
(HIS 2021)
on
World Wide Web
December 14-16, 2021

http://www.mirlabs.org/his21/

Objectives and Scope

IoT systems naturally generate voluminous "big data" which are stored and accessed through cloud applications across different locations. Big data technologies like Hadoop, Spark were built to handle them. Since there is a need of high-end analytical processing of big data, analysts collect, process and visualize the information using Key Performance Indicators (KPIs) to make strategic decisions for improving the system performance. Artificial Intelligence (AI) / Machine Learning (ML) systems process large amounts of data which need appropriate infrastructure that can scale based on the computation needs. Cloud infrastructure serves this purpose and can be scaled on-demand. The inherent scalability and redundancy of cloud infrastructure coupled with IoT devices and computational intelligent algorithms enhances the quality of decision-making process. As predictive decision-making is very much important to implement AI/ML-based decisions, hybrid systems are used. The efficiency and effectiveness of computational intelligent algorithms can be achieved together by hybridizing them.

Contributions to this special session are welcome to present hybridization of novel methods, algorithms, frameworks, architectures, platforms and applications used for intelligent decision making in Big data, IoT and cloud systems.

Subtopics

The topics include, but are not limited to:

- Big data, IoT and cloud infrastructures
- Theoretical aspects of hybridization
- Automated parameter tuning
- Decision support systems
- Predictive analytics and cloud-based architectures
- Cloud-based big data analytics
- Emerging business models using big data approaches
- Managing Big Data Sets
- IoT Data Management

- Cloud Computing Infrastructure
- Hybrid models for machine learning algorithms
- Hybrid optimization techniques
- Hybrid of soft computing and statistical learning techniques
- Hybrid computing using neural networks - fuzzy systems - evolutionary algorithms
- Hybrid deep learning methods
- Computational Intelligent algorithms
- Business Information Systems
- Real world applications of Big data, IoT and cloud systems
- Tools and methods of Big data, IoT and cloud systems
- Security and privacy preserving approaches of Big data, IoT and cloud systems

Paper Publications

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (Indexed in SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago) https://www.springer.com/series/15179
- Papers maximum length is 10 pages
- Papers must be formatted according to Springer format (Latex/word) available at: https://www.springer.com/de/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324

Important Dates

Paper submission due: September 30, 2021
Notification of paper acceptance: October 31, 2021
Registration and Final manuscript due: November 15, 2021
Conference: December 13-15, 2021

Special Session Chairs

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- Dr. Dalia Kriksciuniene, Institute of Social Sciences and Applied Informatics, Kaunas Faculty, Vilnius university, Lithuania
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