Call for Papers

Special Issue on Computational Social Systems for COVID-19 Emergency Management and Beyonds

The ongoing pandemic of coronavirus disease 2019 (COVID-19) has caused tremendous human life and economic loss around the global. All the countries fighting against the disease face severe, multi-facets issues and challenges, including medicine, politics, economics, public health, technology, social management, etc. Among them, public health emergency management becomes a principle line which organizes emergent responses of efforts from all the aspects of the society.

In nowadays, the rapid process of digitized human society and convenient information dissemination already significantly facilitated smart emergency management in many areas including public health, however, several great challenges are still difficult to be overlooked. Data resource barriers are common among different social compartments preventing trusted share of critical data sets, and thus society-wide cross-domain scientific and precise decision making is not possible. Deep coupling of the real-world society and the virtual cyber space leads to mutual strong feedback to each other, leading to the situation in which emergency management is not just the matter in the real world, and it becomes tangled cyber-physical events. Distributed emergency response information and resources create difficulties in collaborations in emergency management. As a result, how to organize cross-disciplinary, cross-industry, geographically-distributed professional personnel and resources for collaborative and coordinative joint efforts, becomes urgent issues to be solved. The WHO named the secondary disaster on massive information flooding during pandemic as the "infodemic", which is one of the major social impacts different from the SARS epidemic 17 years ago. This pandemic happens with a society with highly-developed and highly-convenient information dissemination, as a result, people are not able to discriminate trustworthy sources and reliable guidance they need, from false, malicious and manipulative information sources.

This special issue aims to provide a much urgent and needed research work report in response to the ongoing COVID-19 pandemic, and share novel ideas, techniques and results on computational social systems based smart emergency.

Scope

The scope of the articles we seek includes innovative concepts, novel approaches and techniques, and new applications in smart and intelligent emergency management based on computational social systems.

Specific topics include but are not limited to the following:

- Novel Emergency Management Infrastructure: How new technical infrastructures for computational social system, such as Industrial Internet, Internet of Things, Big Data, 5G communication, cloud computing, edge computing, blockchain, etc., bring new possibilities and capabilities to emergency management.

- Data Science, Machine Learning and Artificial Intelligence for Emergency Management: Automated inter-sharing and cross-check of data; Knowledge engineering, machine learning and artificial

intelligence technology; Distributed and trustworthy multi-participant decision making; novel optimization and intelligent control approaches of emergency resources operation and management.

- Social Media and Emergency Management: Misinformation detection; Quantitative multimedia data analysis of COVID-19; Deep learning and data mining on cross-modal social-media; Social-media analytics and societal behavior; Economic stimulus and stress relief.

- Emergency Management for Vertical Application Areas: Emergence management applications and practices for vertical academic and industrial areas, such as public health, public safety, medicine R&D, manufacture industries, traffic, energy & electrical power, etc.

Submission Procedure

Papers should be formatted according to the IEEE Transactions on Computational Social Systems guidelines for authors and manuscripts (both 1-column and 2-column versions are required) should be submitted electronically through the online IEEE manuscript submission system.

Important Dates

Paper Submission Deadline: June 30, 2020

First review completed: August 15, 2020

Revision due: September 15, 2020

Second Review completed: October 15, 2020

Final Manuscript due: November 30, 2020

Publication: Early 2021

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