

# CALL FOR PAPERS

Critical infrastructure refers to important facilities, supply chains, services, and so on, which if destroyed, degraded, or rendered unavailable for an extended period would adversely impact on the social or economic well-being of the nation or affect nation's ability to ensure national security. Power system, transportation infrastructure, communication network, economic system, and public healthcare service, and so on are all typical examples of critical infrastructure, underpinning our society and serving as the backbone of our countries.

In essence, critical infrastructure is all complex systems. Modelling and analysis of these complex systems play important roles in understanding and managing them. However, due to the inherent complexity and the continuous evolution of these complex systems, traditional models and analysis methods have to face increasing challenges which even result in serious disturbances. For the past decade, our society has witnessed power blackouts, economic crises, and breakdowns of communication networks and transport networks from time to time. Undoubtedly, these accidents can not only lead to billion-dollar losses, but also cause larger disturbance of our society as well as panic among residents.

Admittedly, these disturbances have exposed the potential problems of current modelling and analysis methods, motivating both academic and industrial societies to seek new solutions. With technology advance, new methods have emerged recently such as distributed optimization and control, cloud-computing, big data, Internet of Things, deep learning, and grey system theory. These advanced methods have provided potential promise for tackling existing issues.

Generally, the purpose of this special issue is to publish high-quality research papers as well as review articles addressing recent advances on critical infrastructure modelling and analysis. Submissions should present novel methods, algorithms, architectures, protocols, and technologies for effectively developing, deploying, and managing critical infrastructure.

Potential topics include but are not limited to the following:

- ▶ Theoretical foundations of managing and monitoring of critical infrastructure
- ▶ Distributed control and optimization for smart grid
- ▶ Advanced computing and control (e.g., machine learning and big data analytics) for smart cities
- ▶ Grey models based analysis and forecast in energy system
- ▶ Transportation optimization and control based on advanced information technologies
- ▶ Traffic flow forecasting in cloud and/or distributed computing
- ▶ Advanced computing methods for risk hedging and decision making of economic system
- ▶ Healthcare systems and operation management

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/complexity/amcin/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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#### Submission Deadline

Friday, 28 July 2017

#### Publication Date

December 2017