

CALL FOR PAPERS

IEEE Transactions on Network Science and Engineering

Special Issue on Network of Cyber-Social Networks: Modeling, Analysis, and Control

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TOPIC SUMMARY:

Network of cyber-social networks (NCN) is a promising new area that has recently attracted significant interests. Its core differentiator is the tight conjoining among heterogeneous cyber-social networks or between cyber networks and physical networks. The focus of this proposed special issue is to address the interdependence of NCN components that facilitates its modeling, analysis, and control.

Over the past decade, we have witnessed an unprecedented growth of communication networks and online social networks in cyber world that “teleports” us to interact with remote people and/or objects. With the development of cyber technologies, heterogeneous networks become increasingly interdependent. Examples include mobile social networks that exploit social ties, modern power networks that rely on the control and communication over the Internet, and intelligent transportation networks that utilize communication networks to monitor traffic congestion in real time. A mobile social network is a typical multi-layer NCN where the short-range device-to-device communication is influenced by the human social behavior (trust and reciprocity). A modern power network demonstrates a fundamental NCN property where the interconnecting links between networks may induce or impede the risk of cascading failures. Until recently, these heterogeneous networks were mostly treated as separate entities, leaving their complex interactions unexplored.

The topics of interest for this special issue include, but are not limited to:

- Temporal evolution and interdependent modeling of cyber-social networks
- Self-organized and behavior-driven criticality of multi-layered cyber-social networks
- Interdependent collective dynamics and control of cyber-social multi-agent networks
- Synchronization and control of cyber-social networks
- Disease/information spreading dynamics on cyber-social networks
- Distributed optimization and optimal design of cyber-social networks
- Applications of cyber-social network theory.

IMPORTANT DATES:

- Manuscripts due: March 1, 2018 (extended deadline)
- First round of review notifications: June 1, 2018
- Revised manuscripts due: August 1, 2018
- Second round of review notifications: October 1, 2018
- Final accepted manuscript due: December 1, 2018.

SUBMISSION GUIDELINES:

Prospective authors are invited to submit their manuscripts electronically, adhering to the *IEEE Transactions on Network Science and Engineering* guidelines:

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Note that the page limit is the same as that of regular papers. Please submit your papers through the online system:

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