

CALL FOR PAPERS

IEEE Transaction on Systems, Man and Cybernetics - Part C *Special Issue on Interdependencies in Civil Infrastructure Systems*

The increasing complexity and interconnectedness of civil and other infrastructures systems, such as transportation, water and wastewater conveyance, electric power, energy, telecommunications, and cyber-infrastructures, have introduced new vulnerabilities to those infrastructures as well as new risks to society. Previous research focused on individual infrastructure systems has produced models, simulations and control paradigms that cannot address these vulnerabilities and risks. Moreover, the interdisciplinary science and engineering for monitoring, measuring, evaluating, and optimizing these interdependent, multi-scale, distributed infrastructure systems over their life-cycles is still in its infancy.

A “system of systems” perspective is needed to adequately capture the interdependencies between civil and other infrastructure systems. Such a perspective, possibly codified as a framework, will foster the development of new models and the merging of individual models to models of coupled and multiple systems, which can eventually lead to the formulation and analysis of theories for meta-infrastructure systems.

The special issue will focus on meta-infrastructure models as large-scale complex adaptive systems, development of multiple performance measures and economic models, risk, and uncertainty of the meta-infrastructure models.

Submission and Review Process

The guest editors for the special issue are Professor Nii Attoh-Okine (okine@ce.udel.edu) and Dr. Miriam Heller (mheller@nsf.gov) who can be contacted for further information. All manuscripts for this special issue should be submitted electronically to the IEEE SMC-C website (<http://smcc-ieee.manuscriptcentral.com>). Authors should indicate that their manuscript is being submitted for the Special Issue on *Interdependencies in Civil Infrastructure Systems*. A copy of the manuscript should be emailed in PDF format to Professor Attoh-Okine.

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Schedule

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