ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering

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Call for Papers

Special Collection on Resilience of Power Infrastructure System

Aims & Scope

Extreme weather events, such as hurricanes, droughts, and flooding, are expected to be more "common" under a more variable climate system. With threats from stronger hurricanes, wildfires, snowstorms, etc., power infrastructure systems are experiencing critical threats, leading to many community residents and industrial facilities without power for days, weeks or longer. With the interdependency with other infrastructure systems, such as the communication, water, and transportation systems, the damages or failures of critical components of power infrastructure system could potentially create cascading effects and create disastrous damages to communities, which might take years to recover. The main objective of this special collection is to bring together researchers working on different aspects of the resilience of power infrastructure systems. State-of- the-art knowledge and expertise from the researcher, engineers, operators, and owners are expected to be synthesized to enhance the resilience of power infrastructure systems when confronting extreme weather events in their life cycles.

Topic Areas

- Resilience of power transmission and distribution system and related data collection and processing, experimentation, and simulations;
- Artificial Intelligence (AI) in evaluating the infrastructural and network resilience of power systems, such as the machine learning and deep learning methods, and their applications for power infrastructures ;
- Risks and uncertainty of power infrastructure system regarding single and multiple hazards;
- Decision-making strategy and optimization for power infrastructure system design, repair, hardening, and recovery;

continued on reverse

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- Dependency and interdependency of power infrastructure systems with other infrastructure systems, such as communication, water, and transportation systems;
- Analyze the impacts of distributed energy resources integration towards resilience operation of power systems at both transmission and distribution levels.

Publication Target Dates

1. Paper Submission Deadline: Sep. 30, 2023
2. Initial Review Completed: Mar. 15, 2024
3. Special Issue Publication Date: Sep. 30, 2024

Standard Submission Instructions

Papers should be submitted electronically to the Journal at https://editorialmanager.com/jrnrueng/default1.aspx. If you already have an account, log in as author and select Submit Paper at the bottom of the page. If you do not have an account, select Submissions and follow the steps. In either case, at the Paper Submittal page, select ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering the Journal of. Papers received after the deadline or papers not selected for inclusion in the Special Issue may be accepted for publication in a regular issue.

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