

# **IEEE International Workshop on Resilience Engineering**

## **Call for Papers**

**(<https://qrs20.techconf.org/workshops/iwre>)**

The workshop will be co-located with the 2020 IEEE International Conference on Software Quality, Reliability, and Security (<https://qrs20.techconf.org/>), in Macau, China, December 11-14, 2020.

Resilience is rapidly spreading throughout domains traditionally studied by quality, reliability, and security researchers. It is widely recognized that progressively higher levels of resilience are needed to ensure complex systems and processes can provide continuity of operations and services. Examples include military vehicles, information systems, critical infrastructure, as well as supply chains and manufacturing processes. Many of these possess cyber and physical dimensions and are interconnected via networks or compose to form systems of systems. Despite the strong interest in resilience by defense and security organizations, the concepts are also of interest to commercial systems and processes. Recognizing that there is no universal mathematical formulation or single process capable of encompassing all domains, the Resilience Engineering Workshop seeks to convene researchers from across the spectrum of systems and process domains, ranging from theoretical to applied research for a stimulating exchange. We invite the participation of experts to share their ideas and experience to identify universal themes as well as to help define differences across domains. In doing so, we seek to bring enhanced clarity to this promising but often incompletely understood attribute and to accelerate the maturation of resilience as a discipline so that principles and best practices can be effectively disseminated to and implemented by the engineering community.

We invite manuscripts for the IWRE workshop to discuss recent research in areas associated with engineered resilient systems and processes. The length of a camera ready paper will be limited to eight pages in the standard IEEE conference format, including the title of the paper, the name and affiliation of each author, a 150-word abstract, and up to 6 keywords. Topics of interest include, but are not limited to:

- Novel mathematical formulations and frameworks
- Resilience and its relationship to traditional quantitative and qualitative risk management methods
- Case studies from any domain emphasizing a system or process perspective (fault tolerance in high performance computing)
- Methods for design and verification of resilience as a system attribute
- Test and evaluation (T&E) methods to assure resilience
- Bio-inspired methods for engineered resilient systems and processes
- Resilience within multidisciplinary systems and processes
- Resilience between interdependent systems and processes

**Chair:**

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**Key Dates:**

Manuscripts Due: June 15, 2020

Author Notification: July 10, 2020