



Transforming the Resilience of Critical Infrastructure Systems and Communities

Resilience Week Objective: A Symposium dedicated to advancing the interdisciplinary dialog on policy and technologies that accelerate critical infrastructure and community resilience to unexpected and malicious threats.

SESSION 07: UNMANNED AERIAL VEHICLES FOR RESILIENT COMMUNICATION

Session Chairs

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Session Abstract

Recently we have witnessed a tremendous increase in the use of unmanned aerial vehicles (UAVs) in a wide range of applications. UAVs have also provided tremendous opportunities to develop resilient wireless communication systems especially in post-disaster era or in areas without an infrastructure. The goal of this session is to bring researchers from both academia and industry to cover the ongoing research advances in this area as well as to discuss the current challenges that are still need to be addressed and the standardization efforts for UAV communications.

Topics

UAV-assisted wireless communications, Cellular-connected UAVs, Delay-tolerant UAV-to-UAV networking in Post-disaster recovery, UAV-assisted smart-phone mesh networks, Network topology control for performance (e.g., energy utilization, throughput) optimization, UAVs in 4G/5G cellular networks, joint trajectory design and resource allocation for UAV based wireless communication, Air-to-air, air-to-ground, and ground-to-air channel modeling for UAVs, Standardization efforts for UAV based communication, UAV authentication and data privacy.

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