



IEEE 7th World Forum on Internet of Things
20-24 June 2021 // New Orleans, Louisiana, USA
 Theme: The Impact of Artificial Intelligence on IoT

Special Session on IoT for Emergency Response and Disaster Recovery
(in conjunction with WF-IoT 2021)

Organizing Committee
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Paper Submission Guidelines
All final submissions should be written in English with a maximum paper length of six (6) printed pages see web conference for instructions. Papers must be submitted through https://epapers.org/wf-iot2021/ESR/login.php . See conference web page for instructions: https://wfiot2021.iot.ieee.org/authors-proposers/
Important Dates
Paper submission deadline: March 22, 2021 Paper acceptance notification: April 22, 2021 Camera-ready submission: May 15, 2021

Call for Papers
Overview Natural and manmade disasters (including pandemics such as COVID-19) can occur unpredictably and range in severity from something locally manageable to large scale events that require external intervention. Smaller scale events typically involve local law enforcement and emergency responders. On the other hand, when large scale disasters occur, they can cause widespread damage and overwhelm the ability of local governments and authorities to respond. In such situations, Civil-Military Cooperation (CIMIC) is essential for a rapid and robust response. Across the spectrum of these operations, IoT, Smart Cities, and Smart Environments can significantly improve the ability of emergency responders to quickly understand the situation and conditions (also known as developing Situation Awareness). IoT can help with assessing potential damage that has been caused (e.g., to the city infrastructure, communications and power grid, road conditions, transportation services, etc.). Application of IoT to supply chain management can provide very rapid insights into the logistical situation and result in faster resupply of critically needed materials. User-centered / peer-to-peer IoT services can enable victims to help each other, thereby accelerating the recovery effort. Finally, pervasive deployment of IoT in the context of hospitals and medical services can improve triage and care for those in need.
Scope and Topics The scope and technical topics of interest include, but are not limited to: <ul style="list-style-type: none"> IoT and Civil-Military Cooperation (CIMIC) for Natural Disasters and Pandemic Response. Applications of IoT for emergency medical response, including monitoring of hospital conditions (availability of space, supplies, and needed expertise / equipment) and patients. Applications of IoT for logistics and supply chain management, especially in the context of disaster relief. Novel integration of IoT-based physiological monitors for emergency responders and triage.

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| | <ul style="list-style-type: none">• IoT data analytics and visualization for emergency response.• Smart city monitoring and leveraging services in smart city environments for disaster response and other activities.• Integration of IoT capabilities into Emergency Response Centers.• Requirements, examples, and use cases for deployment of IoT for disaster relief and emergency response.• Service-oriented computing, standards and standardization of APIs for IoT and smart cities.• IoT to monitor critical infrastructure, including power grid, transportation, and communications.• Challenges and solutions to deploying and using IoT in degraded environments (e.g., when infrastructure, communications, and electrical power may be limited).• Architectural aspects of bridging civilian and military IoT infrastructure, including federation, security, information, and communication architectures, work flow / business processes, interoperability and Integration of disparate technologies.• Information management challenges for military application of IoT – trustworthiness, pedigree, provenance, and enabling military commanders and missions to benefit from IoT generated information.• Examples of physical instantiations of military IoT systems built from commercially available elements and architectures.• Security challenges related to co-existence and interconnection of military and civilian IoT networks.• Resilience to adversarial security attacks and misuse / abuse of IoT infrastructure and capabilities.• Challenges related to reliability and dependability, especially when IoT becomes mission critical.• Zero-configuration or other approaches to simplify the deployment and configuration of IoT, especially in coalition settings where disparate IoT resources need to coexist and interoperate.• Knowledge discovery, including semantic and syntax discovery of information provided by IoT.• Challenges related to actuation of IoT devices, especially with real-time requirements.• Power challenges for tactically deployed IoT devices.• Smart camps and smart city approaches for rapidly deployable field facilities. |
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