Wireless Communications and Mobile Computing

Special Issue on

Emergency Networks and Future Public Safety Systems

CALL FOR PAPERS

Natural or man-made disasters, CBRN (Chemical, Biological, Radiological, and Nuclear), can cause many casualties not only in urban areas and massive destruction in critical infrastructures. Earthquakes have been responsible for more than 30% of the total fatalities from natural disasters in the last 30 years. Terrorist attacks, especially in high-rise buildings, can be responsible for a large number of entrapped people. Entrapment can also occur as the result of collapsed structures due to accidental or deliberate explosions (e.g., collapsed mines, technical failures, and confined spaces).

Protection of critical infrastructures, on one side, and prompt emergency response, on the other, play a fundamental role in saving human lives, protecting properties, and recovering from system failure.

In past events, PPDR (Public Protection and Disaster Relief) Agencies, for example, fire brigades, ambulance service, and the police, have always had many difficulties in effectively doing their work, because of technical and organizational issues. Interoperability among first responders belonging to different teams has always been very difficult, as well as coordination actions among Agencies. In addition, managing and recovery of collapsed terrestrial telecommunication infrastructures has always been a major issue to solve in crisis events.

Ideally, Future Public Safety Systems should be interoperable, secure, and resilient for voice and data communications, supporting broadband communications and services. New systems must address both mission critical and non-mission critical situations in an integrated and uniform way.

Therefore the development and setup of advanced telecommunications and networking technologies for emergency networks as support of Future Public Safety Systems are among the most important tasks to face.

This special issue aims to collect high quality papers from researchers and experts working in the field of public safety, emergency response, protection, relief, and recovery of critical infrastructures. Results from research activities, demonstrations, test bed, and prototype testing are encouraged by universities, research institutes, industries, and companies.

Potential topics include but are not limited to the following:

- Wireless networks at the service of effective first-responder work
- Ad hoc emergency network for crisis events
- 4G/5G-based emergency networks
- Software Defined Networking/Network Function Virtualization for PPDR systems
- Sensor networks for environmental monitoring
- Drone deployment for crisis events
- Positioning systems (LPS, GPS, etc.) for crisis management process
- New communication infrastructure and infrastructures-less architectures for future emergency networks
- Satellite communications for disaster events
- Secure communications in emergency networks
- Critical infrastructure resilience and survivability
- Networking for disaster management
- Interoperability (radio spectrum, wireless technologies, and network architectures) for crisis response
- New social media and wireless technologies for crisis response and Search and Rescue (SAR) activities

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/wcmc/enfpss/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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