



*Call for Papers*

**Special Issue on  
Emerging Multimedia Technology for Multimedia-  
centric Internet of Things (mm-IoT)**

Springer Journal Multimedia Tools and Applications

Editor-in-Chief: Borko Furht

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The **Internet of Things (IoT)** can be defined as the interconnection of uniquely identifiable embedded computing devices within the existing Internet infrastructure. Typically, IoT is expected to offer advanced connectivity of devices, systems, and services that goes beyond machine-to-machine communications (M2M) and covers a variety of protocols, domains, and applications. The interconnection of these embedded devices (including smart objects) is expected to usher in automation covering all major engineering fields, while also enabling advanced applications such as Smart Grid and Smart Surveillance.

MPEG has already started to investigate on standardization activities to define network protocols for the Internet of Things (e.g., how to connect things). The variety and heterogeneity of "Things" make difficult to standardize descriptions, data formats, APIs in a global manner, however, when the environment is well established, this can be done. Therefore, MPEG is exploring representations of multimedia things as part of complex distributed systems implying interaction between things and between humans and things. The multimedia data type elements are corresponding to descriptions of devices and messages for "talking to" and "adapting to" either devices or services in the Internet of Things.

The **Multimedia-centric Internet of Things (mm-IoT)** is the collection of interfaces, protocols and associated multimedia-related information representations that enable advanced services and applications based on human to device and device to device interaction in physical and virtual environments. Information refers to data sensed and processed by a device, and/or communicated to a human or another device.

## **Topics**

Submitted papers may focus on original work in multimedia-based IoT services and system architecture constructions, the distributed network of audio-video cameras systems, multimedia data optimization and complexity-aware algorithm designs, camera network implementations and

management, low-power design, and security algorithms. Both theoretical and technical papers are welcome. Original contributions showing practical approaches are also welcome.

Potential topics include, but are not limited to:

- Service and system architectures of Multimedia-based IoT
- Interfaces, protocols and associated multimedia-related information representations in IoT
- Fast and complexity-awareness algorithms for real-time multimedia computing in IoT
- Low complexity audio/video encoding in mm-IoT
- Control the quality over complexity for each individual Media Thing
- Real-time ultra-high quality media compression and storing scheme in IoT
- Design of hardware structure for low-power real-time multimedia-centric IoT service
- Synchronization technique for video and audio for IoT services
- Security scheme of video/audio signals for protecting personal information in mm-IoT
- Structure of camera network management
- Distributed system for smart applications in IoT
- Architectural performance evaluation of system
- Multimedia crowd flow analysis in mm-IoT
- Big data analysis technique on mm-IoT

Before submission, authors should carefully read the Author's Guidelines section of the journal that can be found at

<http://www.springer.com/computer/information+systems+and+applications/journal/11042>.

Prospective authors for this special issue can submit an electronic copy of their complete manuscript through the <https://www.editorialmanager.com/mtap/default.aspx>. Important dates related to the paper submission and review, are given below:

Manuscript Due:	December 31, 2016
Final Decision:	March 28, 2017

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