

ACM Transactions on Internet Technology (TOIT)

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Call for Papers for a Special Issue on

Emerging Technologies for Connected Communities



**ACM Transactions on
Internet Technology**

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Deadlines

Submissions: April 30th, 2016
First decisions: July 15th, 2016
Revisions: October 1st, 2016
Final decisions: December 1st, 2016
Publication materials due: January 1st, 2016

Submission

To submit a paper, please follow the instructions on
<http://toit.acm.org/submission.html>

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As world populations concentrate in urban areas, communities worldwide face new challenges. On the one hand, cities face overcrowding, physical and environmental resource constraints and increasing pressure on the part of governments and businesses toward ensuring continuing economic growth. On the other hand, rural areas may become depopulated and have a hard time keeping up with changes in business technology and management.

Connected Communities is an emerging research area investigating design, deployment and management techniques for establishing and maintaining an ICT infrastructure supporting a highly connected, data-intensive and sustainable urban community. It also considers BURD - Bridging the Urban Rural Divide - looking at means to leverage the advances in wireless and mobile communications to engage and sustain rural communities.

A major objective of this research is this enabling urban and rural ICT infrastructures to seamlessly support all processes and services needed for citizens' safety, health, security and quality of life. Desirable properties of the ICT infrastructure underlying such services include (i) full scalability by elastic allocation of resources (such as sensors, actuators, virtual network and computing devices) (ii) sustainability and energy-efficiency (iii) effective real-time monitoring and control (iv) certifiable security and privacy.

For example, supporting people mobility across BURD spaces requires handling in an integrated manner historic and real-time sensor data on traffic and road conditions, open data on weather, and user feedback, reconciling the need for high density of sensor network with its sustainability energy and maintenance-wise.

The ACM TOIT Special Issue on "Emerging Technologies for Connected Communities" aims to provide a unique opportunity for presenting highly innovative research, unlocking the huge potential of ICT infrastructure toward establishing and running communities supporting participation, prosperity, sustainability, health and well-being. We list below some indicative topics of interest organized by themes.

Connected Communities Infrastructure and Supporting Technologies

Internet of Everything (IoX) And Anything/Everything As A Service (XaaS) For Connected Communities

Sustainable Large-Scale Sensor Networks For Urban Environments

High Performance Computing/Networking For Sensor Data Processing

Service Frameworks for Connected Communities

Privacy-Preservation In The Urban Infrastructure

Security and Resilience Of The Communications Infrastructure

Connected Communities Service Frameworks and Protocols to Integrate Rural Communities

Solutions for Urban Data Storage and Access

IoT-to-BURD Supply Chain

Ontology-Based Fusion of Smart City Datasets

Connected Community Governance and Management

Connected Communities Applications

Citizen Participation and E-Democracy

Healthcare and Lifestyle Data Processing and Analysis

Support for Entrepreneurship and Innovation

Cloud-Based Analytics for Urban Decision-Making

Real-Time Scalable Analytics for Large-Scale Datasets