



Call for Papers

ACM Transaction on Intelligent Systems and Technology ([ACM TIST](#))

Special Issue on *Urban Computing*

Overview

With the rapid progress of urbanization and civilization on earth, urban computing is emerging as a concept where *every* sensor, device, person, vehicle, building, and street in the urban areas can be used as a component to probe city dynamics to further enable *city-wide* computing for *servicing people and their cities*. Urban computing aims to enhance both human life and urban environment smartly through a recurrent process of sensing, mining, understanding, and improving. Urban computing also aims to deeply understand the nature and sciences behind the phenomenon occurring in urban spaces, using a variety of heterogeneous data sources, such as traffic flows, human mobility, geographic and map data, environment, energy consumption, populations, and economics, etc.

Recently, real-world data reflecting city dynamics becomes widely available, including, e.g., users' mobile phone signal, GPS traces of vehicles and people, ticketing data in public transportation systems, user-generated content (like tweets, micro-blog, check-ins, photos), data from transportation sensor networks (camera and loop sensors) and environment sensor networks (temperature and air quality), as well as data from the Internet of Things. As a result, we are ready to carry out real urban computing activities that lead to better and smarter cities. By better sensing and understanding the city dynamics we are more likely to design effective strategies and intelligent systems for improving urban lives. Examples of urban computing projects can be found on <http://research.microsoft.com/en-us/projects/urbancomputing/default.aspx>.

Topics of Interests

We invite the submission of high-quality manuscripts reporting relevant research in the area of sensing/mining/understanding/managing city dynamics. The special issue welcomes submissions presenting technical, experimental, methodological and/or applicative contributions in this scope, addressing –though not limited to– the following topics:

- Intelligent systems and technology for urban sensing and city dynamics sensing
- *City-wide* traffic modeling, visualization, analysis, mining, and prediction
- *City-wide* human mobility modeling, visualization, mining, and understanding
- Intelligent systems and technology for evaluating urban planning and city configurations
- Urban environment/pollution/energy consumption monitoring and data mining
- *City-wide* intelligent transportation systems
- Anomaly detection and event discovery in urban areas
- Discover regions of interests and regions of different functions
- Mining public transportation data, such as ticketing data in bus and subway systems, road pricing data, and taxi data
- Social behavior modeling, understanding, and patterns mining in urban spaces
- Ubiquitous/pervasive intelligent systems in urban areas
- *City-wide* mobile social applications in urban areas

- Location-based social networks enabling urban computing scenarios
- Smart recommendations in urban spaces
- Mining data from the Internet-of-Things/sensor networks in urban areas
- Intelligent delivery services in cities

Submissions

Manuscripts shall be sent through the ACM TIST electronic submission system at <http://mc.manuscriptcentral.com/tist> (please select “Special Issue: Urban Computing” as the manuscript type). Submissions shall adhere to the ACM TIST instructions and guidelines for authors available at the journal web site: <http://tist.acm.org>.

The papers will be evaluated for their originality, contribution significance, soundness, clarity, and overall quality. The interest of contributions will be assessed in terms of technical and scientific findings, contribution to the knowledge and understanding of the problem, methodological advancements, and/or applicative value.

Important Dates

Paper submission due: **Oct. 18, 2012** (~~Oct. 7, 2012~~)

Final paper notification: **Mar. 8, 2013**

Camera-ready due: **Mar. 31, 2013**

Guest Editors

[Yu Zheng](#), Researcher, Microsoft Research Asia

[Ouri E. Wolfson](#), Professor, Department of Computer Science, University of Illinois at Chicago

[Hai YANG](#), Professor, Hong Kong University of Science and Technology

[Licia Capra](#), Senior lecture, University of College London