EURASIP Journal on Wireless Communications and Networking

Special Issue on Advances and Emergence in Participatory Sensing on Mobile Social Media Analytics

Participatory Sensing is a process of acquisition, integration, and analysis of big and heterogeneous data generated by a diversity of sources in urban spaces, such as sensors, devices, vehicles, buildings, and human. With the help of cloud computing, Internet of Things, and Big Data, Participatory Sensing connects unobtrusive and ubiquitous sensing technologies, advanced data management and analytics models, and novel visualization methods, to create solutions that improve urban environment, human life quality, and city operation systems. The proliferation of mobile devices has led to a bright new stage in which multimedia search and analysis are increasingly moving from the desktop to the cloud. Nowadays, it has become convenient to capture images and videos on the mobile end and associate them with social and contextual metadata such as comments and GPS tags. Such a hybrid data structure can benefit a wide variety of potential multimedia applications on the mobile end, such as location recognition, landmark search, augmented reality, and commercial recommendations. One intrinsic potential is to explore large-scale social multimedia to assist and facilitate location related applications, which is further promoted by the evolution of mobile devices. With the combination of social and mobile cues, several problems that are previously difficult to be tackled in multimedia content analysis have also become more tractable. For example, multiple images can be captured for accurate object research and recognition.

Current research in Participatory Sensing addresses the following issues: Participatory Sensing as a novel methodology for user-centered research; development of new services and applications based on human sensing, computation, and problem solving; engineering of improved Participatory Sensing platforms including quality control mechanisms; incentive design of work; usage of Participatory Sensing for professional business; and theoretical frameworks for evaluation. This is opening a vast space of opportunities to extend the current networks, communications, and computer applications to more pervasive and mobile applications.
Potential topics include, but are not limited to:

- Participatory Sensing visual search and augmented reality
- Location based recommendation systems
- Participatory Sensing computing and communication
- Participatory Sensing big data computing for social and mobile applications
- Multi device scene modeling in ad hoc wireless network
- Mobile and social network privacy
- Cloud-terminal collaboration in Participatory Sensing computation
- Future trends in mobile Participatory Sensing analytics
- Real-time Participatory Sensing and mobile crowd sensing
- Adaptive Participatory Sensing platforms
- Social media, semantic web viewpoints, and Participatory Sensing blog platforms
- Experience reports and studies of Participatory Sensing
  (i.e., services, testing, and measurements)

Submission Instructions

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Submission schedule
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