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With the fast increasing popularity of mobile smart devices, mobile crowd sensing has become a new paradigm of applications that enables the ubiquitous mobile devices with enhanced sensing capabilities, such as smartphones and wearable devices, to collect and to share local information towards a common goal. Most of the smart devices are equipped with a rich set of cheap and powerful sensors, for example, accelerometer, digital compass, GPS, microphone, and camera. These sensors can be utilized to monitor mobile users' surrounding environment and infer human activities and contexts. In recent years, a wide variety of applications have been developed to realize the potential of crowd sensing throughout everyday life, such as environmental monitoring, noise pollution assessment, road and traffic condition monitoring, road-side parking statistics, and indoor localization. The data acquired through mobile crowd sensing exhibits a number of important characteristics, such as being large in scale (Volume), being fast generated (Velocity), being different in forms (Variety), and being uncertain in quality (Veracity). The 4Vs of crowd sensing data make it extremely interesting and challenging in designing participatory and opportunistic sensing technologies, human centric data management and analytics models, and novel visualization tools.

The objective of this special issue is to invite authors to submit original manuscripts that demonstrate and explore current advances in all aspects of big data management in mobile crowd sensing environments. The special issue solicits novel papers.

Potential topics include, but are not limited to:

- ▶ Architecture and framework design for crowd sensed data management
- ▶ Theoretic foundations of data analytics for crowd sensing
- ▶ Human centric data management and analytics models
- ▶ Data mining and machine learning algorithms and applications for crowd sensed data
- ▶ Distributed and parallel algorithms for understanding big crowd sensed data
- ▶ Participatory and opportunistic sensing and data collection
- ▶ Crowd sensing data communication and sharing
- ▶ Algorithm design for sensing scheduling
- ▶ Big crowd sensed data processing, storage, and mining
- ▶ Sensing resource management in crowd sensing
- ▶ Economic systems and incentive mechanisms for crowd sensing
- ▶ Crowd sensed data quality evaluation and pricing
- ▶ Security, data privacy preservation, and trust management in crowd sensing
- ▶ Social and psychological issues on crowd sensed data management
- ▶ Novel crowd sensing and human centric data management applications
- ▶ Novel crowd sensed data visualization tools
- ▶ Experience reports and studies of crowd sensing systems with big data

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/misy/dmmc/>.

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