

Introduction to this Special Issue: Mobile Data Analytics

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With the rapid advancement of mobile devices and location acquisition technologies, more and more large-scale location-based data have been available for data analytics and realizing new location-aware services. Various large-scale location-based data including user-generated data in location-based social networks (LBSNs) and GPS data reported from vehicles or sensors have led to research challenges and opportunities in location-based services, intelligent transportation systems, geographic information systems, urban computing, and smart cities. Different computer science techniques, e.g., data mining, machine learning, artificial intelligence, and spatial and spatio-temporal databases, can be used or combined to address such challenges.

This special issue consists of four contributions that address different problems in the research area of mobile analytics. The first contribution is about a dynamic ridesharing framework which allows real-time dynamic matching of travel requests with available cars under certain constraints in large scale. The second contribution introduces the recent advances in location-based user preferences modeling for location-based recommendations and prediction through geo-tagged social media data analytics. Ting Hua et al. contribute the third article which focuses on the allocation of social media analytics for spatio-temporal event mining. In the fourth contribution, Jia-Dong Zhang and Chi-Yin Chow summarize their recent research project which fuses social, categorical, geographical, sequential, and temporal influences for point-of-interest recommendations in LBSNs.

I hope the readers will enjoy reading this issue and find it useful in their research work.