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Editorial: Recent Advances on the Mobile Multimedia Services and Applications

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Editorial:

The successful deployment of multimedia services and applications in a mobile environment requires an interdisciplinary approach, where multimedia, network and physical layer issues will be solved jointly. Content features analysis and coding, media access control, multimedia flow and error control, cross-layer optimization, Quality of Experience (QoE), media cloud as well as mobility management and security protocols are research challenges. These challenges need to be carefully checked when designing new mobile media architecture. A great effort is needed to be put into designing applications, taking into account users' perceptions of the overall quality of the services provided. Within this scope, MOBIMEDIA aims to provide a unique international forum for researchers from industry and academia, who are dedicated to the fields of multimedia coding, mobile communications and networks to study new technologies, applications and standards. The collection of original unpublished manuscripts can improve the knowledge and practice of the integrated design of efficient technologies and the provision of advanced mobile multimedia applications.

This special issue features five selected papers with high quality. The first article, "Detection of Fake Reviews using Group Model", proposed the concept of review group, which is designed to effectively split reviews of reviewer into groups to identify both positive and negative deceptive reviews. Additionally, authors explore the collusion relationship between reviewers to build reviewer group collusion model. The algorithms can effectively improve the precision in fake reviews classification task especially when reviews are posted by professional review spammers.

With the development of neural network models, how to compress models and accelerate neural networks are undoubtedly to be crucial research topic. The second article titled "Bit-Quantized-Net: An Effective Method for Compressing Deep Neural Networks" studied the problem that neural network models suffer from computational consuming and memory intensive for parameters training/storage. Author proposed "Bit-Quantized-Net"(BQ-Net), which trains the network with bit quantized weight to shorten the running time and applies Huffman coding to compressed the model size.

In the next article with the title "Node Attitude Aware Information Dissemination Model Based on Evolutionary Game in Social Networks", the authors explored the influence of node attitude on information dissemination and proposed an information propagation model based on evolutionary game. By considering both node's attitude update rules and inter-node game matrix, both positive and negative postures replicate the equilibrium solutions of the dynamic equations and stabilize the corresponding equilibrium points. This model show that the different attitudes of nodes play an important role in information dissemination.

Effective feature representation is widely regarded as the most important premise for sensor-based activity recognition (AR). The fourth article titled "Enhancing Representation of Deep Features for Sensor-based Activity Recognition" improved the feature representation of activities by using a reversed CNN to generate the significant data based on the original features and combine the raw training data with significant data to obtain enhanced training data. This algorithm can not only train better feature extractors but also help better understand the abstract features of sensor-based activity data.

The last article titled "Indoor WiFi Positioning Algorithm Based on Location Fingerprint", authored by Chunshan Li, presented a method based on skewness-kurtosis normality test and Kalman filter fusion through the research of fingerprint

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data. Based on the traditional Kalman filter method, the proposed method optimizes the three stages of the fingerprint positioning algorithm through the skewness-kurtosis normality, the weighted KNN (K-Nearest Neighbor), the fusion of Levenberg-Marquardt method and the Kalman filter to improve the accuracy of positioning.

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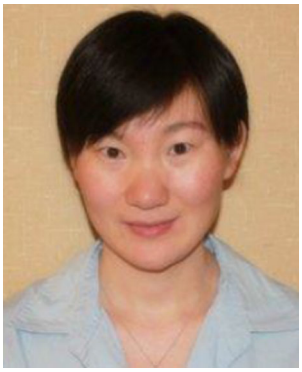

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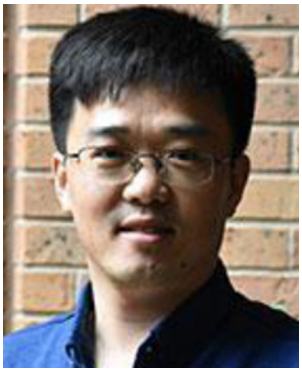

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