Guest Editorial
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The recently emerged new computing paradigms, such as Edge/Fog computing, try to distribute services away from centralized data centers by exploiting the concept of cloudlets. While it also brings additional difficulties and challenges in terms of resource allocation, performance optimization, energy cost, link switch, security, and privacy issues. Therefore, it becomes a necessity to integrate new computing techniques into the traditional service computing paradigm. We invite some outstanding accepted papers of ChinaCom 2019 in their extended versions and open for other submissions to this special issue. Finally, we have five papers for this special issue. A summary of these papers is outlined below.

In the paper entitled "Orbital Angular Momentum Mode Intelligent Identification in the Secondary Frequency Domain with Compressive Sensing" by Chao Zhang, Jin Li, and Yuanhe Wang, they propose an intelligent OAM mode identification method based on CS and transfer learning. Analog-to-Information Converter with Limited Random Sequence modulation is used as a detector through random sampling, the low sampling rate with CS can be used to build the model of the received signal and the frequency shift in the second frequency domain. Transfer learning is employed to establish spectrum-mode mapping, which can accurately identify OAM modes, and then the high-speed transmission will be achieved. The simulation results show the benefits of the proposed method.

In the paper entitled "A Content-Aware POI Recommendation Method in Location-Based Social Networks Based on Deep CNN and Multi-Objective Immune Optimization" by Xinxin Lu and Hong Zhang, they propose a content-aware point of interest recommendation method joint with deep convolution neural network and multi-objective immune optimization. To avoid adjusting many weight coefficients, geographic information, user emotional information, and user preferences are optimized as three functions at the same time, and the optimization objective function is constructed. Compared with other methods, the proposed method can ensure high recommendation accuracy under cold start and can achieve the accuracy and diversity of POI recommendation under different recommendation list length.

In the paper entitled "Traffic Sign Detection and Recognition for Intelligent Transportation Systems: A Survey" by Shuanghu Luo, Ling Yu, Zhongqin Bi, and Yongbin Li, they present a survey of traffic sign detection and recognition for intelligent transportation systems. The challenges of traffic sign detection and recognition are discussed (such as lighting conditions, fade in color, obstacles blocking), and the traditional algorithms and deep learning algorithms commonly used in traffic sign detection and recognition are briefly reviewed. Technique difficulties and future directions are summarized, including real scene diagrams and application-oriented studies. They believe that intelligent computations based on the Internet of Things and the Internet of Vehicles with 5G technology should be promoted.

In the paper entitled "Reinforcement Learning Based Computation-aware Mobility Management in Ultra Dense Networks" by Ziyue Zhang, Jie Gong, Xiang Chen, and Terng-Yin Hsu, they propose a novel dynamic programming-based mobility management (DPMM) scheme to minimize the average delay under an energy consumption constraint. They leverage statistic information to handle the inaccurate state information in mobility management. Cooperative data transmission is adopted to improve the delay performance. Due to information uncertainties (e.g. wireless link, user equipment location), they further propose a mobility management scheme based on deep Q-network (DQN) to learn the system information from the environment. The simulation shows that the method can learn from experience and reduce the handover frequency to a certain degree.

In the paper entitled "Joint Trajectory and Resource Allocation Design for Throughput Optimization in UANET" by Tao Peng, Xiaoyang Li, Xiangyu Li, and Rongrong Qian, they designed a joint trajectory and resource allocation algorithm for UAV-enabled networks to provide communication for ground users in emergency scenarios. They optimize their trajectories such that a weighted function of the minimal throughput is maximized. Simulation results verified the effectiveness of the proposed algorithm.

The Guest Editors would like to express their deep gratitude to all the authors who have submitted their valuable contributions, and to the numerous and highly

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qualified anonymous reviewers. We think that the selected contributions, which represent the current state of the art in the field, will be of great interest to the community. We also would like to thank the JIT publication staff members for their continuous support and dedication. We particularly appreciate the relentless support and encouragement granted to us by Dr. Han-Chieh Chao, the Editor-in-Chief of the Journal of Internet Technology.

Guest Editors

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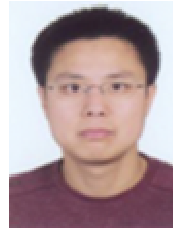
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