
FOREWORD

Special Section on Exploring Drone for Mobile Sensing, Coverage and Communications: Theory and Applications

Nowadays drone system has emerged as an advanced technology with boundless viable applications due to its on-demand deployment, fast response, low cost and flexibility in reconfiguration and movement, such as reconnaissance, cargo delivery, agriculture, photography and other public services. Specifically, the use of drone system for achieving high-speed and prompting wireless communication would interact with underlying sensing network and thus enhance the total network efficiency. It is expected that the drone system has a huge growth prospect, and extensively exploring drone system would transform traditional application scenarios and network topologies accordingly which arouses much distinctive attention including weak connectivity maintenance, energy management, reliable data transfer, data fusion, motion control and scheduling, etc. Indeed, drone-based applications are to extend conventional functions, provide services and results which are fundamentally different from previous studies. To meet such demands, it is important to build technologies for efficient and reliable mobile sensing, coverage and communication in drone system.

We received 38 paper submissions for this special section. After a very careful and fair peer-review process, a total of 11 papers were accepted. These works include RF based drone system, satellite driven drone system, tracking systems, and compressive sensing based algorithm design for drone system. In addition, we invited one paper. It introduces a multi-autonomous robot enhanced Ad-hoc network under the uncertain and vulnerable environment. It highly correlates with our topic and provides a good vision for future drone system design. The editorial committee members believe that these papers attract much attentions in the research and development.

Finally, as the guest editor-in-chief, I would like to express my sincere appreciation to all the authors for their contributions and to all the editors and reviewers for their voluntary activities.

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Panlong Yang (*Nonmember*) received his B.S. degree, M.S. degree, and Ph.D. degree in communication and information system from Nanjing Institute of Communication Engineering, China, in 1999, 2002, and 2005 respectively. Dr. Yang is now a professor in the College of Computer Science and Technology, University of Science and Technology of China. His research interests include wireless sensor networks, battery-free communication, wireless sensing and software defined radio networks. He is a member of the IEEE Computer Society and ACM SIGMOBILE Society. He has published over 150 papers including 36 papers on CCF Rank A list, such as ACM MobiCom, ACM Ubicomp, IEEE JSAC, IEEE TMC etc. Professor Yang has won best paper awards on IEEE MSN 2013, and best paper runner up awards on ACM MobiHoc 2014.

