Editor's Message to Special Issue of Intelligent Transportation Systems and Mobile Communication toward Smart Communities

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The smart community is a new social infrastructure that would become more efficient by harmonized with information technologies (IT), transportation systems and energy control systems. At this moment a lot of researchers are doing research and development practical, commercial and high-performance information and communication equipment towards its realization.

In the intelligent transportation systems (ITS) area, advanced in-vehicle systems, in-vehicle wireless network technologies, high-precision location estimation technologies and autonomous driving technologies have been actively proposed. In the mobile communications area, sensor network technologies and ad-hoc network technologies for drivers and pedestrians have provided to realize these services. In addition, context-aware services using them are provided for practical use. These technologies have become essential research areas in order to realize the smart community.

These research topics related to advanced transportation systems and mobile communication technologies have been studied in Intelligent Transportation Systems and Smart Community (ITS) special interest group and Mobile Computing and Pervasive System (MBL) special interest group of Information Processing Society, Japan. Around 200 research papers per year have been published within these SIGs. Also, in DICOMO2015 symposium that has been held since 1997, 60 papers out of 300 ones are related to these areas; this shows the research activities are very diligent and agile. In fact, most of the published papers have been matured by discussion through the SIG meetings and symposiums, so that we are sure that to collect such papers and publish within a special issue would be vital to promote these research areas and meaningful for Information Processing Society, Japan.

This special issue has been jointly planned by SIG-ITS and SIG-MBL to implement above purport with the following schedule:

CFP: November 2014,

CFP deadline: April 12, 2015,

Editorial Board Meeting: April 14, June 15, September 24.

In this issue, 31 papers are submitted and we have accepted 15 papers, so the final accept ratio is 48% which is almost the same as average. 9 out of 31 are written in English and 3 papers are accepted.

Accepted papers research topics include the estimation of the location, direction and trajectory of mobile objects, mobile ad-hoc network including vehicle-to-vehicle communications, autonomous driving, traffic congestion relief, which cover the main research topics in this area. In addition, application to solve practical issues of society such as traffic congestion are also accepted, so that this special issue become appropriate to our intent.

In this special issue, we have invited Mr. Yuki Matsuda and Dr. Yutaka Arakawa of Nara Institute of Science and Technology to prepare a survey paper on gamification mechanism to strengthen the participatory urban sensing. This invited paper is one of the best references to solve various social problems by promoting joint-cooperation with non-monetary incentive.

Withdrawn and rejected papers are also include interesting contents. We are strongly recommend them to show additional verification and brush-up their contents, and to re-submit them.

Finally, we would like to thank all those who made this special issue possible, including the authors, reviewers, editors, the parties concerned in IPSJ. Without their effort, it is not possible to publish this special issue on time.

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