Since Mark Weiser introduced the concept of ubiquitous computing in 1988, denoting providing information services anytime and anywhere without user-consciousness. Thereafter, information technologies have been embedded in various things, new technologies such as smartphones and cloud computing have been deployed, while big data became available to be analyzed with machine learning technology, and people can take various services for supporting human lives. While the word “IoT” (Internet of Things) become common in this couple of years, the research field of ubiquitous computing includes the concept of IoT. Moreover, researchers study the problems of how the services can be valuable for our life are achieved in a way that is invisible to us. Thus, the field involves the very wide area of engineering researches such as sensor devices, signal processing, middleware, network, data mining, human interfaces, and AI, and is even extended to sociology and psychology. Ubiquitous computing is a quite interdisciplinary research field.

To propel these studies, this special issue of JIP, the 9th special issue on Ubiquitous Computing Systems was planned by the Special Interest Group on Ubiquitous Computing Systems (IPSJ SIG-UBI).

The editorial committee of this special issue is organized by the chair, secretaries, and committee members from SIG-UBI. 10 submitted papers were carefully examined by the committee, and 4 papers are accepted (40% acceptance ratio). We are delighted that the excellent papers can be published.

The topics of accepted papers are selected from a wide range of ubiquitous computing research field, fundamental techniques, such as IoT dataset generation method by a simulation tool, an annotation method for human activity recognition utilizing removal actions of smartphone notifications, a method for detecting road surface statuses using footsteps and inertial sensors, and an recognition method for dance actions using multi-modal sensors. We think it is quite meaningful that we could collect high-quality papers from such a wide research area in this special issue. This special issue has been published once a year from several years ago, and we are planning to continue this publishing. We are looking forward to your submission of your fruitful result of your study at the succeeding chance of this special issue.

Finally, I would like to thank the steering committee of IPSJ journal for giving us the opportunity of this special issue, the reviewers who carefully reviewed despite the busy schedule, and the editorial board/committee members of this special issue. In particular, I appreciate the editorial committee members of this special issue spent their great effort for coordinating authors and reviewers for improving and adopting the high-quality papers. As a result, this special issue has accepted such excellent papers. I feel truly grateful to them. I would also like to thank the authors for their contribution. Even for the studies that were unsuccessfully accepted this time, such accumulation is the way to develop this research field. I hope this special issue will help the further development of the ubiquitous computing researches.

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