
FOREWORD

Special Section on Information and Communication Technology for IoT/CPS in Medicine and Healthcare

The Internet of Things (IoT) and Cyber Physical Systems (CPS) are rapidly expanding worldwide with the rapid development of information and communication technology (ICT). This is notably so in the clinical medicine and healthcare fields. As a potential solution to problems caused by the increase in medical costs due to the rapid aging of society on a global scale, there is great expectation for IoT/CPS innovation in the medical and health care services fields. Furthermore, the introduction of IoT/CPS as a specialized field in medicine and healthcare is bringing about a new research and development paradigm.

The IEICE Technical Committee on Medical Information and Communication Technologies (MICT) is striving to provide the components of engineering and integrated theory necessary for building a strong foundation for dependable ICT, which deals with important data that greatly affects human life, and has much higher reliability than the ICT for electrical household appliances and electrical equipment. We have long been engaged in research and the development of new methods of collecting, transmitting, and processing clinical data. Also, creating an environment conducive to safe and effective data acquisition and transmission is a major part of our research.

The editorial committee is proud to publish a thought provoking invited paper that shows the development of an artificial hand that functions by acquiring control signals transferred through the skin from nerves. After rigorous review and difficult deliberations on seven submissions, four interesting papers were selected for publication in this special section: One on an error correction method for acquired data, another on how noise affects IoT based data collection, and two that propose IoT based data collection methods.

As the guest editor-in-chief, I would like to express my sincere appreciation to the authors for their contributions and to the excellent reviewers and editorial committee members for their voluntary activities. We hope this Special Section will be of great value to our readers who are interested in ICT for healthcare and medicine.

Special Section Editorial Committee Members

Guest Editor-in-chief: Eisuke Hanada (Saga Univ.)

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Eisuke Hanada, Guest Editor-in-Chief

Eisuke Hanada (*Member*) received his B.Eng. and M.Eng. degrees from Kyushu University, Fukuoka, Japan, in 1985 and 1987, respectively. He received his D.Eng. degree from Saga University, Saga, Japan, in 2001. Since Oct. 2014, Prof. Hanada has worked in the Department of Information Science, Saga University Faculty of Science and Engineering. He previously worked at the Nagasaki University Information Science Center managing the campus LAN and information servers (1992–1996), at the Department of Medical Information Science, Kyushu University Graduate School of Medical Science (1996–2002), and as vice director of the Division of Medical Informatics, Shimane University Hospital (2002–2014). His research involves the wired/radio communication environment, information processing systems in hospitals, and telemedicine. Dr. Hanada is a member of the Japanese Society of Medical Informatics, the Information Processing Society of Japan, the Japanese Society of Medical and Biomedical Engineering, the Japanese Telemedicine and Telecare Association, the Healthcare Engineering Association of Japan, and the Acoustical Society of Japan.

