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## FOREWORD

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### Special Section on Visible Light Communications in Conjunction with Topics of ICEVLC 2015

Visible Light Communications (VLC) is developing with the progress of LEDs, which are not only just energy efficient lighting sources, they can also be used for data communications. Since LEDs can be modulated by data at high speeds, their light fluctuations, which are not perceived by human eyes, can send data. VLC provides the dual functionality of lighting and wireless communication. As a result, VLC offers good advantages to radio frequency (RF) communications including free license, wide bandwidth, and very precise positioning. Furthermore, data reception by a camera embedded in smartphones and portable devices is possible. This results in new and attractive interests in the implementation of VLC using an image sensor as a receiver (image sensor communication (ISC)).

The first International Conference and Exhibition of Visible Light Communications (ICEVLC) was held in Yokohama in October 2015 whose main topic was on ISC. The conference was sponsored by Visible Light Communications Association and Telecommunications Advancement Foundation, and was held under the auspices of Ministry of Internal Affairs and Communications, IEICE, and IEEE Tokyo Section ITS Society Chapter.

For the Special Section on Visible Light Communications in Conjunction with Topics of ICEVLC2015, we received 6 submissions. After each submission was carefully reviewed by one guest editor and two expert researchers, the special section accepted two general papers, which are on ISC. In addition, we invited two papers for the special section. One of the invited papers, whose author is the inventor of ISC, shows an overview of products, prototypes, and future applications of ISC. The other shows a theoretical overview of ISC.

The editorial members believe that this special section will contribute to future research and development in this field. As the editor-in-chief, I would like to express my sincere appreciation to all the authors for submitting their manuscripts and to all the reviewers and the editorial committee members for their voluntary activities.

#### Special Section Editorial Committee Members

##### Guest Editors:

Masato Saito (University of the Ryukyus), Yusuke Kozawa (Tokyo University of Science)

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Masao Nakagawa, Guest Editor-in-Chief

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**Masao Nakagawa** (*Fellow*) received B.S., M.S., and Ph.D. degrees in electrical engineering from Keio University in 1969, 1971, and 1974, respectively. He is now Professor emeritus at Keio University and the chairman of *Visible Light Communications Association* (VLCA). He proposed a technical field of *Visible Light Communications* to start a study group in IEICE in 2001 and *Visible Light Communications Consortium* (the predecessor of VLCA) in 2003 as their chairman. His technical interests are in CDMA, mobile communication, ITS (intelligent transport systems), and visible light communications. He proposed the original TDD-CDMA which was modified to TD-CDMA in IMT-2000 world standard and Wireless 1394 standard established as T72 in ARIB. He published several books including, *TDD-CDMA for Wireless Communications* (Artech House, 2003) as a co-author, *Spread Spectrum Communications and Applications* (IEICE, 1998) as a co-author (in Japanese), *Personal Communications and Consumer Communications* (Baifukan, 1996) as chief author (in Japanese), and so on. He published more than 150 journal papers including survey papers. He received Transaction Paper Award from IEEE Consumer Electronics Society 1989, Best Paper Award in IEEE Vehicular Technology Conference in Amsterdam in 1999, Fellow Award from IEICE in 2001, and Fellow Award from IEEE in 2006. He was a board member in IEICE from 2000 to 2002. He was a guest editor in 3 special issues on CDMA in IEEE JSAC (journal of selected areas on communications) from 2001 to 2003. He was a member of NHK technical council committee and a member of information communications council committee of Ministry of Internal Affairs and Communications.

