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## FOREWORD

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### **Special Section on Intelligent Information and Communication Technology and its Applications to Creative Activity Support**

Welcome to the Special Section on Intelligent Information and Communication Technology and its Applications to Creative Activity Support, the IEICE Transactions on Information and Systems. With wide spread of terminals, sensors, and other mobile devices, together with the primary data gathered and accumulated through them, it is now possible to have accurate predictions of succeeding events and phenomena, and more attention has been paid to the development and employment of the systems and products utilizing those data that contribute to improvements of creative activities in our daily life, business, medical treatment, education, and creation all of which are based on advanced intelligent processing of knowledge and information. This trend has necessitated collaborations and integrations among academic fields including information science, language sciences, and knowledge science, and essential is to let computers learn, construct, and assess adequate models of the reality and its advanced knowledge processing with a high precision at a greater speed. The state of the art of knowledge information and communication that assumes those collaborations and integrations has born new areas and technologies including service science, robotics, artificial intelligence, haptics, sensor networking, mechatronics, and virtual reality, to name a few. Even more collaborations and integrations are further expected, while existing techniques and technologies also wait for radical innovations due to the unprecedented alterations of available data in size and quality.

After the call for papers for this Special Section, we received 38 submissions from several countries. The Editorial Committee worked out with difficulty to carefully reviewing and evaluating the submitted papers. After a thorough reviewing process, 16 papers are accepted for publication in this Special Section. Five papers involve creativity support systems and decision support systems, two papers are categorized as knowledge representation, three papers explore data mining technologies, two papers are related to elemental technologies for human behavior analysis, and four papers develop technologies for knowledge support platform.

The Guest Editors would like to express their sincere appreciation to all the authors for their efforts in preparing and submitting their excellent manuscripts, and to the reviewers for their professional and voluntary work. We also appreciate the editorial board of the IEICE Transactions on Information and Systems. Without their support, this special issue would not have been possible. Finally, we would like to express our appreciation for the large efforts of the Editorial Committee Members. Their names and affiliations are listed below.

#### Guest Editors:

Susumu Kunifuji (JAIST, Japan), Thanaruk Theeramunkong (SIIT, Thammasat University, Thailand), Kiyota Hashimoto (Prince of Songkla University, Thailand), Mikifumi Shikida (Kochi University of Technology, Japan), Tessai Hayama (Nagaoka University of Technology, Japan)

#### Guest Associate Editors:

Takayuki Ito (Nagoya Institute of Technology, Japan), Somrote Komolavanij (Panyapiwat Institute of Management, Thailand), Kenji Mase (Nagoya University, Japan), Jun Munemori (Wakayama University, Japan), Andrzej M.J. Skulimowski (AGH University of Science & Technology, Poland), Virach Sornlertlamvanich (SIIT, Thammasat University, Thailand), Yasuyuki Sumi (Future University Hakodate, Japan), Thepchai Supnithi (NECTEC, Thailand), Yasufumi Takama (Tokyo Metropolitan University, Japan), Jiro Tanaka (Waseda University, Japan), Takaya Yuizono (JAIST, Japan)

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Susumu Kunifuji and Thanaruk Theeramunkong, Guest Editors-in-Chief

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**Susumu Kunifuji** (*Member*) received his doctoral degree in Engineering from Tokyo Institute of Technology. He is now an emeritus professor at JAIST, Japan. His current research interests include creativity support systems, innovation design methodology, creativity science, and creative & innovative education.



**Thanaruk Theeramunkong** (*Member*) received his doctoral degree in Computer Science from Tokyo Institute of Technology. He is now a full professor at SIIT, Thammasat University, Thailand. His current research interests include data mining, machine learning, natural language processing, and information retrieval.

