
FOREWORD

Special Section on Multiple-Valued Logic and VLSI Computing

Welcome to this Special Section on “Multiple-Valued Logic and VLSI Computing.” The papers in this section are extended versions of the abstracts presented at the IEEE CS 50th International Symposium on Multiple-Valued Logic (ISMVL 2020), which was organized by hybrid style, i.e., on site and web meeting. This was held in Miyazaki, Japan on November 9–16, 2020, and includes a substantial amount of information beyond the video presentations. The purpose of this Special Section is to share an overview of recent research progress in various aspects relating to post-binary and non-standard VLSI computing paradigm with many readers of this transaction, who are interested in innovative new-concept-based VLSI computing and its applications. This Special Section consists of eleven contributed papers. The contributed first authors are from 9 Japanese and 2 Serbian. Their contributed papers cover a broad range from logic design, VLSI architecture, VLSI circuit implementations and soft computing applications to Medicine. We would like to thank all the authors for their efforts in preparing the manuscripts, and the reviewers who worked diligently to make sure that the papers are worth publication.

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Yutaka Hata (*Member*) received the B.E. degree (Electronics) in 1984, the M.E. degree (Electrical Engineering and Electronics) in 1986 and the Ph.D.(Doctor of Engineering) in 1989 all from Himeji Institute of Technology, Japan. He is currently a Professor in the Graduate School of Information Science, University of Hyogo, Japan. He spent one year in BISC Group, University of California at Berkeley from 1995 to 1996 as a visiting scholar. His research interests are in medical imaging, Bio-signal processing, health monitoring, and fuzzy system. He received 21 international and domestic awards such as the World Automation Congress Lifetime Achievement Award (2008), Franklin V. Taylor Best Paper Award (IEEE SMC 2009), Biomedical Wellness Award (SPIE Defense, Security, and Sensing 2010) and Hyogo Scientific Excellence Award (2019). He serves editors including IEEE Trans on SMC-Systems. He is an IEEE Fellow (2010–).

