

---

## FOREWORD

---

### Special Section on Data Engineering and Information Management

It is our great pleasure to publish this special section on data engineering. In recent years, big data, machine learning, and IoT are increasingly opening up new research fields in data engineering, because the applications in these fields need to utilize a large amount of data. In other words, the research field of data engineering continues to expand its topics to these areas as well as to information management, information retrieval, Web technologies, etc. To make use of data, the data engineering and its related technologies have been an important key.

In the early spring of 2019, two big conventions related to data engineering have been held in Japan: the 11th Data Engineering and Information Management Forum (DEIM Forum 2019), which is the largest domestic workshop, and the 6th IEEE International Conference on Big Data and Smart Computing (Big-Comp 2019), which is one of the prominent international conference in this field. This special section was planned in connection with these conventions.

The editorial committee received 10 regular and 1 short papers from Japan, China, and Taiwan. The received papers had a wide variety of topics, such as knowledge management, smart devices, event streams, 3D object retrieval, etc. After all the paper were carefully reviewed by two anonymous referees, the editorial committee members deeply discussed the quality and significance of each paper based on the review reports. The editorial committee has finally selected 9 papers including 1 short paper, and therefore, these papers are high quality research achievements in the field of data engineering.

Lastly, we would like to thank not only all the authors who submitted their contributions, but also the referees and the editorial committee members for their dedicated efforts to the reviewing process. We would also like to express our gratitude to Guest Editors, Dr. Yasuhiro Fujiwara, Dr. Yasuhiko Morimoto, Dr. Chiemi Watanabe, and Dr. Hiroaki Ohshima who supported us and adequately organized all the editing process of this special section.

Editor-in-Chief:

Shingo Otsuka (Kanagawa Institute of Technology), Jun Miyazaki (Tokyo Institute of Technology)

Editors:

Yasuhiro Fujiwara (NTT), Yasuhiko Morimoto (Hiroshima Univ.), Chiemi Watanabe (NTUT, Univ. of Tsukuba), Hiroaki Ohshima (Univ. of Hyogo)

Associate Editors:

Daichi Amagata (Osaka Univ.), Yukino Baba (Univ. of Tsukuba), Koji Inui (Univ. of Tsukuba), Susumu Ishihara (Shizuoka Univ.), Yoko Kamidoi (Hiroshima City Univ.), Yasuhiko Kanemasa (Fujitsu), Makoto P. Kato (Univ. of Tsukuba), Hideyuki Kawashima (Keio Univ.), Takuya Kida (Hokkaido Univ.), Kyoung-Sook Kim (AIST), Takeshi Kurashima (NTT), Jianquan Liu (NEC), Hisashi Miyamori (Kyoto Sangyo Univ.), Masahide Nakamura (Kobe Univ.), Kyosuke Nishida (NTT), Takahiko Shintani (The Univ. of Electro-Communications), Hiroaki Shiokawa (Univ. of Tsukuba), Taro Tezuka (Univ. of Tsukuba), Masaaki Tsuchida (COTOBADESIGN, Inc.), Kei Wakabayashi (Univ. of Tsukuba), Shoko Wakamiya (NAIST), Takehiro Yamamoto (Univ. of Hyogo), Takayuki Yumoto (Univ. of Hyogo)

---

Shingo Otsuka and Jun Miyazaki, Guest Editors-in-Chief

---

**Shingo Otsuka** (*Member*) received a B.E. degree, M.E. degree and Ph.D from Chiba Institute of Technology, Japan, in 1996, 1998 and 2002, respectively. He has been an associate professor at Department of Information and Computer Sciences, Kanagawa Institute of Technology since 2010. His research interests include useful information extraction from Web, farmer support using IoT and information retrieval. He is a member of IPSJ and DBSJ.



**Jun Miyazaki** (*Senior Member*) received a B.E. degree from Tokyo Institute of Technology, Japan, in 1992, and both M.S. degree and Ph.D from Japan Advanced Institute of Science and Technology (JAIST), Japan, in 1994, 1997, respectively. He has been a professor at School of Computing, Tokyo Institute of Technology since 2013. His research interests include database core technologies, cloud computing, and, information retrieval. He is a member of IPSJ, DBSJ, ACM, and IEEE.

