

---

## FOREWORD

---

### Special Section on Formal Approaches

Recently, we hear many news about serious troubles due to bugs and inappropriate design of systems. Although such troubles happen at this moment, we are going to develop much more complex and larger scale information systems which are very close to our daily life. I am quite sure that formal methods play a key role in order to realize the safety and reliability of those systems. In fact, we can find the name of formal methods in international standards such as IEC 61508, ISO 26262 and ISO/IEC 15408. Formal methods are attracting interests of not only academia but also industry. We, researchers of formal methods, have to meet their expectation. The systems developed are changing. Formal methods have to be changed as well. We should extend the possibility of the formal methods, that is to say researches on formal approaches.

The Special Section on Formal Approaches aims at stimulating research on formal approaches to information systems, ranging from fundamental theory to case studies on real-world systems. In response to the Call for Papers, a total of seven submissions were received. After a thorough and careful review process, the editorial committee selected three papers of exceptional quality that prove the significance and importance of formal approach research.

On behalf of the editorial committee of the Special Section, I would like to express my sincere gratitude to all who submitted their valuable papers. I am also grateful to the external reviewers and the editorial committee members, especially the guest editors of this special section, Dr. Ken Mano and Prof. Hiroyuki Nakagawa, for their devoted efforts towards the success of the special section and the progress of formal approaches.

Guest Associate Editors:

Fuyuki Ishikawa (National Institute of Informatics)  
Hironobu Kuruma (Hitachi, Ltd.)  
Koichi Kobayashi (Hokkaido University)  
Takaaki Tateishi (IBM Japan)  
Tatsuhiko Tsuchiya (Osaka University)  
Shingo Yamaguchi (Yamaguchi University)  
Tomoyuki Yokogawa (Okayama Prefectural University)

Guest Editors:

Ken Mano (NTT Communication Science Laboratories)  
Hiroyuki Nakagawa (Osaka University)

---

Toshiaki Aoki (JAIST), Guest Editor-in-Chief

---

**Toshiaki Aoki** (*Member*) is a professor in Division of Transdisciplinary Sciences and School of Information Science, JAIST. He received B.S. degree from Science University of Tokyo (1994), M.S. and Ph.D. from JAIST.

