

Call for Papers

----- Special Section on Formal Approaches -----

The IEICE Transactions on Information and Systems announces a forthcoming special section on Formal Approaches to be published in October 2022.

Formal methods and techniques play a key role in designing and developing highly reliable information systems and embedded systems. The last decades have seen various new techniques and profound theoretical results using formal methods in surprisingly many fields such as modeling, requirements analysis, specification, automatic generation of codes, testing, verification, and maintenance. They are rapidly extending their application domains as a result of the recent growth of information and communication technologies.

The Special Section on Formal Approaches aims at stimulating research on formal approaches to information systems and embedded systems, ranging from fundamental theory to practical applications. Our emphasis is put on the cross-fertilization of related research fields and encouragement of young researchers.

1. Topics

The major topics are listed below, but we solicit submissions in all areas of formal approaches, i.e., first to formalize information systems, embedded systems, and their environment, next to analyze their behavior and to derive their properties rigorously, and then to solve various problems in designing and managing the systems.

- **Theoretical foundations:** all aspects of theory related to formal description and verification for structure and behavior of systems.
- **Formal techniques:** techniques for mainly describing and analyzing systems, such as software, hardware and networks.
- **Formal tools:** tools based on formal methods such as model checkers, theorem provers, and static and dynamic analyzers.
- **Applications:** practical experiences of applying formal methods to information systems, embedded systems, circuits, security, AI systems, machine learning systems, multi-agent systems, automotive systems, etc.
- **Education:** education on formal methods.

2. Submission Instructions

- The deadline for submission is Nov 5, 2021, 23:59 JST(GMT+9).
- Manuscripts should be carefully prepared according to the guideline in the "Information for Authors" (available at https://www.ieice.org/eng/shiori/mokuji_iss.html). The preferred length of the manuscript is 8 pages.
- Only electronic submission through the web page is accepted. Submit a complete paper and transfer copyright of the paper using the IEICE Web site (https://review.ieice.org/regist/regist_baseinfo_e.aspx). Authors should choose the "[Special FO] Formal Approaches" as a "Journal/Section" on the online screen.

3. Special Section Editorial Committee

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Shingo Yamaguchi (Yamaguchi University)

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Further information may be obtained from the web page at: <http://web.cc.yamaguchi-u.ac.jp/~shingo/FA2021/>. All inquiries should be sent to the guest editor in chief:

Shingo Yamaguchi
Graduate School of Sciences and Technology for Innovation
Yamaguchi University
shingo@yamaguchi-u.ac.jp

4. Important Dates:

Submission Deadline: Nov 5, 2021 23:59 JST (GMT+9) [strict]

First Notification: Dec 10, 2021

Revised Version Deadline: Feb 18, 2022

Final Notification: Mar 29, 2022

* Important Notice *

- (1) When a paper has been accepted for publication, the authors are required to pay the page charges covering part of the cost of publication.

Please carefully read the submission guideline at http://www.ieice.org/eng/shiori/mokuji_iss.html

- (2) Upon accepted for publication, all authors, including authors of invited papers, should pay the page charges covering partial cost of publication around June, 2022. If payment is not completed by July 15, 2022, your manuscript will be handled as rejection.
- (3) For the submission to this Special Section, it is not mandatory to include an author who is a member of the IEICE. We recommend that the non-member authors take this opportunity to join. For detailed information on the IEICE Membership Application, please visit the web-page, https://www.ieice.org/eng_r/join/individual_member.html. If all authors are non-members, the article processing charge for non-members will be applied, except for invited papers.
- (4) [Open Access Option] Open Access Publishing: Since January 2017, all papers of the IEICE Transactions on Information and Systems stored in J-STAGE that include all papers published from January 2017 have been opened to all reader in the world through J-STAGE. Open Access Option for many transactions in IEICE will not be applied to papers in January 2020 issue and following issues of the IEICE Transactions on Information and Systems. (Open Access Publishing will be continued after January 2020.). For details on Open Access Publishing and Open Access Options, please carefully refer to “The Information for Authors” (https://www.ieice.org/eng/shiori/mokuji_iss.html). Note that these rules may be changed without notice.