

Special Section on Foundations of Computer Science

- Foundations and New Trends of Computation Theory -

The IEICE Transactions on Information and Systems announces that it will publish a special section entitled "Special Section on Foundations of Computer Science - Foundations and New Trends of Computation Theory -" in March 2026.

Foundations of computer science has been a popular study area in information and systems from the mid-nineteen century, and studies on more practical theories are increasing recently. As a key of solving difficult and complex problems that have been caused by development of the information communication systems, importance of foundations of computer science is now re-recognized. The series of this special section is the successor of LA Symposium series (~2003), and has been popular as occasions of publishing the latest results on foundations of computer science. As a result, this is its 23rd special section plan. On the subtheme entitled "Foundations and New Trends of Computation Theory", this special section is being planned (scheduled to appear in March 2026 issue) to promote recent progress in the field of foundations of computer science.

1. Scope

The following topics fall in the scope of this special section. We however encourage submissions of papers on other topics if they conform the aim of this special section.

- *Theory and Models of Computation* —Turing Machines, Recursive Functions, Rewriting Systems, Parallel and Distributed Computing, Quantum Computing, Molecular Computing
- *Automata and Formal Language Theory* —Grammatical Models of String and Non-String, Cellular Automata, Applications of Models to Language Processing, Coding Theory, Computational Learning Theory
- *Algorithms and Data Structures* —Graph Algorithms, Combinatorial Optimization, Computational Geometry, Randomized and Approximation Algorithms, Parallel and Distributed Algorithms
- *Computational Complexity Theory* —Computational Complexity, Computability, Circuit Complexity, Communication Complexity
- *Related Areas of Theoretical Computer Science* —Cryptography, Quantum Computation, Computational Learning Theory

2. Submission Guidelines:

- A manuscript should be prepared according to the guideline given in "The Information for Authors" (https://www.ieice.org/eng/shiori/mokuji_iss.html). We encourage the authors to use the IEICE Style File (<https://www.ieice.org/ftp/index-e.html>). The preferred length of the manuscript is 8 pages for a PAPER and 2 pages for a LETTER with the format determined by the IEICE Style File.
- **Submit the manuscript through the IEICE Web site** (https://review.ieice.org/regist/regist_baseinfo_e.aspx). Choose "[Special-FC] Foundations of Computer Science - Foundations and New Trends of Computation Theory -" in the menu of "Journal/Section" in the submission page. Do not choose "[Regular-ED] Information and Systems" or other special sections.
- Authors must agree to the "Copyright Transfer, Article Processing Charge Agreement, Notices from the IEICE, and Privacy Policy" via electronic submission.
- Submission deadline of the manuscript is 10 March, 2025 (firm).

3. Notice to the Authors:

- If the paper is accepted, authors are requested to pay for the page charge.
- Upon accepted for publication, all authors, including authors of invited papers, should pay the page charges covering partial cost of publication around August 2025. If payment is not completed by 15 September, 2025 your manuscript will be handled as rejection.
- The standard period of 60 days between the notification (of conditional accept) and the second submission can be shortened according as the review schedule.
- If there are non-members among the authors, we recommend that the authors take this opportunity to join the IEICE. 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.
- Open Access Publishing: All papers published in the IEICE Transactions on Information and Systems since January 2008 have been opened to all readers in the world through J-STAGE. <https://www.jstage.jst.go.jp/browse/transinf>
- IEICE has begun a multilingual (16 languages) translation trial of IEICE Transactions Online in April 2024. Please visit https://www.ieice.org/eng/s_issue/cfp/triale.pdf for details.

4. Special Section Editorial Committee:

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