Special Section on Foundations of Computer Science

- New Trends of Theory of Computation and Algorithm -

The IEICE Transactions on Information and Systems announces that it will publish a special section entitled "Special Section on Foundations of Computer Science - New Trends of Theory of Computation and Algorithm -" in March 2022.

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 19 th special section plan. On the subtheme entitled "New Trends of Theory of Computation and Algorithm", this special section is being planned (scheduled to appear in March 2022 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**" in the menu of "Journal/Section" in the submission page.
    – Authors must agree to the "Copyright Transfer and Page Charge Agreement" via electronic submission.

    – Submission deadline of the manuscript is **March 26, 2021(firm)**.

3. **Notice to the Authors:**
    – If the paper is accepted, authors are requested to pay for the page charge.
    – The standard period of 60 days between the notification (of conditional accept) and the second submission can be shortened according as the review schedule.
    – **At least one of the authors must be an IEICE member** when the manuscript is submitted for review. Invited papers are an exception. We recommend authors unaffiliated with IEICE to apply for the membership.
    < https://www.ieice.org/eng_r/join/individual_member.html >
    – **Open Access Option:** Papers published in January 2019 issue and following issues will be offered a trial basis option which can make the papers open access if authors pay an additional charge on top of the usual page charge. For details on open access options, please carefully refer to "The Information for Authors" (https://www.ieice.org/eng/shiori/mokuji_iss.html). Note that open access option is still in the pre-trial stage, and it may be changed without notice.
    – Upon accepted for publication, all authors, including authors of invited papers, should pay the page charges covering partial cost of publication around November 2021. If payment is not completed by 15 December, 2021 your manuscript will be handled as rejection.

4. **Special Section Editorial Committee:**
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Inquiry should be made to the Guest Editor-in-Chief, preferably by Email with Subject "IEICE(FCS2021)".