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DESCRIPTION

*Theoretical Computer Science* is mathematical and abstract in spirit, but it derives its motivation from practical and everyday computation. Its aim is to understand the nature of computation and, as a consequence of this understanding, provide more efficient methodologies. All papers introducing or studying mathematical, logic and formal concepts and methods are welcome, provided that their motivation is clearly drawn from the field of computing.

Any queries about submissions and peer review should be addressed to the TCS editorial office: tcs@elsevier.com.

Papers published in *Theoretical Computer Science* are grouped in three sections according to their nature. The first section `Algorithms, automata, complexity and games` is devoted to the study of algorithms and their complexity using analytical, combinatorial or probabilistic methods. It includes the whole field of abstract complexity (i.e. all the results about the hierarchies that can be defined using Turing machines), the whole field of automata and language theory (including automata on infinite words and infinitary languages), the whole field of geometrical (graphic) applications and the whole field of measurement of system performance using statistical methods.

The second section, `Logic, semantics and theory of programming`, is devoted to formal methods to check properties of programs or implement formally described languages; it contains all papers dealing with semantics of sequential and parallel programming languages. All formal methods treating these problems are published in this section, including rewriting techniques, abstract data types, automatic theorem proving, calculi such as SCP or CCS, Petri nets, new logic calculi and developments in categorical methods.

The third section, Natural Computing, is devoted to the study of computing occurring in nature and computing inspired by nature. In the rapidly evolving field of computer science, natural computing plays an important role as the catalyst for the synergy of human designed computing with the computing going on in nature. This synergy leads to a deeper and broader understanding of the nature of computation. Although natural computing is concerned also with experiments and applications, this section of Theoretical Computer Science is focused on the theoretical aspects of natural computing with clear relevance to computing. Among others, it will contain papers dealing with the theoretical issues in evolutionary computing, neural networks, molecular computing, and quantum computing.

*Theoretical Computer Science* will now publish high-quality advanced introductions. Advanced introductions, which are by invitation only, should cover a focused topic within the scope of TCS at a
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**AUDIENCE**

Researchers in the Theoretical Aspects of Computer Science.

**IMPACT FACTOR**

2018: 0.718 © Clarivate Analytics Journal Citation Reports 2019

**ABSTRACTING AND INDEXING**

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Engineering Index  
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To find out more, please visit the Preparation section below.

Introduction
Theoretical Computer Science is mathematical and abstract in spirit, but it derives its motivation from practical and everyday computation. All papers introducing or studying mathematical, logic and formal concepts and methods are welcome, provided that their motivation is clearly drawn from the field of computing.

Papers published in Theoretical Computer Science are grouped in three sections according to their nature. Algorithms, automata, complexity and games, or TCS-A, is devoted to the study of algorithms and their complexity using analytical, combinatorial or probabilistic methods. Logic, semantics and theory of programming, or TCS-B, is devoted to formal methods to check properties of programs or implement formally described languages and contains all papers dealing with semantics of sequential and parallel programming languages. Natural Computing, or TCS-C, is devoted to the study of computing occurring in nature and computing inspired by nature. This section is focused on the theoretical aspects of natural computing with clear relevance to computing. Among others, it will contain papers dealing with the theoretical issues in evolutionary computing, neural networks, molecular computing, and quantum computing. Any queries about submissions and peer review should be addressed to the TCS editorial office: tcs@elsevier.com.

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The practice of peer review is to ensure that good science is published. It is an objective process at the heart of good scholarly publishing and is carried out by all reputable scientific journals. Our referees therefore play a vital role in maintaining the high standards of **Theoretical Computer Science** and all manuscripts are peer reviewed following the procedure outlined below.

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Referees are asked to evaluate whether the manuscript:

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- Is sound and valid
- Fits the scope of *Theoretical Computer Science*
- Is clearly presented, including linguistic quality
- Correctly references previous relevant work

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Manuscripts are typically reviewed within 4-5 months. Unusually long or difficult manuscripts may take longer. The time required will also be greater in cases where it is difficult to find suitably qualified referees. Should a report be unreasonably delayed, a further expert opinion may be sought. If the referees’ reports contradict one another, the Handling Editor may obtain additional reviews if this is required to make a decision. Revised manuscripts are usually reviewed by the referees of the original submission, but the Handling Editor may seek input from additional reviewers.

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A decision to accept or reject the manuscript, or to request a revision, will be sent to the author along with any recommendations made by the referees, and may include verbatim comments by the referees.

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