THEORETICAL COMPUTER SCIENCE

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

- Description p.1
- Audience p.2
- Impact Factor p.2
- Abstracting and Indexing p.2
- Editorial Board p.2
- Guide for Authors p.5

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.

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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.

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*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
level that would be appropriate for a scientist who is new to the topic and wishes to gain an up-to-date understanding. Articles should be self-contained, including motivation and basic definitions, and proceed to advanced material and/or open problems which may - but need not - include new results. Sufficient references should be given to provide the reader with entry points to the research literature on the topic as well as the origins of the main ideas. Submissions will go through the standard review process of TCS.

AUDIENCE

Researchers in the Theoretical Aspects of Computer Science.

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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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- Is clearly presented, including linguistic quality
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