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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**.

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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.

## AUDIENCE

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Researchers in the Theoretical Aspects of Computer Science.

## IMPACT FACTOR

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2016: 0.698 © Thomson Reuters Journal Citation Reports 2017

## ABSTRACTING AND INDEXING

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ACM Computing Reviews  
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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.

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

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[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

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[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13.03.03).

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