

Theoretical Computer Science
Algorithms, automata, complexity and games

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Stringology: In Celebration of Bill Smyth's 80th Birthday

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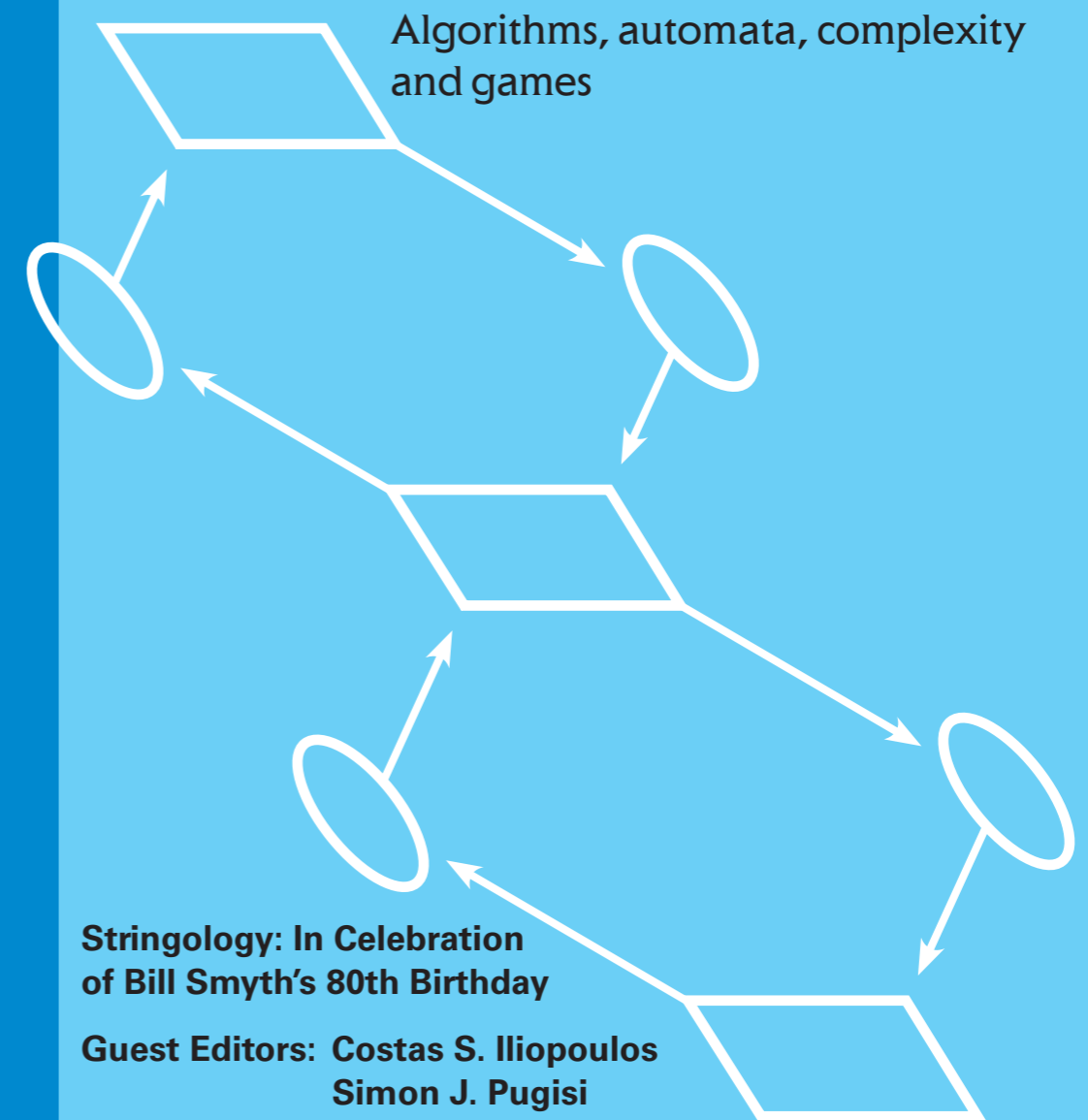
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All kinds of papers, introducing or studying mathematical, logic and formal concepts and methods are welcome, provided that their motivation is clearly drawn from the field of computing.

Papers published in *Theoretical Computer Science* are grouped in three sections according to their nature.

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 will contain all papers dealing with semantics of sequential and parallel programming languages. All formal methods treating these problems will be 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.

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Theoretical Computer Science

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