

Mathematical Structures in Computer Science

Editorial policy

Mathematical Structures in Computer Science (MSCS) is a journal of theoretical computer science which focuses on the application of ideas from the structural side of mathematics and mathematical logic to computer science. The journal aims to bridge the gap between theoretical contributions and software design, publishing original papers or broad surveys with original perspectives in all areas of computing, provided that ideas or results from logic, algebra, geometry, category theory or other areas of logic and mathematics form a basis for the work. The journal also welcomes applications to computing based on the use of specific mathematical structures (e.g. topological and order-theoretic structures) as well as on proof-theoretic notions or results. The use of logic, categorical or algebraic language just as a unifying tool for a variety of applications is appreciated, in particular if linked with relevant experimental activity. The journal will also accept contributions in new interdisciplinary fields bridging computer science, quantum physics, mathematics and information theory. In particular, papers on quantum information processing and communication, as well as on the related issues in quantum language design will be considered.

The purpose of the journal is to increase the circulation of new very high standard results in fast growing areas which are currently influencing various aspects of actual computing. Indeed, this journal is not meant to be only a 'theory journal' but, by choosing as a theme the use of mathematical methods of Computer Science independently of their area of application, it aims to highlight connections among different topics and to encourage applications of theoretical contributions.

In order to promote the use of methods from mathematics and physics in computer science, expository and introductory papers are also welcome, with the specific aim of turning the (sometimes excessively) technical jargon of specialized communities to a commonly understood language for as many working computer scientists as possible. Articles in other areas of pure mathematics may be considered as well provided that there is a clear connection to computational issues or they investigate mathematical structures whose relevance to computer science is well established. However, these contributions should be directed to the broad audience of computer scientists to which this journal is addressed. Equally, discussions of methodological or philosophical nature concerning the foundation of Computer Science are of interest for the journal.

Submission of manuscripts

Papers may be submitted to any member of the Editorial Board, possibly in electronic (pdf) form.

The paper should be accompanied by the author's address, telephone, fax number, and an electronic mailing address.

A copy of the paper together with the name of the editor chosen should also be sent to the Editor-in-Chief who will record the submission.

Submission of a paper is taken to imply that it has not been previously published and that it is not being considered for publication elsewhere. Upon acceptance of a paper, the author will be asked to transfer copyright to the publisher.

The publisher requires submission of papers written in LaTeX, possibly using the MSCS LaTeX style file which can be obtained using anonymous FTP from the internet address <ftp.cup.cam.ac.uk>. Go into the directory /pub/texarchive/journals/latex/ where you will find a concatenated file called mscs.all. This file contains readme.txt, mscs.sty and mscguid.tex. If you Tex mscguid.tex you will get a full set of instructions for using the style file. In case of difficulties obtaining these files, there is a help-line available via e-mail; please contact texline@cup.cam.ac.uk. While use of the MSCS LaTeX style file is preferred, ordinary LaTeX or plain TeX files can also be accepted.

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Layout of manuscripts

Papers should be typewritten in **double spacing throughout**, on one side of the paper. Please avoid footnotes if possible. Papers should begin with an abstract of not more than 300 words and should end with a brief concluding section.

Illustrations

Figures should be drawn in black ink on good quality white paper or produced by computer to comparable quality. Wherever possible they will be reproduced with the author's original lettering. Originals of figures should not be sent until the paper has been accepted. A list of captions should be attached separately.

References

The Harvard system of references should be used. In the text, a reference should be quoted by the author's name and date in parentheses, in date order, e.g. (Smith 1983; Jones and Jones 1985; Hunter 1986a,b). Where there are three or more authors, the first name followed by et al. should be used. A full list of references should be given at the end of the main text, listing, in alphabetical order, surname of author and initials; year of publication (in parentheses); article title; journal name abbreviated in accordance with the *World List of Scientific Periodicals* (4th edn); volume number; inclusive page numbers. For books and conference proceedings, place of publication and publisher (and Editor(s) if appropriate) should be included.

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