

Paper Submissions to COMSOC-2006

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Abstract

This short paper explains the formatting instructions for submissions to the 1st International Workshop on Computational Social Choice.

1 Formatting Instructions

Authors are invited to submit full papers not exceeding 14 pages, including references (roughly 5000 words). Each paper should include a title, the names and contact details of all authors, and an abstract of 100–300 words.

Please format your paper according to the following guidelines. The most important requirements are (1) that the submission should be formatted for A4 paper (that is, the page size as shown under *Document Properties* in the Acrobat Reader, for instance, should be 8.27×11.69 in); and (2) that the text should fit into an area of 4.75×7.5 in (12.07×19.05 cm). This excludes page numbers (which we suggest you include for the submission, but which must be removed for the camera-ready version in case of acceptance). Please use a 10pt typeface, with suitable deviations for section headings, footnotes, etc. In general, please aim at having your paper look as close to this sample as possible. The easiest way of achieving this is to use the Latex document preparation system with the style file `comsoc.cls` provided at the workshop website (take the file `sample.tex` as a starting point).

Papers not conforming to these guidelines will be accepted for review (provided they are not excessively long), but in case of acceptance we must insist that the guidelines be followed during preparation of the camera-ready version.

2 What is Computational Social Choice?

Computational social choice is an interdisciplinary field of study at the interface of social choice theory and computer science, promoting an exchange of ideas in both directions. On the one hand, it is concerned with the application of techniques developed in computer science, such as complexity analysis or algorithm design, to the study of social choice mechanisms, such as voting procedures or fair division algorithms. On the other hand, computational social choice is concerned with importing concepts from social choice theory into computing. For instance, social welfare orderings originally developed to analyse the quality of resource allocations in human society are equally well applicable to problems in multiagent systems or network design.

Social choice theory is concerned with the design and analysis of methods for collective decision making. Much classical work in the field has concen-

trated on establishing abstract results regarding the existence (or otherwise) of procedures meeting certain requirements, but such work has not usually taken computational issues into account. For instance, while it may not be possible to design a voting protocol that makes it impossible for a voter to cheat in one way or another, it may well be the case that cheating successfully turns out to be a computationally intractable problem, which may therefore be deemed an acceptable risk.

Examples for topics studied in computational social choice include the complexity-theoretic analysis of voting protocols (both with a view to developing computationally feasible mechanisms, and to exploit computational intractability as a means against strategic manipulation); the formal specification and verification of social procedures such as fair division algorithms (social software); and the application of techniques developed in artificial intelligence and logic to the compact representation of preferences in combinatorial domains (such as negotiation over indivisible resources or voting for assemblies).

References

- [1] S. J. Brams and A. D. Taylor. *Fair Division: From Cake-cutting to Dispute Resolution*. Cambridge University Press, 1996.
- [2] N. Nisan. Bidding and allocation in combinatorial auctions. In *Proc. 2nd ACM Conference on Electronic Commerce (EC-2000)*. ACM Press, 2000.
- [3] M. S. Pini, F. Rossi, K. B. Venable, and T. Walsh. Aggregating partially ordered preferences: Impossibility and possibility results. In *Proc. 10th Conference on Theoretical Aspects of Rationality and Knowledge (TARK-2005)*. National University of Singapore, 2005.
- [4] A. Rusinowska, H. de Swart, and J.-W. van der Rijt. A new model of coalition formation. *Social Choice and Welfare*, 24(1):129–154, 2005.

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