Notes to CADE-12 Referees

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Introduction

These notes give advice on how to fill in the CADE-12 referee form.

Please read the paper and then fill in the referee form (except the changes section) to the best of your ability by Sunday 16th January 1994. *After* you have done this consult the other referees for this paper. If you all agree on the final overall evaluation of the paper then take no further action. If not, then try to resolve any discrepancies between you. Sometimes one referee knows something that another does not, *e.g.* that there is a flaw in a proof or that a similar paper has been published elsewhere. If this discussion causes you to change your opinion of the paper then record this change of opinion in the "Changes" section. *Do not change any other part of the form.* If you cannot reach agreement with the other referees then please describe any issues of principle or fact that separate you in the "Changes" section. This will be a great help to the Programme Committee in resolving the discrepancy and will be especially helpful if you cannot attend the Programme Committee Meeting yourself.

Please submit your referee form by email to cade-12@aisb.ed.ac.uk or by fax to 44-31-650-6516 by Monday 31st January. This will enable us to identify the papers to be discussed in detail at the Programme Committee Meeting on Friday 4th February.

Timetable

Submission Deadline	1st December 1993
Paper Refereeing	~15th December 1993 – 16th January 1994
Referee Interaction	17th – 30th January 1994
Deadline Referee Forms	31st January 1994
Programme Committee Meeting	4th February
Notification Deadline	14th February

The timing is tight and any slippage will mean that some papers will be treated unfairly. Please make every effort to adhere strictly to the timetable.

Validity

Are there any errors in the paper?

The kind of error you look for depends on the nature of the paper. If the paper contains a mathematical proof then check the proof and note any faulty or unjustified steps. If algorithms are described then note any bugs in them. Note any incorrect or inconsistent use of terminology. Note any discrepancy between algorithms described and worked examples that illustrate them. If experimental work is described then check the methodology of the experiments and ensure that they justify any conclusions drawn from them. Even if there are no technical errors there may be gaps or faults in informal arguments or unjustified assertions made.

Significance of the Work

How much of an impact will this work make on the field?

What is the nature of the contribution: a new technique; an application to a new problem; a new theoretical result; an experimental analysis? Are any new ideas clever or trivial? Are the problems tackled easy or hard? Are the results: unnecessarily complicated, *ad hoc*, inefficient, impractical or limited in application? Is the work described: finished; in progress, only proposed?

Originality

Has this or similar work been published before?

Work is unoriginal if published either by the authors or by someone else. Often the situation is not quite clear-cut, *e.g.* the work is a slight advance on earlier work, or the presentation makes comparison difficult. In this case it is the responsibility of the author(s) to show awareness of the related work, to compare their work with it and to demonstrate some advance over the related work. Addition of such a comparison might be made a condition of acceptance.

Identify the nature of the contribution before deciding on originality. For instance, a technique might be well-known, but the originality may lie in a novel application of it or in an experimental comparison with some other technique.

Non-original work can be allowed if the paper is intended as a survey or if the previous publication was by the same author(s) in a non-archival source, *e.g.* a technical report, a workshop proceedings circulated only to the participants.

Appropriateness for CADE

Does the paper fit into the remit of CADE-12 as announced in the Call for Papers?

Here is the relevant extract from the Call for Papers:

> CADE conferences cover all aspects of automated deduction:
>
> | | |
> |---|---|
> | First *vs.* Higher Order Logics | Classical *vs.* Non-Classical Logics |
> | Special *vs.* General Purpose Inference | Interactive *vs.* Automatic Systems |
>
> Specific topics of interest include (but are not limited to):
>
> | | | |
> |---|---|---|
> | Resolution | Sequent Calculus | Decision Procedures |
> | Unification | Rewrite Rules | Mathematical Induction |
>
> and any applications of automated deduction, including:

Deductive Databases	Logic and Functional Programming
Commonsense Reasoning	Software and Hardware Development

For instance, papers which dealt with these application areas, but not with the application of automated deduction to them, would *not* be considered appropriate.

Quality of Presentation

How well is the paper presented?

Presentation covers overall organisation, readability and the use of English.

Organisation: Is all the material present? Is any material unnecessary? Is the material in the right order? Is the paper self-contained? Are the title, abstract and conclusion an accurate precis of the work done? Is terminology defined before it is used? Is there an adequate use of diagrams, examples and formalism? Is related work discussed? Is the bibliography adequate?

Readability: Is the meaning always clear? Are the arguments crisp or woolly? Are there any cryptic or obtuse sentences? Does the paper ramble? Did the paper hold your attention?

English: Are there any spelling, typographical or grammatical errors?

If there are problems can they be readily fixed in the timescale available to the author?

Referee's Confidence in the Paper's Subject

How confident are you that your assessment is sound?

If this paper addresses an issue that you yourself have worked on then score a 5. If the issue is one in your area of research, whose progress you have followed then score a 4 or 3. If this work lies outside your research area, but you feel able to give an opinion, then score 2 or 1.

We hope that we only gave you papers in your area of expertise, but sometimes errors are made or it is not possible to find enough referees with deep expertise. If you feel completely unable to assess a paper then please let us know immediately. If we have enough notice we may be able to find an alternative referee.

Overall Evaluation of the Paper

Should we accept this paper?

The overall evaluation should not just be an arithmetic average of the part scores. Low scores in some categories can be fatal, whereas in others they may not be. For instance, a very unoriginal, insignificant or inappropriate paper would be unacceptable however well it scored in other categories. On the other hand a poorly presented or invalid paper would be acceptable provided these faults could be readily corrected and it scored well elsewhere. However, remember that authors have much less time to make corrections than they would for a journal paper, so that it is rarely sensible to accept a paper that requires major modifications. Also, there is no time to re-referee papers, so authors have to be trusted to make the required modifications and referees have to be confident that the modifications can (and will) be effected with no difficulty.

Justification

Why did you give the scores you did?

Concentrate on the justification of the overall score and of any categories where the score was extreme. Give positive as well as negative reasons.

Changes

Did your opinion change after consulting other referees?

What further factors emerged in the interaction that you had not previously known about? Did these change your scores and if so how? [Do not alter your original score, but record your new score here.]

If you failed to reach agreement with another referee, what was the basis of your disagreement? Record any issue of principle involved so that the Programme Committee can discuss it.

Recommendation

What changes should the authors make to the paper?

If you have given the paper a low score in any category then specify what, if anything, the author(s) can do to correct it. Tackle the major issues first and leave minor issues, typos, *etc.* to the end. Try to be as helpful and positive as possible. Imagine yourself receiving this referee form; what would help you? Make clear which modifications *must* be effected for the paper to be accepted by CADE-12 and which are optional or are long term suggestions.

Notes to the Programme Committee

What is the real story?

Record here anything you want the Programme Committee to see, but not the author. This might include a blunt negative opinion on the work which would upset the author(s). It might include remarks on the relation to your own work which would compromise your anonymity. It might include suggestions on the line the Programme Committee could take, *e.g.* if it was feeling generous, but which it might not want revealed to the author(s) prematurely. It might discuss non-technical issues the Programme Committee might want to take into account, *e.g.* that the author(s) are isolated from fellow researchers and the literature, so that a generous attitude might be taken on poor originality.