

Review Checklist

The following one-page checklist is meant as an aide for the systematic peer review of scientific literature. It may also prove useful when writing such documents. It is based mainly on the following references:

Alan Meier: *How to Review a Technical Paper*, Energy and Buildings, 19(1):75–78, Elsevier, 1992.

Dale Benos, Kevin Kirk, John Hall: *How to Review a Paper*, Advances in Physiology Education, 27(2):47–52, American Physiological Society, 2003.

Philip Bourne, Alon Korngreen: *Ten Simple Rules for Reviewers*, PLOS Computational Biology, 2(9):e110, Public Library of Science, 2006.

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Matthias Rupp, 2008

Review Checklist v0.3

1. Decide if you will review the paper

- Can you finish the review in time?
- Are there no conflicts of interest?
- Are you competent in this area of research?

If at least one of your answers is “no”, decline to review the paper & tell your editor about it *immediately*; suggest other potential reviewers. If you want to review only part of the paper, tell your editor.

2. Review the paper

General:

- Is it an original/novel contribution?
- Is it a significant contribution?
- Is it the right amount of work for one paper?
- Not too much overlap with authors' previous work?
- Is the approach appropriate for the problem?
- Does it consider current research?
- Is the structure (see below) ok?
- Is it written in correct, clear & concise English?
- Are abbreviations and symbols explained?
- Does it fit the scope of the journal?

Title:

- Does it reflect the content of the paper?
- Is it specific?

Abstract (read at beginning and end of review):

- Is it informative & comprehensive?
- Does it properly reflect the paper's content?
- Does it mention purpose/problem, methods, results, conclusions and significance?
- Is it brief and concise?

Introduction:

- Is it long enough? Is it not too long?
- Does it fit the audience?
- Does it cite work by others than the authors?
- Does it motivate what follows?

Main text body:

- Is the approach clearly & concisely described?
- Are there sufficient/not too many details?
- Can others reproduce the experiment?
- Are all parts necessary?

Conclusions:

- Is no new material introduced?
- Is the focus only on the authors results?
- Do the results support the conclusions?

References:

- Are recent references cited?
- Are references by others than the authors cited?
- Are important references cited?
- Are reference details correct?
- Do the references state what the authors claim?
- Are all references used in the text?

Figures & Tables:

- Is each figure/table necessary?
- Is a figure/table the right choice?
- Are all captions present and appropriate?
- Is each figure/table referenced in the text?
- Are tables readable (clear layout, no leading zeros, only significant digits)?
- Is the quality of the figures good enough (sharpness, legend present, readable fonts, axes labelled)?

General considerations:

- Review the way you want to be reviewed yourself
- Write in a constructive, clear and explicit way
- Cite where necessary to backup your critique
- Do not enforce your own opinions/preferences
- If more brevity or detail is needed, say where
- If you can not assess something, e.g. significance of contribution, say so
- If you suspect fraud, plagiarism or duplicate publication, tell your editor about it immediately

3. Pass your review on to the editor

Make sure to comment on

- Importance of research question
- Originality/novelty of work
- Appropriateness and priority for publication
- Writing style, quality of figures/tables
- Strengths/weaknesses of approach, data & implementation

What editors appreciate:

- Thoroughness
- Timeliness
- Constructive criticism backed by references
- Objectivity