Reviewing an Article

An IEEE Author Education Course

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Biography

- EE Professor, University of Ferrara & Bologna
- 2013-2014 IEEE Vice President for Publication Services and Products (PSPB)
- 2010 President IEEE Circuits and Systems Society
- Chair of PSPB Authors Education ad-hoc Committee
• The importance of peer review to the communication of science
• Become an IEEE reviewer
• What to ask yourself before accepting an invitation to review
• Ethical standards & responsibilities essential to peer review
• What to look for while evaluating an article
• Writing a reviewer report
What is Peer Review?

“Scholarly peer review (also known as refereeing) is the process of subjecting an author's scholarly work, research, or ideas to the scrutiny of others who are experts in the same field, before a paper describing this work is published in a journal or as a book”

– Wikipedia

Two key functions:
• Acts as a filter: ensures research is properly vetted before publication
• Improves article quality: emphasizes key points, identifies errors or shortcomings, generates new ideas, gives constructive feedback
Why is it Important?

91% of authors think that peer review improves the quality of their article

91%
Types of Peer Review

**Single blind**
The reviewers know the authors’ identities, but the authors do not know the reviewers’ identities; most common at IEEE

**Double blind**
Neither the reviewers nor the authors know each others’ identities

**Open**
Several different formats, including:
- Authors and reviewers are aware of each others’ identities
- Reviewers’ comments are published along with the article, with or without the reviewers’ name
How It Works

Submission → Pre-screen → To reviewers → Editor Makes Decision → Accept, Revision, Reject

Rejection: topic, format
Why Become a Reviewer?

Teaching guide for author

Improve technical content of the article

Improve research and advance the field

Polish your own research, writing & critiquing skills

Improve Quality
How to Become a Reviewer

1. Select a journal in your subject area
2. Find the submission site from the journal homepage
3. Create a user account with your institutional email and affiliation
4. Enter keywords specifically describing your current area of focus
Review Invitation To-Do’s:
Timeliness in your response matters

- **Read the abstract**
  - Confirm you are qualified to evaluate the article

- **Check your schedule**
  - Can you complete the review by the deadline?

- **Respond**
  - Follow instructions to register your response
Responsibilities in Peer Review

**Author**
- Accuracy
- Compliance
- Revision

**Editor**
- Policies
- Confidentiality
- Manage review; finalize decision

**Reviewer**
- Comprehensive review
- Flag ethical issues
- Confidentiality
Editorial Prescreening

- Style
- Policy
- Language
- Scope
- Minimum Technical Substance
- Plagiarism
## What to Look For During Peer Review

### Research
- Novelty of the work based on complete literature review
- Well designed and executed study
- Data reported and analyzed correctly

### Results
- Appropriate interpretation of the data
- Significant Advancement
- Clarity of Presentation

### Compliance
- Appropriate for this publication
- Meets all ethical and journal requirements
Writing a Reviewer Report

**Goal**
- Provide an objective and professional evaluation
- Give constructive and useful feedback
- Critique the article, not the author

**Avoid**
- Ignoring weaknesses or inconsistencies
- Giving vague or generalized commentary (if a reference is missing mention it!)
Sample Constructive Criticism

• I suggest that the author streamline the abstract and move the examples to the discussion section.
• I recommend that the author conducts a more thorough literature review, including relevant work from X, Y, Z (cite papers).
• This article would be improved by expanding the discussion of what this interesting finding means and why it is significant. Add more comparison to related methodologies such as X, Y, Z.
• I would like to see more data to support the statement on page X, lines Y-Z.
• This article would benefit from being proofread by a professional English language editor to correct numerous grammatical errors, such as on page X, line Y-Z.
Recommend a Decision

- **Accept**
  - Ready for publication in current form
- **Minor Revision**
  - Small changes required
- **Major Revision**
  - Significant changes required
- **Reject**
  - Fundamental changes required
Second Round of Review

1. Author submits the revised article
2. Reviewer submits report
3. Editor finalizes revision decision
4. Author revises article and responds to reviewers
5. Revised article returned to original reviewer (others may be added)
6. Original reviewer confirms requested changes were made

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In Closing

- Reviewers have a vital role in the advancement of science
- Objectivity, constructive criticism, and attention to detail are key to a good review
- Practice makes perfect! Volunteer to review for your favorite journal today
Questions?

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