Let's talk about

Reviewing

SIGEVO Summer School

GECCO 2021

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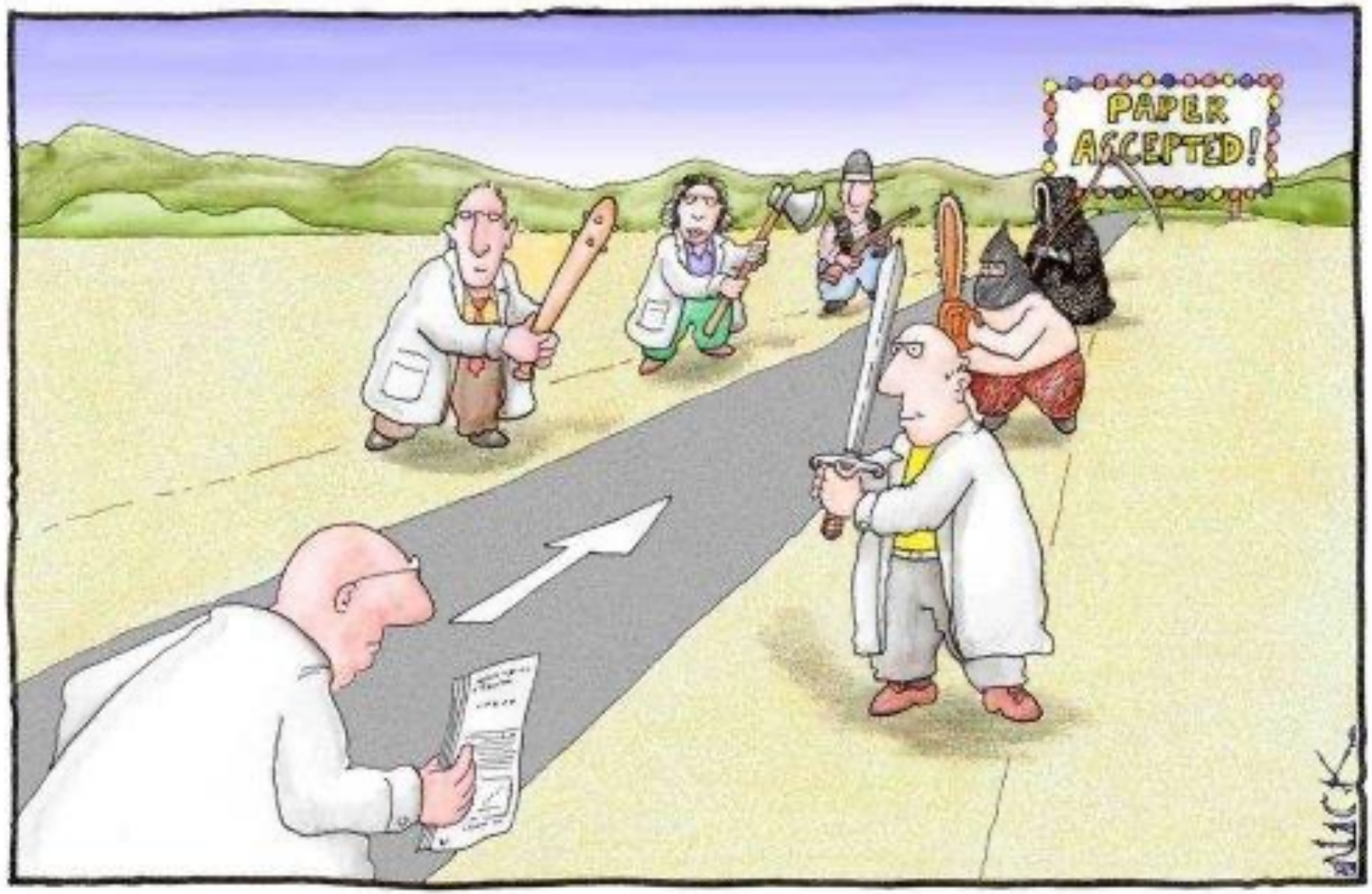
Go to **www.menti.com** and use the code **17 17 29**

Peer reviewing

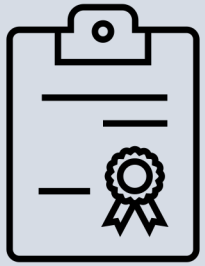
*The process of subjecting an author's work to the **scrutiny** of others who are **experts** in the same field, before a paper describing this work is **published** in a journal, conference proceedings or as a book.*


PAPER ACCEPTED!

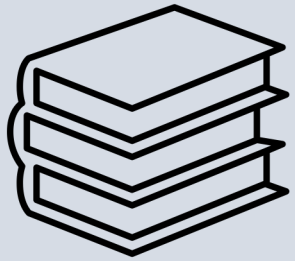
Objective of a review

Ensure the pertinence and quality of published scientifc work:

Originality



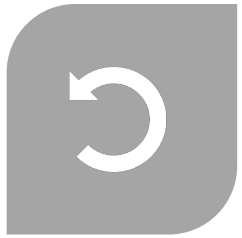
Validity



Quality

Do I want to review?

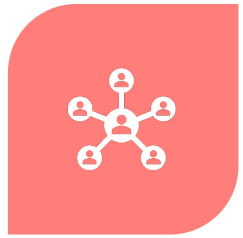
BROADEN YOUR PERSPECTIVE OF THE FIELD



UPDATING YOUR KNOWLOEDGE

IMPROVING YOUR WRITING ABILITIES

GOOD FOR YOUR CV



NETWORKING

Can I review?

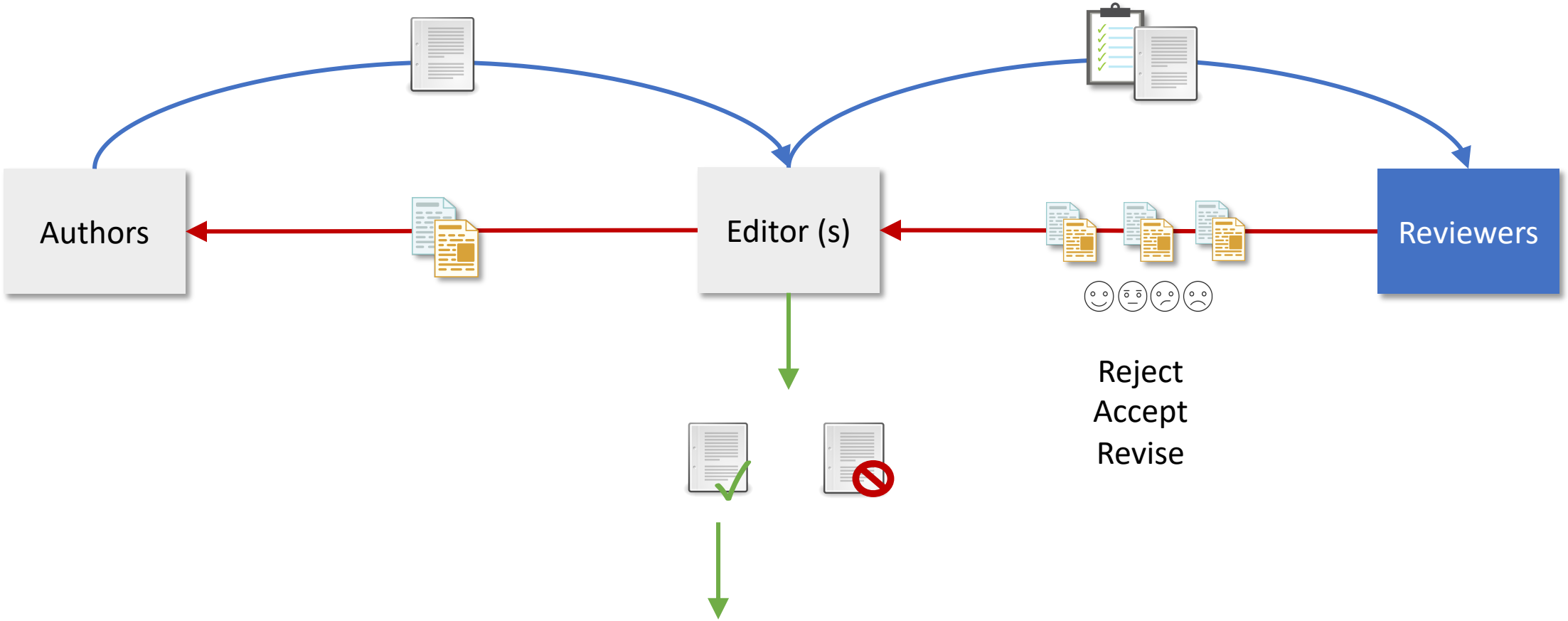
Check the journal / conference scope

Check the subject of the article

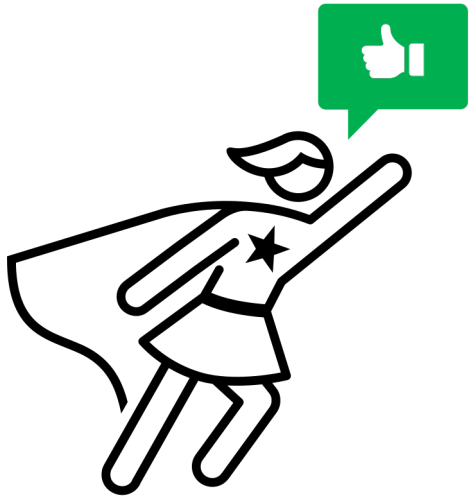
Check for conflicts of interest

Check the deadlines of the review

Reviewing process



Review invitation ...



And now what?

And now what?

Prepare for reviewing

1. Keep in mind the scope of the conference/journal

Prepare for reviewing: Keep in mind the scope

Applied Soft Computing is an international journal promoting an integrated view of **soft computing** to solve real life problems. Soft computing is a collection of methodologies, which aim to exploit tolerance for imprecision, uncertainty and partial truth to achieve tractability, robustness and low solution cost. The focus is to publish the highest quality research in application and convergence of the areas of **Fuzzy Logic**, **Neural Networks**, **Evolutionary Computing**, **Rough Sets** and other similar techniques to address real world complexities.

Applied Soft Computing is a rolling publication: articles are published as soon as the editor-in-chief has accepted them. Therefore, the web site will continuously be updated with new articles and the publication time will be short.

Major Topics:

The scope of this journal covers the following soft computing and related techniques, interactions between several soft computing techniques, and their industrial applications:

- Ant Colony
- Chaos Theory
- Evolutionary Computing
- Fuzzy Computing
- Hybrid Methods
- Immunological Computing

Why GECCO?

The Genetic and Evolutionary Computation Conference (GECCO) presents the latest high-quality results in genetic and evolutionary computation since 1999. Topics include: genetic algorithms, genetic programming, ant colony optimization and swarm intelligence, complex systems (artificial life, robotics, evolvable hardware, generative and developmental systems, artificial immune systems), digital entertainment technologies and arts, evolutionary combinatorial optimization and metaheuristics, evolutionary machine learning, evolutionary multiobjective optimization, evolutionary numerical optimization, real world applications, search-based software engineering, theory and more.

ECOM - Evolutionary Combinatorial Optimization and Metaheuristics

Description

The ECOM track aims to provide a forum for the presentation and discussion of high-quality research on metaheuristics for combinatorial optimization problems. Challenging problems from a broad range of applications, including logistics, network design, bioinformatics, engineering and business have been tackled successfully with metaheuristic approaches. In many cases, the resulting algorithms represent the state-of-the-art for solving these problems. In addition to evolutionary algorithms, the class of metaheuristics includes prominent generic problem solving methods, such as tabu search, iterated local search, variable neighborhood search, memetic algorithms, simulated annealing, GRASP and ant colony optimization.

Scope

The ECOM track encourages original submissions on the application of evolutionary algorithms and metaheuristics to combinational optimization problems. The topics for ECOM include, but are not limited to::

- Representation techniques
- Neighborhoods and efficient algorithms for searching them
- Variation operators for stochastic search methods
- Search space and landscape analysis
- Comparisons between different techniques (including exact methods)

Prepare for reviewing

2. Check review guidelines and instructions

1. Keep in mind the scope of the conference/journal

Prepare for reviewing

Guidelines: Example Elsevier

DO

- Summarize the article in a short paragraph. This shows the editor you have read and understood the research.
- Give your main impressions of the article, including whether it is novel and interesting, whether it has a sufficient impact and adds to the knowledge base.
- Ideally when commenting, do so using short, clearly-defined paragraphs and make it easy for the editor and author to see what section you're referring to.
- Assess whether the article conforms to the journal-specific instructions (e.g. the guide for authors).
- Give specific comments and suggestions about e.g. title, abstract: Does the title accurately reflect the content? Is the abstract complete and stand-alone?
- Check the graphical abstracts and/or highlights.
- Keep your comments strictly factual and don't speculate on the motives of the author(s)
- Carefully review the methodology, statistical errors, results, conclusion/discussion, and references.
- Consider feedback on the presentation of data in the article, the sustainability and reproducibility of any methodology, the analysis of any data and whether the conclusions are supported by the data.
- Raise your suspicions with the editor if you suspect plagiarism, fraud or have other ethical concerns, providing as much detail as possible. Visit Elsevier's ethics page or consult the COPE guidelines for more information.
- Be aware of the possibility for bias in your review. Unconscious bias can lead us all to make questionable decisions which impact negatively on the academic publishing process. Read further to find out more about this important subject and to view resources on how to identify and tackle bias.

Prepare for reviewing

Guidelines: Example Elsevier

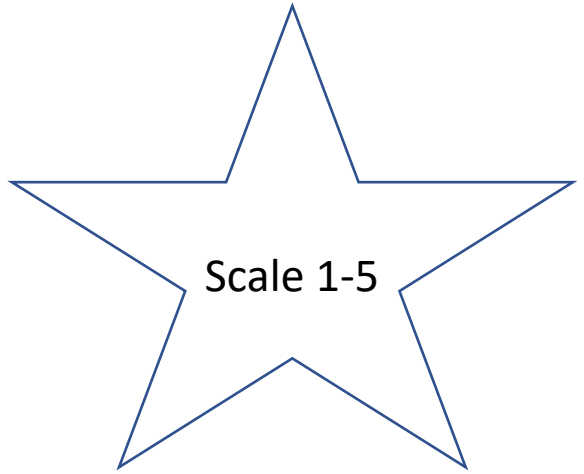
DON'T

- Feel the need to comment on the spelling, grammar or layout of the article. If the research is sound, but let down by poor language; recommend to the editor that the author(s) have their paper language edited.
- Make ad-hominem comments.
- Dismiss alternative viewpoints or theories that might conflict with your own opinions on a topic: when reviewing, maintain an open perspective.
- Share the review or information about the review with anyone without the agreement of the editors and authors involved. According to COPE guidelines , reviewers must treat any manuscripts they are asked to review as confidential documents. This applies both during and after the publication process unless the journal employs open peer review.
- Suggest that the author includes citations to your (or your associates') work unless for genuine scientific reasons and not with the intention of increasing citation counts or enhancing the visibility of your work (or that of your associates).

Prepare for reviewing

Instructions: Example GECCO papers

1. RELEVANCE TO THIS CONFERENCE/TRACK
2. SIGNIFICANCE OF THE PROBLEM
3. ORIGINALITY OF THE WORK
4. ACHIEVEMENT OF STATED OBJECTIVE
5. WRITING QUALITY
6. REPLICABILITY
7. TECHNICAL SOUNDNESS



Prepare for reviewing

Instructions: Example GECCO papers

8. ABSOLUTE **RECOMMENDATION**
    1. definitely reject outright
    2. probably accept as poster
    3. definitely accept as poster
    4. probably accept as full paper
    5. definitely accept as full paper

9. REVIEWER'S CONFIDENCE

10. BEST PAPER?

Prepare for reviewing

Example: a journal

1. The subject addressed in this article is worthy of investigation
2. The information presented was new
3. The conclusions were supported by the data
4. Reviewer **Recommendation**
   - Reject
   - Revise & resubmit
   - Major Revision
   - Minor Revision
   - Accept with minor modifications
   - Accept
5. Overall ranking [1,100]

0	Fails by a large amount
1	Fails by a small amount
2	Succeeds by a small amount
3	Succeeds by a large amount

Prepare for reviewing

+ comments

Summary of the work

General opinion + recommendation

Comments & suggestions

Mayor

Minor

+

Confidential comments to Editors

Prepare for reviewing

4. Allocate 2-3 hours

3. Get a coffee, pen++ and paper

2. Check review guidelines and instructions

1. check the scope of the conference/journal

Review basics

Structured: don’t just write what just comes to your mind

Constructive: make suggestions on how to improve

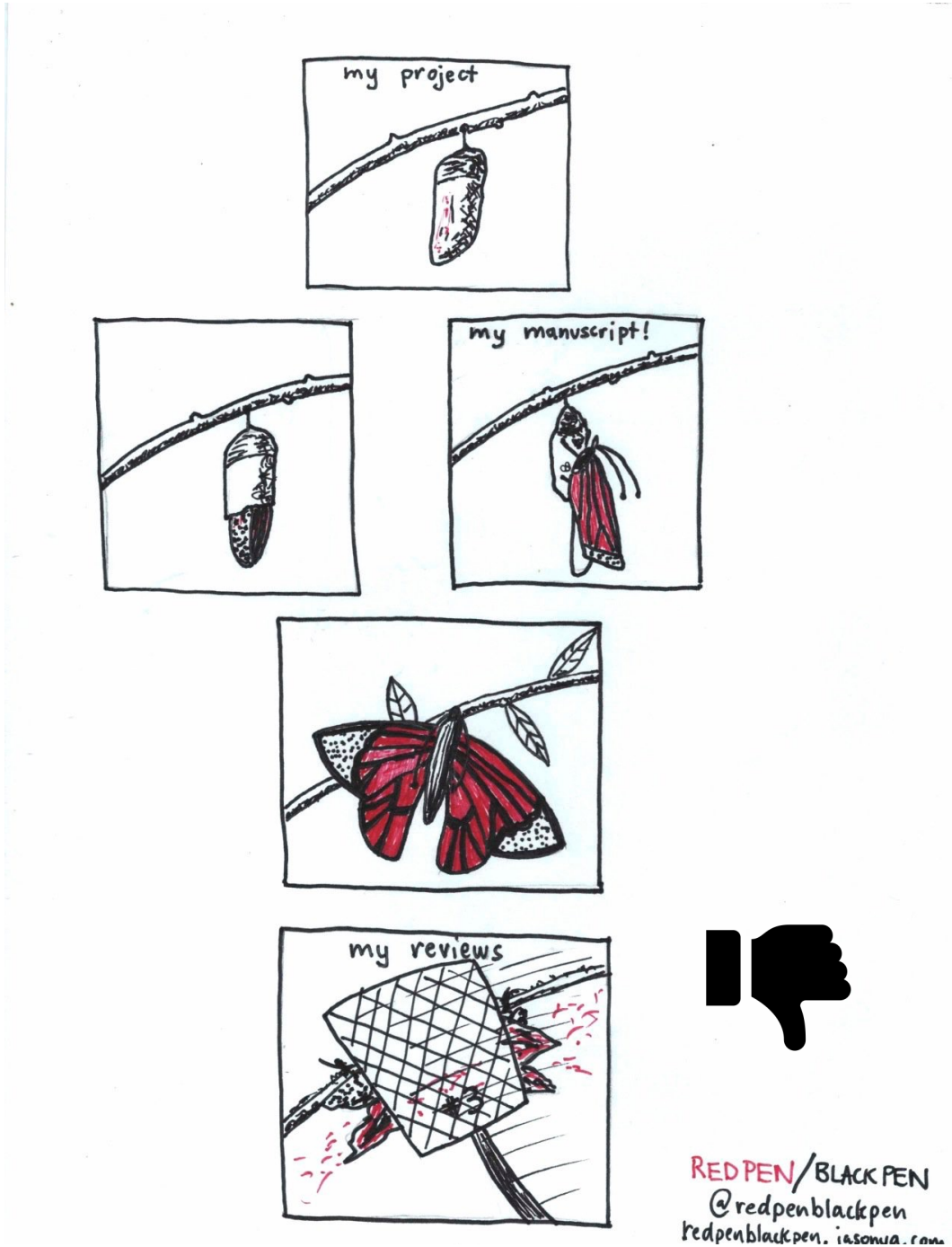
Clear: make sure your comments are clear, provide examples

Consise: go straight to the point

Throrugh: justify your comments, address all important aspects

Reasonable: recommend feasible and pertinent things

Consistent: uniform criteria and align to you recommendation


my project
my manuscript!
my reviews
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redpenblackpen.jasonyu.com

First reading

- General aspects
- Focus on **undestanding**

- Highlight key points
- Have a check list
- Take notes!

Second reading

- Particular aspects
- Focus on **arguments**

- List of major issues
- Search for examples
- Think of suggestions

Third reading

- Polish details
- Focus on **general opinion**

- Check consistency
- Reflect on aim and contribution

Understand

Subject: What are the research question(s) or the objective(s) of this work?

Motivation: Why the question(s) or objective(s) are important?

Contribution: What are the contributions of this work?

Methodology: What methods do the authors use in this work?

Results: How the results are related to the research question(s) /objective(s)?

Reviewing: Title, abstract, and keywords

- Does the **title** describe correctly the work?
- Does the the **abstract** summarize well the work?
- Are the **keywords** adequate?

Reviewing: Introduction / background

- Is the research objective(s) / question(s) clearly oulined?
- Is the motivation clear?
- Is background clear for the audience?
- Is the research objective(s) / question (s) well justified by the background information?

Reviewing: Introduction / background

✗ Before

“The authors appear to have no idea what they are talking about. I don’t think they have read any of the literature on this topic.”

Source: plos

Reviewing: Methodology

- Are clearly described the methods applied in the paper?

- If there are experiments with algorithms
  - Parameters
  - Instances
  - Repetitions
  - Platforms

- Are the methods valid, sound and reliable?

- Does the description provided allow replicability?

Reviewing: Methodology

✗ Before

“It’s obvious that this type of experiment should have been included. I have no idea why the authors didn’t use it. This is a big mistake.”

Source: plos

Reviewing: Results

- Are the results well presented
  - Clear and well explained tables, figures, etc.
  - Not repeated data (unless explained)
- Are the results analized for statistical significance
- Are the results meaningful regading the objective(s) / question(s)
- Are there results that are not central to the objective(s) / question(s)
  - can be presented in supplementary material

Reviewing: Discussion and Conclusions

- Are the conclusions supported by the results?
- Does the discussion and conclusions fits the aim of the work?
- Does the discussion consider different relevant perspectives?
- Does the discussion consider relevant findings in other works?
- Does the discussion considers the limitations of the work?
- It is mentioned how the findings influence future research?

Reviewing: Discussion and Conclusions

✗ Before

The authors have over-interpreted the findings.

Source: plos

Reviewing: References

- Are the references correct, appropiate, relevant, recent?

Reviewing: Discussion and Conclusions

✗ Before

I don’t completely understand the manuscript.

Source: plos

Reviewing: Build up your general opinion

1. Originality
2. Significance
3. Consistency and self contained
4. Contribution
5. Clarity: Organization and readability
6. Writing: English language
7. Appropriate terminology

Reviewing : Build up your general opinion

✗ Before

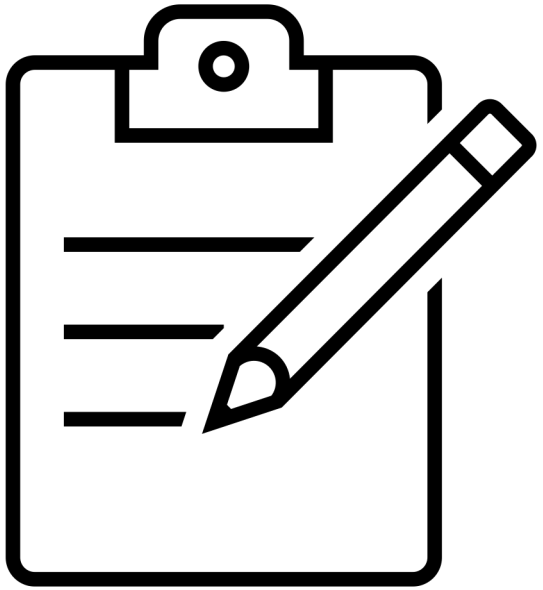
“The writing is so bad, it is practically unreadable. I could barely bring myself to finish it.”

Source: plos

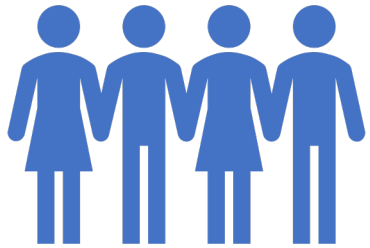
Hey, now I have some things to say...

Write your review

- Provide your **opinion** whether the work can be published
- Provide comments that **explain** your evaluation
- Explain the **reasoning** behind your comments
- Provide suggestions on how to improve



Write your review: Audience



Author(s)

provide feedback and give suggestions

Editor(s)

help to make an acceptance / rejection decision

Write your review: Review Tone

- Be polite
- Be possitive
- Be objective

Golden rule

Review like you would like to be reviewed

Calibrate your review

CONFERENCE

JOURNAL

Several resources!

Web of science academy https://webofscienceacademy.clarivate.com/

Wiley https://authorservices.wiley.com/Reviewers/journal-reviewers/index.html

Springer Nature https://www.springernature.com/gp/reviewers

Springer https://www.springer.com/gp/authors-editors/authorandreviewertutorials

Elsevier https://www.elsevier.com/reviewers

Plos https://plos.org/resources/for-reviewers/

SAGE https://us.sagepub.com/en-us/nam/resources-for-reviewers

Advice https://publons.com/blog/advice-for-early-career-peer-reviewers-a-peer-review-q-a-with-robert-faff/

Questions!?