

Course : COMP6575 – Research
Topics in Computer Science
Effective Period : December 2019

The Ethics of Publication, Authorship and Plagiarism

Session 10

Learning Outcomes

At the end of this session, students will be able to:

- LO 3: Analyze the results from the research study
- LO 4: Write a research paper with the appropriate format

Outline

1. The Ethics of Scientific Publication
2. Commercial Issues
3. Author Responsibilities Before Publication
4. Author Responsibilities During the Peer-Review Process
5. Author Responsibilities after Publication
6. Who deserves credit for the work reported in a scientific paper?
7. Defining Authorship
8. Guests or Ghosts
9. Author Order
10. Plagiarism
11. Copying Another's Ideas
12. Copying Another's Images
13. Copying Another's Words
14. Duplicate Publication, or Self-Plagiarism

The Ethics of Scientific Publication

The Ethics of Scientific Publication (1)

- For a result to be scientific, and contribute to the body of scientific knowledge, it must be described sufficiently so that the paper's conclusions can be validated by others. These are the primary ethic of scientific publication.
- It requires openness, honesty, and integrity on the part of the authors, all traits that most scientist readily exhibit.

Commercial Issues

- When commercial or competitive interests intrude, there may be pressure on authors not to provide sufficient detail in a paper
- Companies may want to keep certain ideas trade secrets
- Authors may want to keep flaws hidden, to increase the chance of publication and to maximize claims of significance
- Authors may also want to keep certain techniques to themselves in order to keep ahead of rival research groups in generating new results
- Secrets may be desirable, or even necessary but they are not a part of science

Author Responsibilities Before Publication

- Carry out the research leading to publication in an ethical manner
- Write your paper with openness and honesty
- Cite as you write to avoid plagiarism through sloppy citation practice
- Ensure that the work is original and has not been previously published or submitted for publication elsewhere
- Select the list of authors appropriately with full approval of the submission by all authors
- Choose the most appropriate journal and submit the best manuscript possible.
- Never knowingly submit a poor manuscript with the hope that the editors and reviewers will help you fix it
- Spend the time to understand the submission requirements of the chosen journal and comply with those requirements

Author Responsibilities during the Peer-Review Process (1)

- Treat editors and publication staff with respect throughout the publication process
- Do not take critical reviews personally (this can be hard advice to follow), and never respond to a review while angry or upset
- Almost always, revisions in response to reviews will make the paper better
- Reply to a journal request for manuscript revision by providing a point-by point response to every item brought up by reviewers and editors
- Before submitting a revised manuscript to the journal, make sure that every author has approved all changes
- Remember that during the peer-review process the material found in your manuscript cannot be submitted to another journal for consideration

Author Responsibilities during the Peer-Review Process (2)

- During the review process, the authors find themselves waiting until that anticipated moment arrives when the editor returns a first decision, often with reviewer comments attached.
- If the decision requires a response and a revised manuscript, the response and revisions provided by the authors are critical to whether the manuscript will finally be accepted or rejected.

Author Responsibilities after Publication

- Authors are responsible for responding to well-considered criticisms of their work after it has been published
- Be prepared to share the data found in your paper (or that your results rely upon) to other researchers upon request. Once published, you must consider these data to be open source and not proprietary
- Because you might have to share them, all data that the paper relied upon should be carefully organized and archived for as long as practically possible (a minimum of three years is a good goal)

Authorship

Who deserves credit for the work reported in a scientific paper?

- That is the basic question of scientific authorship
- because unlike authorship credit in the world of creative writing, what matters most for scientific papers are the ideas rather than the words
- On the surface, it would seem that deciding who belongs in the list of authors would not be a difficult task
- But the affairs of humans are rarely straightforward, and authorship controversies are not uncommon in the world of science and engineering

Defining Authorship

- An author of a scientific paper is anyone who has made a creative contribution to the words or ideas being presented that are claimed to be novel
- Obviously, authorship of the words and figures used in the paper (the conventional definition of authorship) counts as authorship for a scientific paper
- If using a person's words in the paper would amount to plagiarism without that person being listed as an author, then that person must be listed as an author or must be quoted and cited
- But contributions to the concept, design, execution, or interpretation of the work also count. Most definitions of authorship claim that such contributions must be "significant."

Guests or Ghosts

- There are two ways to err in listing the authors for a manuscript: leaving off someone who belongs on the list (a ghost author) and including someone who does not belong on the list (a guest author)
- Both errors are reasonably common in scientific publishing for different reasons, and both can be serious problems with different consequences
- Usually, such mistakes are unintentional and are often the result of not fully knowing the requirements for authorship
- Guest authorship is not always so innocent. Sometimes a supervisor, lab director, or some other person of authority insists that their name be included on all publications under their control

Author Order

- The work generally represents the thesis project of one student, who is then assigned the first author spot
- That student's supervisor is assigned the last author position
- In between, author order is determined by the level of contribution, but with students generally listed first and professors last

Plagiarism

Plagiarism

- Plagiarism remains a difficult and important issue in scientific publishing
- Plagiarism is generally defined as taking another's ideas, images, or words and representing them as one's own. It is intellectual theft
- SPIE, with its many peer-reviewed journals and conference proceeding publications, deals with a number of plagiarism cases each year, ranging from the minor (fixable with editing and education) to the major (sometimes requiring retraction and author sanctions)
- And even though copying is easier than ever to detect using automated tools such as Similarity Check, the problem persists.

Copying Another's Ideas

- It is a bedrock principle of science that each new work builds on the foundation of past work, so that making use of another's ideas is not only allowed but encouraged
- Such misrepresentation can be explicit ("We present here for the first time...") but is most often implicit
- By presenting ideas, designs, models, processes, or results without citations, there is a clear implication that these ideas are original
- Thus, the plagiarism of ideas can also be considered a lapse in proper citation practices
- Authors are expected to make a concerted effort to find relevant literature and cite appropriately, but missing citations are generally dealt with during the review and editing process without any implications of wrongdoing

Copying Another's Images

- Figures are an important part of scientific communication, and the generation of a figure or other image is generally a creative act.
- As such, the use of another's figure requires not only a reference to its original publication, but permission from the figure's author (and possibly the publisher) as well

Copying Another's Words

- According Chris A. Mack, By far the most common plagiarism problem that he forced to deal with as an editor is the copying of another's words.
- Thus, stealing words—taking the credit that rightly belongs to another—besides being inherently dishonest, can rob an author of the reward that may have justified the original effort

Duplicate Publication, or Self-Plagiarism

- Such duplicate publication without proper citation is sometimes used by authors to increase their publication counts, hoping that editors and reviewers will not notice the lack of novelty in their latest submission
- The harm here is to the journal and its readers, who waste their time reviewing and reading old work, thinking that there is something new to learn
- If your new work is a continuation of your old work, cite it. Make sure the reader can easily distinguish between what is new and what is old

References

- Chris A. Mack. (2018). How to Write a Good Scientific Paper. Society of Photo-Optical Instrumentation Engineers (SPIE). ISBN: 978-1-5106-1913-5

In Class Assignment

- How many percentage is your plagiarism checking?
- Notes: Usually the paper submission accept around 10-15% similarity.

The background is a solid blue color. On the left side, there are three large, overlapping circles of varying shades of blue, creating a stylized, organic shape. The circles overlap in a way that creates a central area where all three shades meet.

Thank you