Publication Etiquette and Ethics:
Things You Should Know Before Submitting Your Next paper

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Why This Topic?

• Established practices often govern social behavior in cultures and communities: “etiquette”
  ▫ Can you think of some examples?

• When visiting a new location, it is a good idea to know out about established etiquette
  ▫ When in Rome, do as the Romans do

• Ethics – integral to progress in science, should be inherent, review and emphasis worthwhile
  ▫ Science is international and common values are shared universally
Sharing Your Results in a Paper

- Excitement about work and results is natural

- Do remember that you’re stepping into a new culture

- That’s where this presentation/discussion comes in:
  - Overview of etiquette and ethics in technical publishing
Outline

- Why this topic?
- Our backgrounds
- Overview of the peer-review and publications process
- Etiquette and ethics in scientific publishing
  - Frequently encountered issues
- Question and answer
- Summary
Sheila Hemami: Background

- Chair ECE, Northeastern University, Boston MA
  - Author of over 34 journal and 98 conference papers
- Vice President of IEEE Publications for IEEE
- Former Editor-in-Chief for IEEE Trans. Multimedia
- Experience on editorial boards, conference technical committees, ...
Gaurav Sharma: Background

- Professor, University of Rochester, Rochester, NY
  - Author of over 50 journal and 115 conference papers
- Editor-in-Chief for Journal of Electronic Imaging
  - Published jointly by SPIE and IS&T
- Member of IEEE Publications Services and Products Board
- Experience on editorial boards, conference technical committees, ...
Where Do We Come from?
Why does one publish?

- Share discoveries and knowledge
- Gain prestige and recognition
- Required for program/degree
- Assessment in some careers based on publications

Secondary benefits

- Writing promotes better understanding
  - Logical organization requires clarity of thought
- Often spurs new ideas
  - Both by authors and others

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The Peer Review and Publication Process

- What happens after you click “submit” (my paper): typical journal workflow

Message:
- Peer-review and Publication consumes a lot of time, from a lot of people
- Mostly experienced unpaid volunteers with other day jobs: altruistic service

Author

Submitted Manuscript

Journal Staff

Editor-in-Chief

Associate Editor

Anonymous Reviewers

Production Operations

Published Paper

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Etiquette and Ethics in Publishing: Guiding Principles

- Value the time of others
  - Editorial board, reviewers, readers
  - Also your own!
- Maintain integrity of the publication process
  - Scientific integrity and reproducibility
  - Authorship
- Understand and avoid unacceptable conduct
  - Plagiarism, duplicate submission, disclosure
Preparing Your Manuscript

- You can and should start writing before you have all the work done and everything figured out
  - But should not submit until you have done your part
- Check for logical organization, clarity, and brevity (see presentations on technical writing)
- Also check for
  - Conformance of style with the journal you are submitting to (citations, sections, formatting, etc)
  - Language and grammar
- Details matter: good work presented poorly is often misunderstood and rated poorly by reviewers
- The review process is not intended to edit the manuscript!
Preparing your Manuscript: The Abstract

• Abstract should tell a reader in a nutshell
  ▫ what the paper is about,
  ▫ why is it significant,
  ▫ what is the main novel idea/methodology that is introduced,
  ▫ what are the main findings, conclusions

• It is a tall order to do all of these in a typical 150-250 word abstract!
  ▫ Guideline: In early phase of writing, should plan to spend half as much time on writing, reviewing, and editing abstract as on the rest of the manuscript

• Several of the decisions in the peer-review pipeline are made based largely on the abstract (and cover letter)
Selecting Where to Publish Your Work: Avoiding the “Not-in-Scope” Syndrome

• Questions to ask:
  ▫ Who is your target audience? Select a journal that they read: where has similar work been published?
  ▫ Do you recognize the editor-in-chief/editorial board as being leaders in your field?
  ▫ Is the journal timely? What is submission-to-publication time?

• Question not to ask:
  ▫ What is the impact factor?
Maintaining Scientific Integrity

• Your manuscript should reflect what you actually did and observed
  ▫ Heuristics/hacks should also be documented
  ▫ Do not fabricate results or data
  ▫ Results should be reproducible
  ▫ Selectively reporting results is deceitful

• Fraud is eventually uncovered
  ▫ Several high profile cases: human cloning, ...
Case Study Group I

Selection of Data, Discovering an Error, Breach of Trust, Fabrication

http://www.nap.edu/openbook.php?record_id=12192
Plagiarism

- Plagiarism: Use of another person’s words or ideas without appropriate attribution
  - Always attribute sources – even if these are informal (oral/email communication, website, ...)
    - There are no exceptions to this rule
  - Do not copy other author’s words
    - If required, rephrase and describe in your own words
    - When quoting use no more than one/two sentences verbatim from other authors’ paper with very explicit citation
  - Everything you write is presumed to be your own words unless you quote and cite
- Some examples ....
Reuse of Published Materials

- You must cite and acknowledge any published materials that you make re-use of
  - Examples: Diagrams/figures from an existing paper
    - Extracted and re-used => must get permission from author/publisher (copyright owner) and cite and acknowledge
    - Redrawn with modifications => should cite and indicated “adapted from” or “based on”
- This includes your own prior published work!
Case Study Group II
Is it Plagiarism?, Race to Publish

http://www.nap.edu/openbook.php?record_id=12192

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Authorship and Acknowledgment

• Authorship for an article should be limited to individuals who have
  ▫ substantively contributed to the work, AND
  ▫ reviewed the manuscript and agree with the contents and to being listed as an author
• IMPORTANT: All authors share responsibility for any ethics violations!
• People you have consulted with and who have offered advice, tools, etc but not directly participated can be acknowledged
  ▫ Good idea to let folks know you are acknowledging them
• It is a terrible idea and ethically wrong to include a friend, colleague, or family member that has not contributed to the work as a “co-author”
Case Study Group III

Who gets credit?

http://www.nap.edu/openbook.php?record_id=12192
Duplicate Submissions

• It is not acceptable to submit substantially the same manuscript for review in multiple journals at the same time
• Why?
  ▫ Terribly wasteful of editorial board and reviewer resources
  ▫ The practice is completely taboo in the world of scientific publishing
  ▫ Copyright issues
• Faux counter-arguments
  ▫ I thought it would be faster if I tried two places at the same time...
  ▫ This journal was taking too much time therefore I submitted to another one to see if they would be quicker
Disclosure and Double Publication

• As an author, it is your ethical responsibility to disclose all relevant prior work that you are aware of
  ▫ What is relevant is a matter of judgment, however, relative relevance is easy to assess
• In particular, you must disclose your closely related prior work of yours on the topic
  ▫ Cannot reasonably claim ignorance of these!
• Publishing substantially the same work in two journal papers is unacceptable and often treated as an ethical violation
  ▫ Also potential copyright violation depending on nature of publication
  ▫ Conference to journal overlap, practice varied by discipline
  ▫ Some variations between communities: disclosure is important here
Case Study Group IV

Publication Practices

http://www.nap.edu/openbook.php?record_id=12192
Publication Metrics

- Article and journal citation counts are just one metric of the impact and significance of the work
  - Wide variance of number of citations based on area
  - Bias toward sensationalism and marketing, rather than scientific merit
  - Some research results subsequently found to be fraudulent/erroneous are often cited frequently in follow on work
  - Computed metrics use time windows and useful half-life differs in different fields
  - Metrics are subject to gaming by unethical players
Bibliometric Manipulation

- "Bibliometric manipulation" is defined as actions designed to influence either journal bibliometric measures or personal citation counts
- IEEE now considers "bibliometric manipulation" as misconduct
- Cite your own papers when they are relevant, not to increase your own citation counts
- When you review papers, make sure you review the bibliography for the same reasons!
Impact Factor (IF)

- Designed to help librarians determine which journals are being used and to aid in making subscription decisions
- Aggregate measure of all citations (not just technical) to all articles published in the journal in the last 2 years. **It is an average.**
  - Does not provide information on citations for a single paper was cited
- High impact factor does not mean high selectivity
  - The correlation between IF and rejection ratio is less than 0.2
- Don't use journal IF as proxy for the quality of a single paper.
  - Don't use IF to select a journal in which to publish
- Citation counts are limited in their utility in assessing the importance and significance of work
Maintaining Scientific Integrity

• Conflicts of interest should be minimized and clearly declared
  ▫ Much more common for medical research
  ▫ Can also occur with engineering and scientific research

• Corresponding author is responsible for checking with all others before submitting manuscript
  ▫ Several journals have explicit statements that all authors must read and agree with
  ▫ Send to everyone and request explicit acknowledgment
Participate in Your Community

- Volunteer for reviews
  - Initial “supervised” mentorship phase with advisor
  - Subsequently as an independent reviewer
- Set up an “honor code” for your class/batch/workgroup
- Resist inappropriate peer pressure
  - Conformance should be a by-product of like-mindedness and not of weakness!
- Any ethical misconduct reflects poorly not only on you but also your co-authors and indirectly on your institution
Comments

• Broad ethics and etiquette practices are common between different disciplines

• Details can be quite different
  ▫ Particularly for etiquette, just as in social settings!

• When in doubt:
  ▫ Better to err on the side of politeness
  ▫ Ask someone familiar with the community
Summary

• Scientific publishing communities have established etiquette and ethics expectations for published work
  ▫ It is important that you familiarize yourself with these prior to submission of a manuscript
• Several of the ethics guidelines should be common sense
  ▫ Common sense is not really that common, though!
• Etiquette comes from established practices and can vary between communities
• As an author and scientist you carry your reputation as well as that of your co-authors and your institution
Commentary

- Dynamics of publishing are constantly evolving
- Traditionally, researchers were relatively small community
  - Ethics and etiquette practices were passed on from advisor to student through personal contact
- Distributed work and collaboration environments enable joint work without personal contact
  - Increase productivity
  - Do not eliminate the need for understanding acceptable etiquette
Additional Resources: Pub. Ethics

- IEEE Author Rights and Responsibilities
  [Link](http://www.ieee.org/publications_standards/publications/rights/authorrightsresponsibilities.html)
  [Link](http://tinyurl.com/o7ene37)

- SPIE Code of Ethics
  - See section “Guidelines for Ethical Publishing”
  [Link](http://spie.org/Documents/ConferencesExhibitions/SPIE-Code-of-Ethics.pdf)
  [Link](http://tinyurl.com/p6tf6du)

- Vancouver Protocol
  [Link](http://www.research.mq.edu.au/about/research@macquarie/policies,procedures_and_conduct/documents/Vancouver.pdf)
  [Link](http://tinyurl.com/ppqu9ub)

- On Being a Scientist (US National Academies)
  [Link](http://www.nap.edu/openbook.php?record_id=12192)
  [Link](http://tinyurl.com/mw9ggel)
Additional Resources: Writing, ...

- How to Write an Abstract
  [http://users.ece.cmu.edu/~koopman/essays/abstract.html](http://users.ece.cmu.edu/~koopman/essays/abstract.html)
- IEEE Guide: “How to write for Technical Periodicals and Conferences”
- Reading a Technical Paper
- How to start on research
Thank You!
Questions?

• IEEE Author Tools
  • [http://tinyurl.com/6rzxmxh](http://tinyurl.com/6rzxmxh)