

# Ethics in Research I

## ICERM Professional Development Program



# Responsible Conduct in Research

## Expectations Regarding:

- Publications
  - ▶ Plagiarism
  - ▶ Copyright and References
  - ▶ Reproducibility and Integrity
  - ▶ Authorship and Acknowledgement
  - ▶ Offensive Material
- Peer Review Process
- Professionalism in the Workplace
- Title IX

# Publications - Plagiarism, Copyright, References

What constitutes **plagiarism**?

# Publications - Plagiarism, Copyright, References

What constitutes **plagiarism**?

- Copying, in essentially unchanged form, from other sources without proper attribution or acknowledgement (copying 1 definition is fine if common; copying a paragraph from wikipedia or paper because it captures a certain concept is unethical unless the paragraph is identified clearly as a quote and the source is acknowledged)

# Publications - Plagiarism, Copyright, References

What constitutes **plagiarism**?

- Copying, in essentially unchanged form, from other sources without proper attribution or acknowledgement (copying 1 definition is fine if common; copying a paragraph from wikipedia or paper because it captures a certain concept is unethical unless the paragraph is identified clearly as a quote and the source is acknowledged)
- Applies to all forms of dissemination (papers, talks, grant proposals, )

# Publications - Plagiarism, Copyright, References

What constitutes **plagiarism**?

- Copying, in essentially unchanged form, from other sources without proper attribution or acknowledgement (copying 1 definition is fine if common; copying a paragraph from wikipedia or paper because it captures a certain concept is unethical unless the paragraph is identified clearly as a quote and the source is acknowledged)
- Applies to all forms of dissemination (papers, talks, grant proposals, )
- **Self-plagiarism**: copying from your own papers

# Publications - Plagiarism, Copyright, References

What constitutes **plagiarism**?

- Copying, in essentially unchanged form, from other sources without proper attribution or acknowledgement (copying 1 definition is fine if common; copying a paragraph from wikipedia or paper because it captures a certain concept is unethical unless the paragraph is identified clearly as a quote and the source is acknowledged)
- Applies to all forms of dissemination (papers, talks, grant proposals, )
- **Self-plagiarism**: copying from your own papers
- Plagiarism is *unethical*; self-plagiarism may not be considered as unethical by everybody but it is bad practice in a paper and may result in rejection when discovered in a submission.

# Publications - Plagiarism, Copyright, References

What constitutes **plagiarism**?

- Copying, in essentially unchanged form, from other sources without proper attribution or acknowledgement (copying 1 definition is fine if common; copying a paragraph from wikipedia or paper because it captures a certain concept is unethical unless the paragraph is identified clearly as a quote and the source is acknowledged)
- Applies to all forms of dissemination (papers, talks, grant proposals, )
- **Self-plagiarism**: copying from your own papers
- Plagiarism is *unethical*; self-plagiarism may not be considered as unethical by everybody but it is bad practice in a paper and may result in rejection when discovered in a submission.
- Seek permission for figures copied from other copyrighted work and attribute sources clearly (this may include your own figures!)



# Publications - Research Misconduct

# Publications - Research Misconduct

- **True or False:** It is OK to omit contradictory data (e.g. in numerical simulations) from the paper if it detracts from my point?

# Publications - Research Misconduct

- **True or False:** It is OK to omit contradictory data (e.g. in numerical simulations) from the paper if it detracts from my point?
  - ▶ False. Deliberate omission of contradictory data constitutes research misconduct.

# Publications - Research Misconduct

- **True or False:** It is OK to omit contradictory data (e.g. in numerical simulations) from the paper if it detracts from my point?
  - ▶ False. Deliberate omission of contradictory data constitutes research misconduct.
- **True or False:** Falsifying results such as proofs or numerical simulations constitutes research misconduct?

# Publications - Research Misconduct

- **True or False:** It is OK to omit contradictory data (e.g. in numerical simulations) from the paper if it detracts from my point?
  - ▶ False. Deliberate omission of contradictory data constitutes research misconduct.
- **True or False:** Falsifying results such as proofs or numerical simulations constitutes research misconduct?
  - ▶ True.

# Publications - Research Misconduct

- **True or False:** It is OK to omit contradictory data (e.g. in numerical simulations) from the paper if it detracts from my point?
  - ▶ False. Deliberate omission of contradictory data constitutes research misconduct.
- **True or False:** Falsifying results such as proofs or numerical simulations constitutes research misconduct?
  - ▶ True.
- **True or False:** If I discover a significant mistake or error in my published work, I should publish errata (or equivalent).

# Publications - Research Misconduct

- **True or False:** It is OK to omit contradictory data (e.g. in numerical simulations) from the paper if it detracts from my point?
  - ▶ False. Deliberate omission of contradictory data constitutes research misconduct.
- **True or False:** Falsifying results such as proofs or numerical simulations constitutes research misconduct?
  - ▶ True.
- **True or False:** If I discover a significant mistake or error in my published work, I should publish errata (or equivalent).
  - ▶ True. As painful as it is, better to acknowledge it and move past it.

# Publications - Reproducibility

Your paper includes the output of your algorithm (perhaps against those of others) on real or simulated data.

## Consider:

- Are you obligated to provide the data itself (or at least the means for generating it)?
- Are you obligated to report the values of all the parameters set?
- How far do you need to go to ensure reproducibility?



# Publications - Acknowledgement and Authorship

How do I **acknowledge contributions** from others? For instance:

- Outcomes of discussions with others
- Suggestions received from others
- Suggestions from referees (what if they are anonymous? what if they are not?)

How do I **avoid conflicts when collaborating**, such as:

- Who will be co-authors on a paper?
- Who will be first author (if in non-alphabetical order)?
- Often difficult to predict when problems arise: be aware of potential problems and handle them professionally – seek advice from advisors or mentors

## Publications - Offensive Material

Some journals have policies on publication of offensive materials. For example, this is taken from SIAM's webpage that gives their journal's policies on potentially offensive material:

*... Unless the authors can make convincing arguments [to the editor] that the particular material is essential to convey the scientific contribution, it is expected that the material be replaced prior to review and further consideration for publication. For example, the "Lena image" has been used in past publications on imaging but is inconsistent with efforts to promote inclusion in mathematics, science, and engineering. SIAM will not consider submissions containing this image.*

Know the policy and abide by it!

# Peer Review Process of Papers and Proposals

- Declare **anything that can be perceived as a potential conflict** when refereeing papers or proposals, i.e.:

# Peer Review Process of Papers and Proposals

- Declare **anything that can be perceived as a potential conflict** when refereeing papers or proposals, i.e.:
  - ▶ author is a former student or a close collaborator;
  - ▶ you work on exactly the same problem and may have an interest in delaying the review or giving a negative report

# Peer Review Process of Papers and Proposals

- Declare **anything that can be perceived as a potential conflict** when refereeing papers or proposals, i.e.:
  - ▶ author is a former student or a close collaborator;
  - ▶ you work on exactly the same problem and may have an interest in delaying the review or giving a negative report

When in doubt, ask!

# Peer Review Process of Papers and Proposals

- Peer reviews are strictly confidential: you **cannot**

# Peer Review Process of Papers and Proposals

- Peer reviews are strictly confidential: you **cannot**
  - ▶ use any of the material you learned about during review (unless you also obtained it independently from the author or repository)

# Peer Review Process of Papers and Proposals

- Peer reviews are strictly confidential: you **cannot**
  - ▶ use any of the material you learned about during review (unless you also obtained it independently from the author or repository)
  - ▶ give the manuscript to anybody else unless the editor allows it



# Peer Review Process of Papers and Proposals

- Peer reviews are strictly confidential: you **cannot**
  - ▶ use any of the material you learned about during review (unless you also obtained it independently from the author or repository)
  - ▶ give the manuscript to anybody else unless the editor allows it
  - ▶ talk to others about the manuscript unless you have a technical question that you can ask without revealing the identity of the author or communicating confidential material

# Peer Review Process of Papers and Proposals

- Peer reviews are strictly confidential: you **cannot**
  - ▶ use any of the material you learned about during review (unless you also obtained it independently from the author or repository)
  - ▶ give the manuscript to anybody else unless the editor allows it
  - ▶ talk to others about the manuscript unless you have a technical question that you can ask without revealing the identity of the author or communicating confidential material
  - ▶ disseminate your review to anybody except the editor or program officer who requested the review

# Peer Review Process of Papers and Proposals

- Peer reviews are strictly confidential: you **cannot**
  - ▶ use any of the material you learned about during review (unless you also obtained it independently from the author or repository)
  - ▶ give the manuscript to anybody else unless the editor allows it
  - ▶ talk to others about the manuscript unless you have a technical question that you can ask without revealing the identity of the author or communicating confidential material
  - ▶ disseminate your review to anybody except the editor or program officer who requested the review
  - ▶ contact the author with questions or comments (You may be able to reveal your identity by signing the review, if the process allows.)

# Professional Ethics in the Workplace

- Ethical use of institutional computer, email, corporate cards, and office facilities
- Confidentiality of privileged information (grades, referee reports, recommendation letters, etc.)
- Be aware of, and abide by, copyright and software license requirements:
  - ▶ Use care when installing software on different computers or for different users
  - ▶ Do not download scanned copies of copyrighted material
- Be aware of personal conflicts of interest:
  - ▶ Financial, family, etc.
  - ▶ Dating students and postdocs
  - ▶ Asking students or postdocs for personal favors

# Title IX

Title IX is a comprehensive federal law that prohibits discrimination on the basis of sex in any federally funded education program or activity.

*No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity receiving Federal financial assistance.*

Title IX of the Education Amendments of 1972 to the Higher Education Act of 1965

# Title IX

## Brown University's Title IX and Gender Equity Statement of Non-Discrimination:

*Brown University does not discriminate on the basis of sex, race, color, religion, age, disability, status as a veteran, national or ethnic origin, sexual orientation, gender identity, or gender expression, or any other category protected by applicable law, in the administration of its educational policies, admission policies, scholarship and loan programs, or other school administered programs. Full policy: <https://www.brown.edu/about/administration/title-ix/home>*

## Brown policy covers:

Privacy and Confidentiality

Sexual or Gender-based Harassment

Sexual Assault

Relationship and Interpersonal Violence

Stalking

Retaliation

Consent

# Title IX

ICERM's statement:

*ICERM is committed to creating a safe, professional, and welcoming environment that benefits from the diversity and experiences of all its participants. Both the Brown University "Code of Conduct", "Discrimination and Workplace Harassment Policy", and "Title IX Policy" apply to all ICERM participants and staff. Participants with concerns or requests for assistance on a discrimination or harassment issue should contact the ICERM Director or Assistant Director; they are the responsible employees at ICERM under this policy.*