Workshop & faculty development program
ON
Modern Research Practices, Methodologies, And
Intellectual Property Rights(IPR)

Topic: Research Integrity (Scientific and Ethical)

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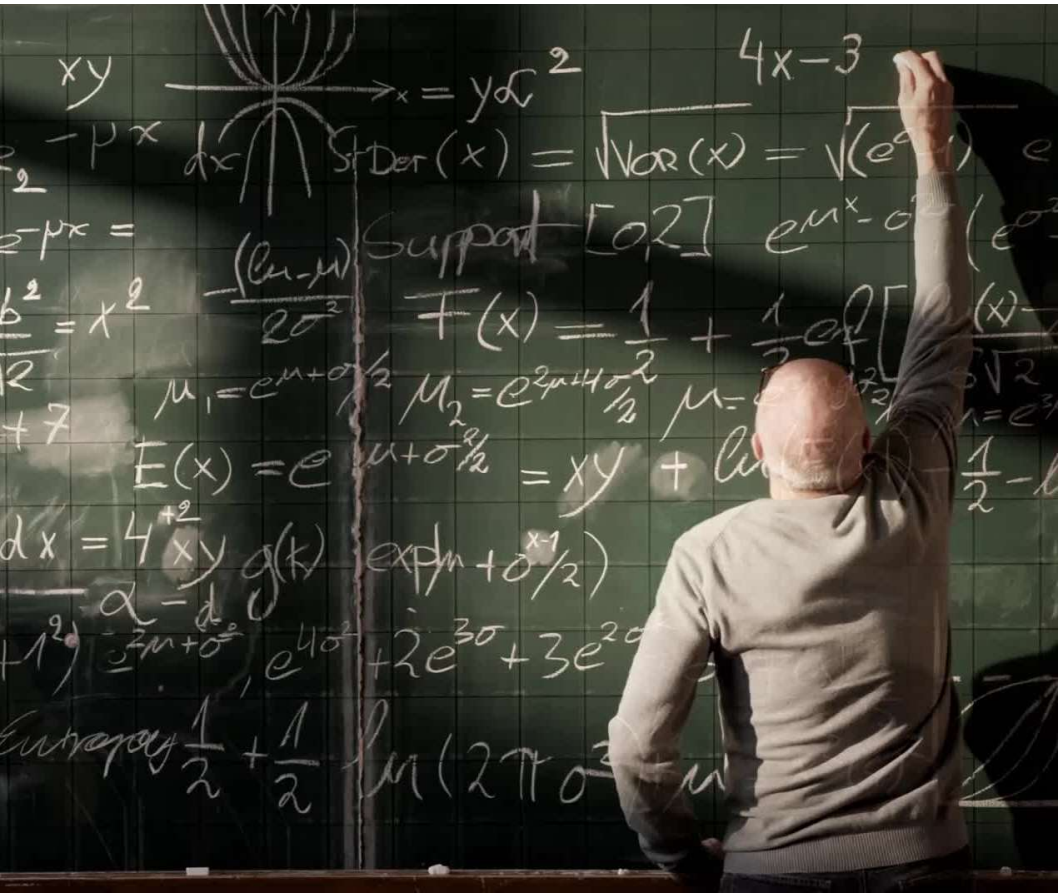
Outline

- What is Research Integrity
- Misconducts
- Plagiarism
- To Avoid Scientific Misconduct
- Good practice in research integrity
- Conduct That Undermines Research Integrity
- Guideline for Responsible Conduct of Research
- Conclusion
- Refernces



“Most people say that it is the intellect which makes a great scientist. They are wrong: it is character.”

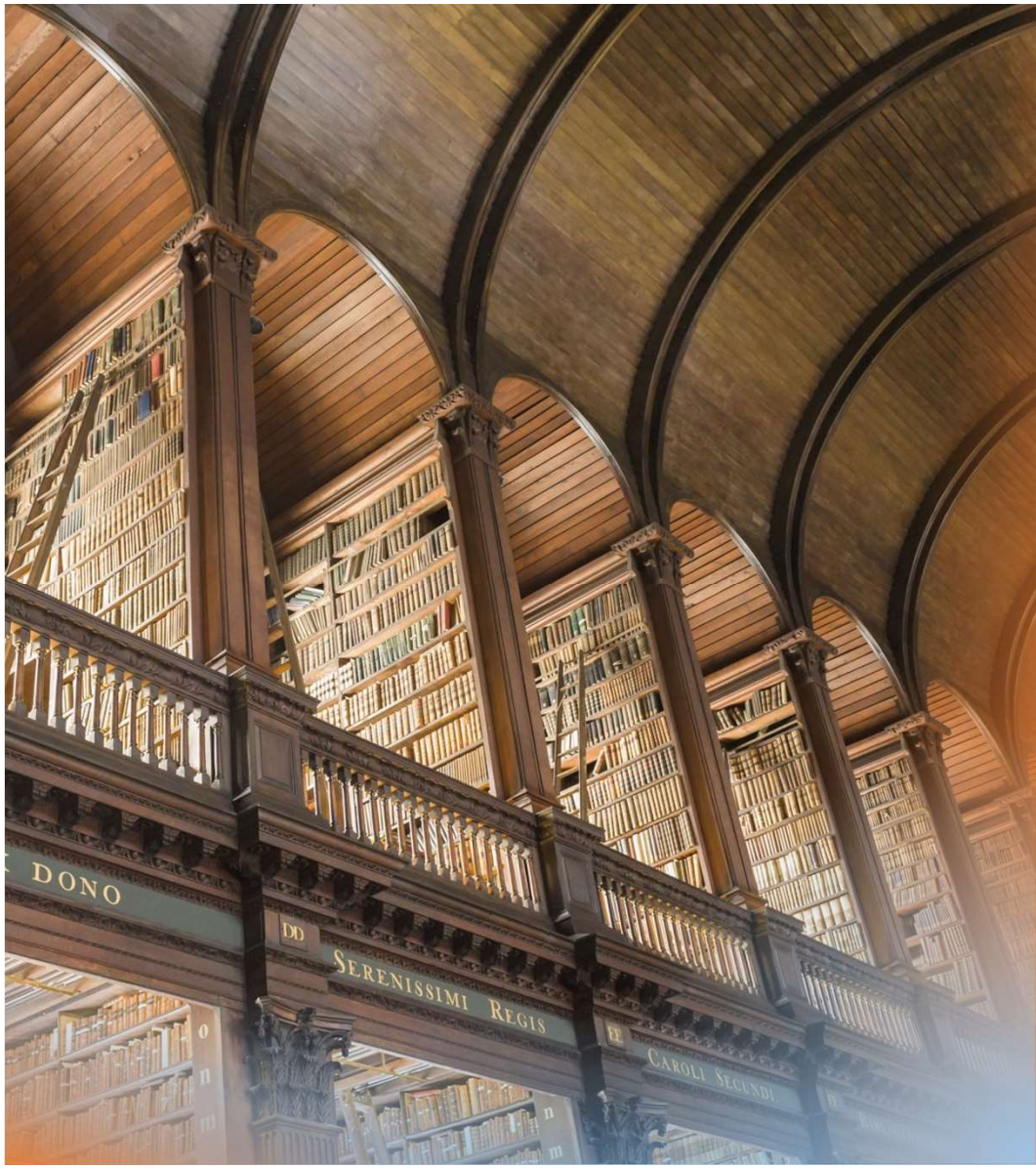
Albert Einstein

A kind of scientific integrity, a principle of scientific thought that corresponds to a kind of utter honesty — a kind of leaning over backwards. For example, if you're doing an experiment, you should report everything that you think might make it invalid — not only what you think is right about it: other causes that could possibly explain your results; and things you thought of that you've eliminated by some other experiment, and how they worked — to make sure the other fellow can tell they have been eliminated … In summary, the idea is to try to give all the information to help others to judge the value of your contribution; not just the information that leads to judgment in one particular direction or another.

Research Integrity

Conducting research in a way which allows others to have trust and confidence in the methods used and the findings that result.

-University of Edinburgh, University of Bath



Why do We Promote Research Integrity

- Highest possible standards of quality and ethics
- Public trust and confidence
- Robust and free from outside influences

Integrity in Research

Research integrity is an integral part of all of the following stages in research process:

- Planning of research
- Conducting the research
- Disseminating results

Research Misconduct

A violation of the ethical standards of scientific research, study, and publication.

Fabrication

Falsification

Plagiarism

Other types of Research/Scientific misconduct include:

Misconduct involving experimental techniques

Incorrectly attributing authorship

Gift authorship

Defining Data Fabrication and Falsification

As per oxford Dictionary “The invention or falsification of observations or results of experiments. This is a very serious form of scientific fraud that is a criminal act occasionally perpetrated by overly eager, dishonest, or corrupt scientists.”

Cambridge University Press , states that, “Data fabrication occurs when data are invented - either some data, which just tip the results of the research over to being positive and significant, or the wholesale fabrication of all the data in a paper.”

Defining Plagiarism

- New Oxford American Dictionary defines 'plagiarism' as “... the practice of taking someone else's work or ideas and passing them off as one's own”
- Longman Dictionary of Contemporary English defines plagiarism in two contexts [uncountable] “when someone uses another person's words, ideas, or work and pretends they are their own”
- The U.S. office linked to the White House, Office of Science and Technology Policy (OSTP), defines that: “plagiarism ranges from the unreferenced use of others' published ideas… to submission under 'new' authorship of a complete paper, sometimes in a different language”

Plagiarism

Presenting someone else's work as one's own irrespective of intention.

Reference: QM Academic Regulations, Part 2 – General Regulation, 2.79.

To Avoid Plagiarism

Reference

Quote

What If we paraphrase

Conclusion: If you use another person's ideas, findings or research (i.e. facts they have established) in your work you must reference the work.

Conduct That Undermines Research Integrity

- In the planning and designing of research
- In conducting research
- In the publication of results
- In the evaluation of people, projects, or publications
- In professional relations within research institutes, relations with colleagues, and when organizing or managing research

Reporting Scientific Misconduct

- Problem because of Misconduct
  - Reputations of scientists and their institutions
  - Shake public confidence in the integrity of science
  - Result in imposition of institutional/governmental
- Note: There may be different explanations to what you perceive, Reprisals sometimes occur, If your allegation is judged malicious or reckless you may be charged with scientific misconduct.

To Avoid Scientific Misconduct

RIGOROUS DATA GOVERNANCE

DEVELOPING ADVANCE DETECTION TOOLS

DIGITAL WATERMARKING

TRANSPARENCY AND OPEN SCIENCE

PEER REVIEW

ETHICAL GUIDANCE AND OVERSIGHT

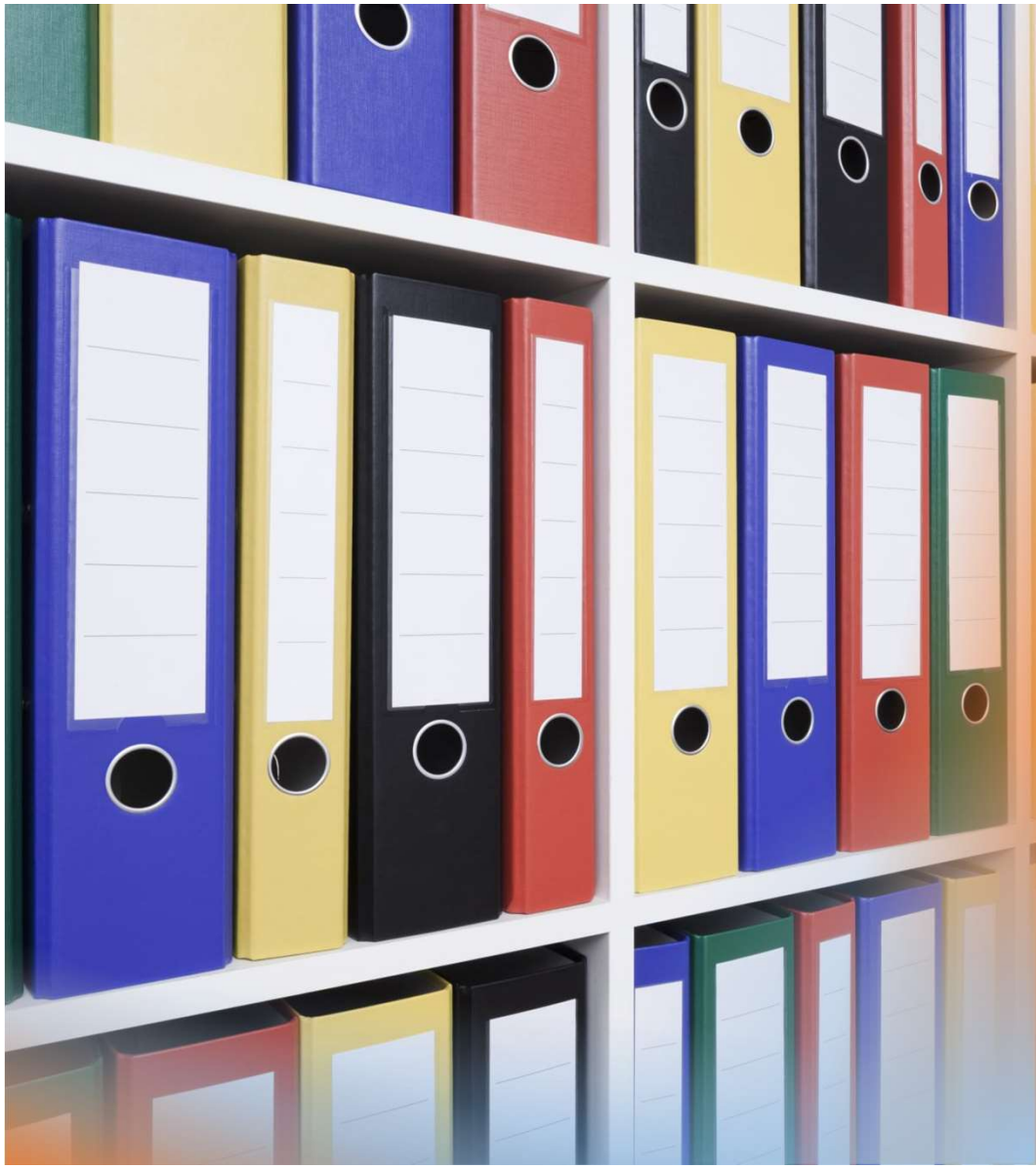
EDUCATION AND AWARENESS

Good practice in research integrity

- Excellence in research practice
- Transparency in research
- Legal and professional standards in research
- Research integrity training
- Authorship
- Data Management and Ownership

Guideline for Responsible Conduct of Research

- Integrity of Data
  - Use and Misuse of Data
  - Ownership of and Access to Data
  - Storage and Retention of Data
- Authorship And Other Publication Issues
  - Criteria for Authorship
  - Order of Authors
  - Self-citations
  - Duplicate Publication
  - Early Release of Information About to be Published
- Conflict Of Interest



Conclusion

- An investigator who leads a research group has leadership and supervisory responsibilities with respect to the research performed by members of the group. An investigator serves not only as a research manager with respect to members of the research group but also as a mentor responsible for the intellectual and professional development of graduate students, postdoctoral fellows, and junior faculty in the group, including awareness and sensitivity to issues in research ethics. Mentors should assist students in defining a thesis or dissertation problem that is intellectually challenging and has a reasonable prospect of being concluded within a normal or defined period.

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"Rather fail with honor than succeed by fraud."

Sophocles

Thank you