

# Research Methodology in Computer Science

## Academic Integrity

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# Academic Integrity

## Definition

**Academic integrity** (also called academic honesty) means that you will be honest in your **own** academic work and report any violations of the honor code by other colleagues.

# Why You Should Care About Academic Integrity?

## Negative Sequences

These possible disciplinary actions should not be taken lightly - you could:

- fail an assignment;
- fail a course;
- even be expelled from the college
- be withdrawn your degree

## Rewards

- Knowledge
- New Skills
- The Ability to Critically Analyze the World Around You
- Self-Respect
- A Sense of Accomplishment

# Types of Academic Dishonesty

- Cheating
- Plagiarism
- Duplicate Submission

# Cheating

## Definition

**Cheating** is taking or giving any information or material which will be used to determine academic credit.

- Create non-existing data
- Modify the existing data
- Use a subset of all obtained data

# Cheating Example

## Jan Hendrik Schön

- Researcher at Bell Labs working in the field of condensed matter physics and nanotechnology
- In 2001, he was listed as an author on an average of one research paper every eight days
- Claimed to have produced a transistor on the molecular scale
- Published (and peer reviewed) papers were suspected to contain duplicated and anomalous data
- He was dismissed after an investigation found 24 cases of misconduct
- Science withdrew 8 papers and Nature 7 papers co-authored by Schön

# Cheating Example

## Haruko Obokata (小保方晴子)

- A former stem-cell biologist and research unit leader at Japan's Laboratory for Cellular Reprogramming, Riken Center for Developmental Biology.
- She claimed to have developed a radical and remarkably **easy way** to generate stimulus-triggered acquisition of pluripotency (STAP) cells that could be grown into tissue for use anywhere in the body.
- In response to allegations of irregularities in Obokata's research publications involving STAP cells, Riken launched an investigation that discovered examples of scientific misconduct on the part of Obokata.
- Attempts to replicate Obotaka's STAP cell results failed. The ensuing STAP cell scandal gained worldwide attention.
- Her advisor Satoshi Tsuneda was found dead at Riken from an apparent suicide.
- Her Ph. D. degree is withdrawn.

# Cheating Example

## Chen-Yuan Chen ( 陳震遠 )

- A professor at National Pingtung University ( 國立屏東大學 )
- He published 60 papers in Journal of Vibration and Control.
- Editor Ali H. Nayfeh reviewed Chen's paper and found 130 dummy accounts that all belonged to Chen.
- Chen resigned from NPTU and the papers are withdrawn.
- Chen's brother is also involved in some of the papers.
- Minister of Education is the advisor of Chen's brother and he was listed as an author in some of the papers, he resigned from Ministry of Education.



# Cheating

## Retraction Watch

Find many retracted papers in <https://retractionwatch.com/>

## Withdrawn Degrees

Find withdrawn degrees here.

## Question

Why did they cheat in their thesis or academic papers?

# Plagiarism

## Definition

**Plagiarism** is the act of using another person's words or ideas without giving credit to that person

## Question

Are the actions allowed?

- Directly copy and paste without the owner's permission and without citation
- Directly copy and paste with the owner's permission and citation.
- Rewrite the sentence (using different wording and structures) without citation
- Rewrite the sentence (using different wording and structures) with citation

# Self-Plagiarism

## Definition

**Self-plagiarism** is defined as a type of plagiarism in which the writer republishes a work in its entirety or reuses portions of a previously written text while authoring a new work.

- data
- graphics
- sentences
- structures

## Question

Can I submit an extended conference paper to a journal?

# Duplicate Publication

## Definition

**Duplicate publication**, multiple publication, or redundant publication refers to publishing **the same intellectual material** more than once.

- under review
- publication

## Question

Why is duplicate publication not allowed?

## Question

What is the standard operation procedure (SOP) to avoid duplicate publication if you want to submit a paper to another conference/journal?