



**A.A. 2021-2022**

*Corso di Laurea Magistrale in GEOSCIENZE*

***Metodi Elettromagnetici in Geofisica (6 CFU)  
- MEMAG -***

***A scientific paper***

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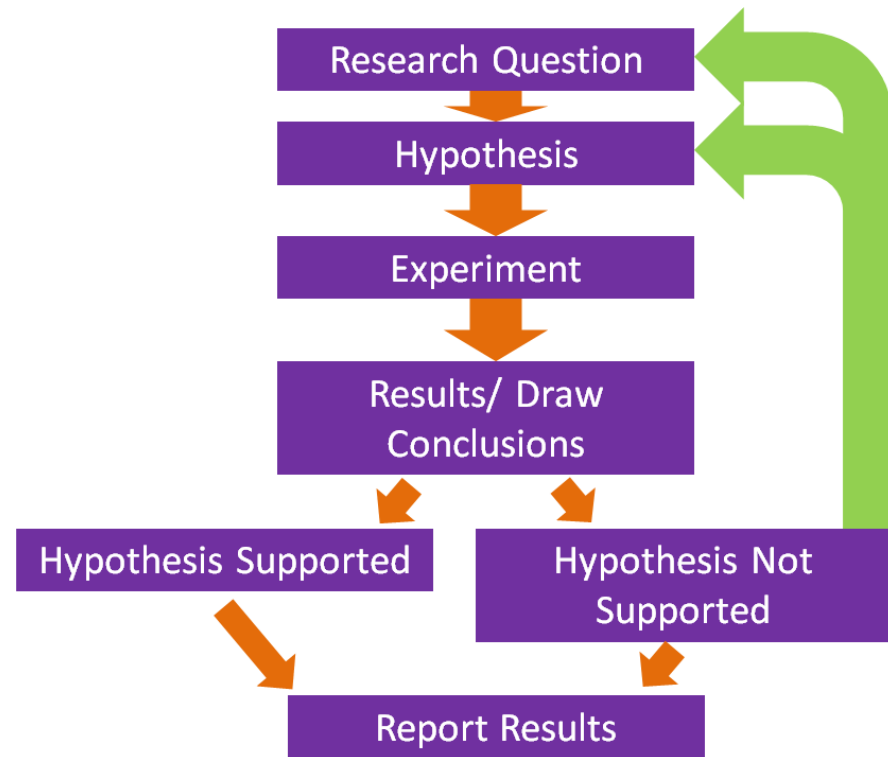
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# What is a scientific paper?

**DEFINITION:** a written and published report describing original research results

An organized description of hypotheses, data and conclusions, intended to instruct the reader.

- Your objective in research is to formulate and test hypotheses, to draw conclusions from these tests, and to teach these conclusions to others.
- Essential to understand the hypotheses (goals) while collecting data.
- To develop hypotheses towards a high quality publication a complete understanding of current literature in your research field is critical, but essential
- Something that adds a small brick to the global knowledge



Remember that: interesting and unpublished is equivalent to non-existent!

# What is a scientific paper?

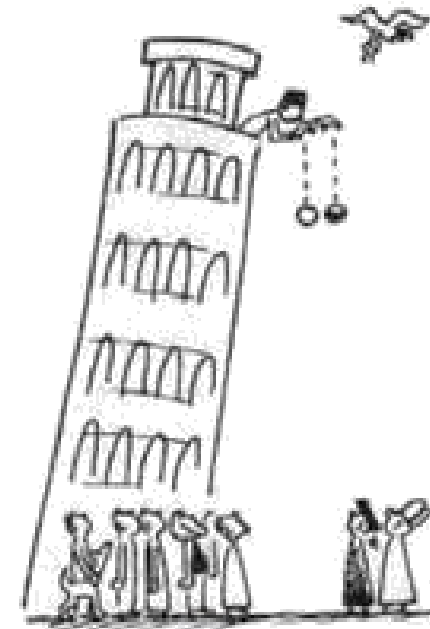
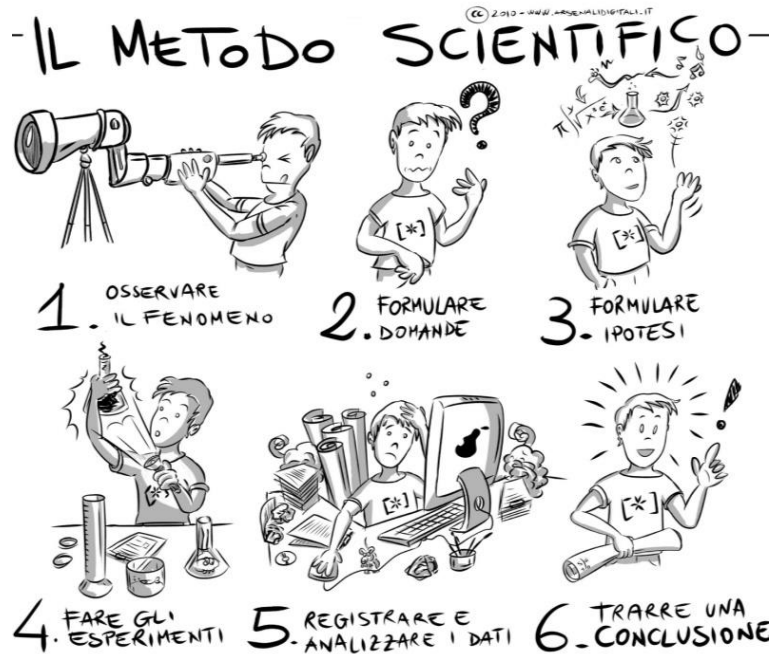
Some BASIC CONCEPTS:

- Try and errors
- Replicable data

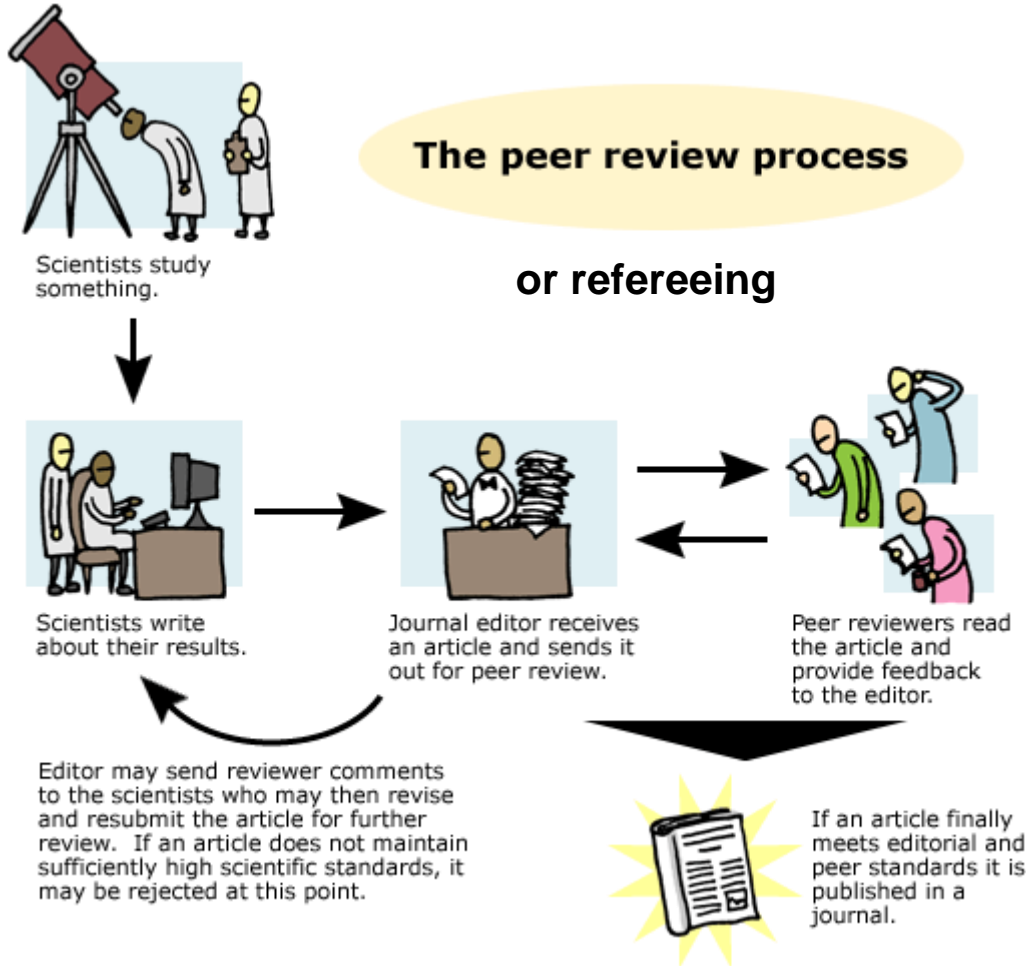
*Data replicability simply means that it is possible for an experiment to be carried out again, either by the same scientist or another.*

*Galileo Galilei started to use **experiments as a research tool**.*

*"Mathematics is the alphabet with which God has written the universe"...*



# The revision mechanism



## PROS

- *It should assure an actual evaluation about the scientific value of the paper*
- *Peer-reviewed articles provide a trusted form of scientific communication*

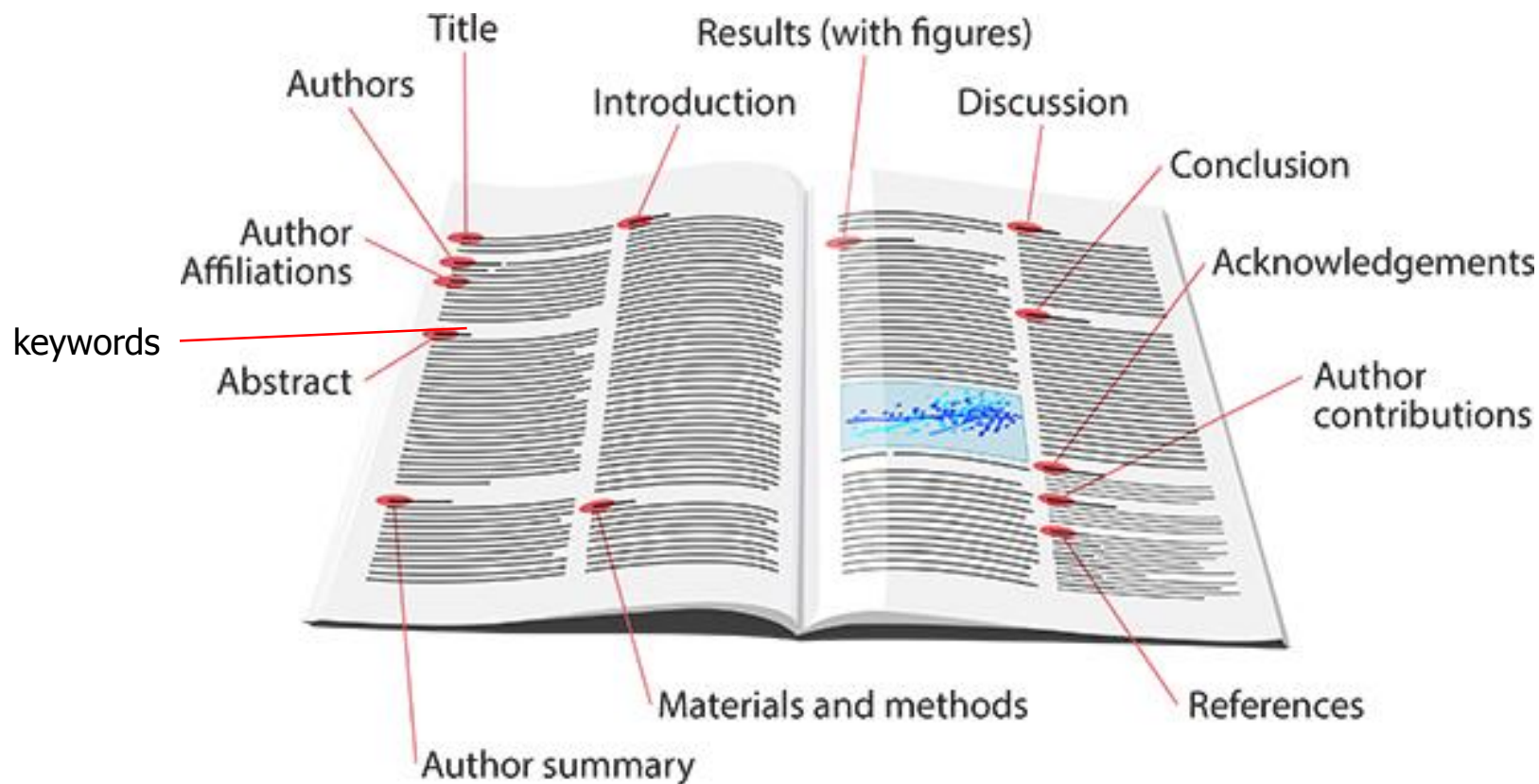
## CONS

- *Review is often a long process*
- *Publishing can be expensive*
- *Unexpected ideas can be (at first) rejected*

*NO Conflict of interests*  
*NO economical interests*  
*NO principle of authority (ipse dixit)*

## Open assess or not?

# Wow is organized a scientific paper?



*NO plagiarism!*  
*NO fake data!*  
*NO cancel out data!*