

# Research Metrics

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# Agenda

## 1 Introduction

## 2 Bibliometrics

- Impact factor

## 3 Researcher's metrics

**Assessing** the quality and impact of research outputs is necessary

**Every Metric** has its limitations

**No easy way exists** to measure scientific performance

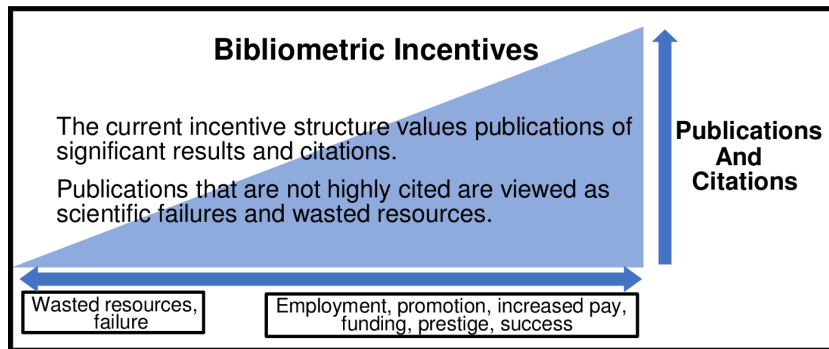


Figure 1: Bibliometrics incentives model.

<https://doi.org/10.1371/journal.pone.0195321.g001>

# Impact factor

The Impact Factor is the average number of citations received by articles in a journal within a two-year window

$$IF(x) = \frac{Citations(x)}{Publications(x-2) + Publications(x-1)}$$

For example, Nature had an impact factor of 49.962 in 2020:

$$IF(2020) = \frac{Citations(2020)}{Publications(2018) + Publications(2019)} = 49.962$$

Note that 2020 impact factors are reported in 2021; they cannot be calculated until all of 2020 publications have been processed by the indexing agency.

# Impact factor limitations

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**Altmetric Attention Score** tracks online shares and conversations relating to a piece of published research.

It is calculated using data collected around research articles such as mentions on social media, news outlets, blogs, patents, etc.

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# Blocks and columns and simple animation

## Sample ordinary block

You can use *columns* environment to split a slide into 2 or more parts.

## Props and cons lists

Use *proplist* and *conslist* environments to show props and cons as a list respectively.

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## Sample example block

Example: For example you can implement props and cons with use of *columns*.

# Sample citations

## Citation in $\text{\LaTeX}$ with Bibtex

To cite something just add your bibitem in *references.bib* file and use *cite* command with corresponding name. Everything else will happen **automatically!**

I claim something very important and have to cite this paper [?], this article [?], book [?] and preprint [?].

## Where to find citation bibtex item

Please use citation *BibTeX* item from Google Scholar



Figure 2: Big picture

If you want 2 side image, use *subfigures*



(a) White



(b) Blue

Figure 3: Main caption

# References I