Scientometrics Indicators

Scientometrics indicators are the basis for evaluation of researchers, journals and articles. Some of the most important indicators of scientometrics are as follows:

Impact Factor

The IF for a given publication is calculated by dividing the number of times the articles published in a journal are cited during the two previous years, by the number of articles published by that journal in the same interval.

Immediacy Index

The immediacy index of a journal depicts how often, on average, authors cite very recent articles from a particular journal and, hence, how rapidly the average paper from that journal is adopted into the literature.

H-Index

The H-index has become an approach of surveying researchers’ productivity and impact. The H-index of a particular author is the number of the numeric sequence of papers which some citations equal to or is greater than the rank of the sequence.

Cited Half-Life

It is the calculated point (age in the year) where 50% of the citations are underage and 50% of the citations are over that age. The cited half-life is a measure of the rate of decline of the citation curve. It is the number of years that the number of current citations takes to decline to 50%of its initial value. It is a measure of how long articles in a journal continue to be cited after publication.

G-Index

It is based on the distribution of citations received by a given researcher’s publications: given a set of articles ranked in decreasing order of the number of citations that they received, the G-index is the (unique) largest number such that the top g articles received (together) at least g2 citations.

M-Index

It is defined asH-index/n, where n is the number of years since the scientist’s first published paper; it is also called mquotient and allows comparing scientific careers of different times.

Mathew Value

It is one of the current indicators of scientometrics which was proposed by mooij in 2006. It is a modified format of impact factor in a five year period for a specific subject.

Eigenfactor Score

Eigenfactor score (ES) is considered an indicator for the global influence or repercussion of JCR journals. ES calculation is based on the number of times articles from the journal published in the past 5 years have been cited in the JCRyear, but it also considers which journals have contributed to these citations, so that highly cited journals will influence the network more than lesser-cited journals.

Article Influence Score

AIS determines the average influence of a journal’s articles over the first 5 years after publication. It is obtained from the Eigenfactor score, based on its same iterative algorithm, but considering the number of articles in the journal .

CiteScore

CiteScore is the youngest metric and was published on December 2016 [34]. It is a free measure for the average number of citations received per document issued in a serial; it is also one of the three major indices included in Scopus by Elsevier to rank publication sources.

SCImago Journal Rank

The SJR is a metric based on data from Scopus that was developed by Felix de Moya at the University of Granada, Spain [42]. It is based on the centrality concepts that were first developed in social network analysis, and many of the terms used to measure centrality reflect their sociological origin; indicators of centrality identify the essential vertices within a graph.

Source-Normalised Impact per Paper(SNIP)

Source-Normalised Impact per Paper (SNIP) measures contextual citation impact by weighting citations based on the total number of citations in a subject field. The SNIP also uses a 3-year publication window so that a higher proportion of total cites made to a journal are included in the calculation, it only counts peer-reviewed documents, and it only counts citations made to peer-reviewed documents.

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